General-purpose ICs

Linear Regulators

Linear Regulators

Single-Output LDO Regulators - Product Table

Max. Rating Input Voltage \ Output Current	0.1A	0.15A	0.2A	0.3A	0.5A	1.0A	1.5A	2.0A	3.0A	4.0A	External MOSFET
45 to 50V	BD42500G-C*2/3 BD42540FJ-C*2/3 ▶P.44		BD7xxL2*2 ▶P.31 BD4xxM2*1/2 BD4xxM2W*1/2 ▶P.32 BD4269FJ-C*2/3 BD42530EFJ-C*2 BD42530FP2-C*2 BD42530FPJ-C*2 ▶P.44	BD4269EFJ-C*2/3 ▶P.44	BD357xY BD7xxL5*2 BD4xxM5*1/2 BD4xxM5W*1/2 BD800M5*2 BD00EA5W ▶P.31 BD4271HFP-C*2/3 BD4271FP2-C*2/3 BD3021HFP*2/3 BD3020HFP*2/3 BD42754FPJ-C*2/3 BD42754FP2-C*2/3 BD3925FP-C*2 BD3925HFP-C*2 ▶P.44						
30 to 36V	BDxxFA1FP3 BD50FA1MG-M*2 BD00FA1WEFJ ▶P.33			BD3650FP-M*2 ▶P.32 BA3662CP-V5 ▶P.33	BA178Mxx*1 ▶P.31	BA178xx*1 BAxxCC0*1 BDxxC0AFPS*4 BDxxFC0FP BDxxC0A*1/2 BDxxFC0W*1 BAxxCC0W*1 BD00C0AWFPS-M*2 BDxxC0AW*1 ▶P.31, 32, 33		BAxxDD0T BAxxDD0W*1 BD00FD0W ▶P.32				
18V						BAxxBC0*1 BAxxBC0W*1 BD37210AMUV BD37215AMUV ▶P.34, 43	BAxxJC5T BA00JC5WT ▶P.34				
15V				BDxxGA3*1/2/4 ▶P.36	BDxxGA5*2/4 ▶P.35, 36	BA1117FP BDxxGC0*2/4 ▶P.31, 35					
10V				BDxxHA3*2/4 ▶P.38	BDxxHA5*2/4 ▶P.37, 38	BDxxHC0*2/4 ▶P.37	BDxxHC5*2/4 ▶P.37				
6 to 7V		BHxxNB1WHFV BHxxRB1WGUT BHxxPB1WHFV ▶P.43	BUxxTD2WNVX*1 BUxxTD3WG*1 BUxxTA2W*1 BUxxSD2MG-M*2 BUxxJA2MNVX-C*2 BUxxJA2VG-C*2 BUxxJA2DG-C*2 BUxxSA4WGWL ▶P.41, 42	BHxxM0AWHFV ▶P.40	BDxxIA5*2/4 BDxxKA5FP BDxxKA5W*1 BDxxIA5 BUxxSD5WG BUxxSA5WGWZ BD37201NUX ▶P.39, 40, 43	BDxxIC0*1/2/4 ▶P.38, 39	BD37215AMUV*5 ▶P.43				
Ultra Low Voltage (Dual Supply)					BD3550HFN BD3507HFV BD3540NUV ▶P.43	BD3551HFN BD3541NUV ▶P.43		BD3506F BD3552HFN ▶P.43	BD3508MUV BD3512MUV ▶P.43	BD3509MUV ▶P.43	BD3504FVM BD3521FVM ▶P.43

*1 Package Lineup *2 Automotive Grade *3 Multi Function Regulator (Ex. Voltage Detection) *4 Industrial Grade *5 Negative Voltage type

Linear Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

78 series Regulators/Standard Regulator

35V Resistance 1A Output 78 series Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Circuit Current (mA)	Thermal Shutdown Circuit	Area of Safety Operation Circuit	Over Current Protection Circuit	Package/Part No.	
									TO220CP-3	TO252-3
BA17805 (BA7805)	7.5 to 25.0	5	±4	1.0	4.5	✓	✓	✓	BA17805CP	BA17805FP
BA17806 (BA7806)	8.5 to 21.0	6							BA17806CP	BA17806FP
BA17807 (BA7807)	9.5 to 22.0	7							BA17807CP	BA17807FP
BA17808 (BA7808)	10.5 to 23.0	8							BA17808CP	BA17808FP
BA17809 (BA7809)	11.5 to 26.0	9							BA17809CP	BA17809FP
BA17810 (BA7810)	12.5 to 25.0	10							BA17810CP	BA17810FP
BA17812 (BA7812)	15.0 to 27.0	12							BA17812CP	BA17812FP
BA17815 (BA7815)	17.5 to 30.0	15							BA17815CP	BA17815FP
BA17818 (BA7818)	21.0 to 33.0	18							BA17818CP	BA17818FP
BA17820 (BA7820)	23.0 to 33.0	20							BA17820CP	BA17820FP
BA17824 (BA7824)	27.0 to 33.0	24							BA17824CP	BA17824FP

35V Resistance 500mA Output 78 series Regulators

BA178M05 (BA78M05)	7.5 to 25.0	5	±4	0.5	4.5	✓	✓	✓	BA178M05CP	BA178M05FP
BA178M06 (BA78M06)	8.5 to 21.0	6							BA178M06CP	BA178M06FP
BA178M07 (BA78M07)	9.5 to 22.0	7							BA178M07CP	BA178M07FP
BA178M08 (BA78M08)	10.5 to 23.0	8							BA178M08CP	BA178M08FP
BA178M09 (BA78M09)	11.5 to 26.0	9							BA178M09CP	BA178M09FP
BA178M10 (BA78M10)	12.5 to 25.0	10							BA178M10CP	BA178M10FP
BA178M12 (BA78M12)	15.0 to 27.0	12							BA178M12CP	BA178M12FP
BA178M15 (BA78M15)	17.5 to 30.0	15							BA178M15CP	BA178M15FP
BA178M18 (BA78M18)	21.0 to 33.0	18							BA178M18CP	BA178M18FP
BA178M20 (BA78M20)	23.0 to 33.0	20							BA178M20CP	BA178M20FP
BA178M24 (BA78M24)	27.0 to 33.0	24							BA178M24CP	BA178M24FP

15V Resistance 1A Output Standard LDO Regulator

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Adjustment Pin Current (μA)	Reference Voltage (V)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package
BA1117FP	10	Variable	±1	1.0	60	1.2 (I_O=1A)	75 (f=120Hz, V_I-V_O=3V, Vripple=1V_{PP})	10	Over-Current/ Temperature	TO252-3

Single-Output LDO Regulators

50V Resistance 500mA Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Saturation Voltage: IO=200mA (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD3570YFP-M	4.5 to 36.0	3.3	±2 (T_a=−40 to +125°C)	0.5	–	30	−40 to +125	–	Over-Current/ Temperature	TO252-3	–
BD3570YHFP-M										HRP5	–
BD3571YFP-M	5.5 to 36.0	5.0			0.25					TO252-3	–
BD3571YHFP-M										HRP5	–
BD3572YFP-M	4.5 to 36.0	Variable 2.8 to 12.0								TO252-5	–
BD3572YHFP-M										HRP5	–
BD3573YFP-M		3.3			–			✓		TO252-5	–
BD3573YHFP-M										HRP5	–
BD3574YFP-M	5.5 to 36.0	5.0			0.25					TO252-5	–
BD3574YHFP-M										HRP5	–
BD3575YFP-M	4.5 to 36.0	Variable 2.8 to 12.0								TO252-5	–
BD3575YHFP-M										HRP5	–

50V Resistance 200mA Output Low Quiescent Current LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Saturation Voltage: I_O=200mA (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package/Part No.			Automotive Grade AEC-Q100
										HTSOP-J8	TO252-3	SOT223-4	
BD733L2	4.37 to 45.0	3.3	±2 (T_a=−40 to +125°C)	0.2	0.6	6	−40 to +125	–	Over-Current/ Temperature	BD733L2EFJ-C	BD733L2FP-C	BD733L2FP3-C	YES
BD750L2	5.8 to 45.0	5.0			0.4					BD750L2EFJ-C	BD750L2FP-C	BD750L2FP3-C	YES

50V Resistance 500mA Output Low Quiescent Current LDO Regulators

BD733L5	4.17 to 45.00	3.3	±2 (T_a=−40 to +125°C)	0.5	0.4	6	−40 to +125	–	Over-Current/ Temperature	–	BD733L5FP-C	–	YES
BD750L5	5.6 to 45.0	5.0			0.25					–	BD750L5FP-C	–	YES

45V Resistance 500mA Output Low Quiescent Current LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package/Part No.				Automotive Grade AEC-Q100
										TO252-3	TO263-3	TO263-5	TO252-J5	
BD433M5	4.0 to 42.0	3.3	±2 (T_j=−40 to +150°C)	0.5	0.25 (I_O=300mA)	38	T_j=−40 to +150	–	Over-Current/ Temperature	BD433M5FP-C	BD433M5FP2-C	–	–	YES
BD450M5	5.5 to 42.0	5.0			0.2 (I_O=300mA)					BD450M5FP-C	BD450M5FP2-C	–	–	YES
BD433M5W	4.0 to 42.0	3.3			0.25 (I_O=300mA)			✓		–	–	BD433M5WFP2-C	BD433M5WFPJ-C	YES
BD450M5W	5.5 to 42.0	5.0			0.2 (I_O=300mA)					–	–	BD450M5WFP2-C	BD450M5WFPJ-C	YES

45V Resistance 500mA Output Low Quiescent Current LDO Regulators with Shutdown Switch

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package/Part No.			Automotive Grade AEC-Q100
										TO252-3	TO263-5	HRP5	
New BD800M5	3.0 to 42.0	Variable 1.2 to 16.0	±2.0	0.5	0.45 (I_O=500mA)	17	−40 to +150	✓	Over-Current/ Temperature	–	–	BD800M5WHFP-C	YES
			±2.5							–	BD800M5WFP2-C	–	
New BD00EA5W			±1 (T_j=25°C)				−40 to +105			BD00EA5WFP	–	BD00EA5WHFP	–
			±1.5 (T_j=25°C)							–	BD00EA5WFP2	–	–

Single-Output LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

45V Resistance 200mA Output Low Quiescent Current LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package/Part No. HTSOP-J8	Package/Part No. SOT223-4	Automotive Grade AEC-Q100
BD433M2	3.9 to 42.0	3.3	±2 (T_j=−40 to +150°C)	0.2	0.2 (I_O=100mA)	40	T_j=−40 to +150	–	Over-Current/ Temperature	BD433M2EFJ-C	BD433M2FP3-C	YES
BD450M2	5.5 to 42.0	5.0			0.16 (I_O=100mA)					BD450M2EFJ-C	BD450M2FP3-C	YES
BD433M2W	3.9 to 42.0	3.3			0.2 (I_O=100mA)			✓		BD433M2WEFJ-C	BD433M2WFP3-C	YES
BD450M2W	5.5 to 42.0	5.0			0.16 (I_O=100mA)					BD450M2WEFJ-C	BD450M2WFP3-C	YES

36V Resistance 300mA Output LDO Regulator

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (mA)	Operating Temperature (°C)	Protection Circuit	Package	Automotive Grade AEC-Q100
BD3650FP-M	5.6 to 30.0	5.0	±2 (T_a=−40 to +125°C)	0.3	0.2 (I_O=200mA)	0.5	−40 to +125	Over-Current/ Temperature	TO252-3	YES

35V Resistance 2A LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package
BA15DD0T	3 to 25	1.5	±1	2.0	0.9	0.45 (I_O=2A)	55	50 (I_O=0 to 2A)	Over-Voltage/ OverCurrent/ Temperature	TO220FP-3
BA18DD0T		1.8								TO220FP-3
BA25DD0T		2.5								TO220FP-3
BA30DD0T		3.0								TO220FP-3
BA33DD0T		3.3								TO220FP-3
BA50DD0T		5.0								TO220FP-3
BA90DD0T		9.0								TO220FP-3
BAJ2DD0T		12.0								TO220FP-3
BAJ6DD0T		16.0								TO220FP-3

35V Resistance 2A LDO Regulators with Shutdown Switch

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package/Part No. TO220FP-5	Package/Part No. HRP5
BA00DD0W	3 to 25	Variable 1.5 to 16.0	±1	2.0	0.9	0.45 (I_O=2A)	55	50 (I_O=0 to 2A)	Over-Voltage/ Over-Current/ Temperature	BA00DD0WCP-V5 (TO220CP-V5)	BA00DD0WHFP
BA15DD0W		1.5								BA15DD0WT	BA15DD0WHFP
BA18DD0W		1.8								BA18DD0WT	BA18DD0WHFP
BA25DD0W		2.5								–	BA25DD0WHFP
BA30DD0W		3.0								BA30DD0WT	BA30DD0WHFP
BA33DD0W		3.3								BA33DD0WT	BA33DD0WHFP
BA50DD0W		5.0								BA50DD0WT	BA50DD0WHFP
BA90DD0W		9.0								BA90DD0WT	BA90DD0WHFP
BAJ2DD0W		12.0								BAJ2DD0WT	BAJ2DD0WHFP
BAJ6DD0W		16.0								BAJ6DD0WT	BAJ6DD0WHFP

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package/Part No. TO263-5
BD00FD0W	4 to 32	Variable 1.5 to 16.0	±1	2.0	0.5	0.4 (I_O=1A)	55	V_O×0.7% (I_O=5mA to 1A)	Over-Current/ Temperature	BD00FD0WFP2

35V Resistance 1A LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package/Part No. TO220FP-3	Package/Part No. TO252-3
BA03CC0	4 to 25	3.0	±2	1.0	2.5	0.30 (I_O=0.5A)	55	50 (I_O=5mA to 1A)	Over-Voltage/ Over-Current/ Temperature	BA03CC0T	BA03CC0FP
BA033CC0		3.3								BA033CC0T	BA033CC0FP
BA05CC0		5.0								BA05CC0T	BA05CC0FP
BA06CC0		6.0								–	BA06CC0FP
BA07CC0		7.0								BA07CC0T	BA07CC0FP
BA08CC0		8.0								BA08CC0T	BA08CC0FP
BA09CC0		9.0								BA09CC0T	BA09CC0FP
BAJ0CC0		10.0								BAJ0CC0T	BAJ0CC0FP
BAJ2CC0		12.0								BAJ2CC0T	BAJ2CC0FP
BAJ5CC0		15.0								BAJ5CC0T	BAJ5CC0FP

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (V)	Protection Circuit	Package
BD80C0AFPS	9.0 to 26.5	8.0	±1	1.0	0.6	0.30 (I_O=0.5A)	50	V_O*×0.01 (I_O=5mA to 1A)	Over-Current/ Temperature	TO252S-3
BD90C0AFPS	10.0 to 26.5	9.0								TO252S-3
BD33FC0FP	4.3 to 26.5	3.3	±1	1.0	0.6	–	55	V_O*×0.01 (I_O=5mA to 1A)	Over-Current/ Temperature	TO252-3
BD50FC0FP	6.0 to 26.5	5.0				0.30 (I_O=0.5A)				TO252-3

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (V)	Protection Circuit	Package/Part No. TO252-3	Package/Part No. HRP5	Package/Part No. TO263-3	Package/Part No. TO252S-3	Automotive Grade AEC-Q100
BD33C0A	4.3 to 26.5	3.3	±3 (T_a=−40 to +125°C)	1.0	0.5	–	55	V_O*×0.01 (I_O=5mA to 1A)	Over-Current/ Temperature	BD33C0AFP-C	BD33C0AHFP-C	BD33C0AFP2-C	–	YES
BD50C0A	6.0 to 26.5	5.0				0.3 (I_O=500mA)				BD50C0AFP-C	BD50C0AHFP-C	BD50C0AFP2-C	–	YES
BD80C0A	9.0 to 26.5	8.0					50			BD80C0AFP-C	BD80C0AHFP-C	BD80C0AFP2-C	BD80C0AFPS-C	YES
BD90C0A	10.0 to 26.5	9.0								BD90C0AFP-C	BD90C0AHFP-C	BD90C0AFP2-C	–	YES

*V_O is Output voltage/Unit: V

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

35V Resistance 1A LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision(%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (V)	Protection Circuit	Package
BD80C0AFPS-LB	9.0 to 26.5	8.0	±1	1.0	0.6	0.30 (I_O=0.5A)	50	V_O*×0.01 (I_O=5mA to 1A)	Over-Current/ Temperature	TO252S-3
BD90C0AFPS-LB	10.0 to 26.5	9.0								TO252S-3

35V Resistance 1A LDO Regulators with Shutdown Switch

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Regulation (dB)	Load Regulation (V)	Protection Circuit	Package/Part No.	
										TO252-5	HTSOP-J8
BD00FC0W	4.0 to 26.5	Variable	±1	1.0	0.5	0.3 (I_O=500mA)	55	V_O*×0.01 (I_O=5mA to 1A)	Over-Current/ Temperature	BD00FC0WFP	BD00FC0WEFJ
BD30FC0W		3.0				—				BD30FC0WFP	BD30FC0WEFJ
BD33FC0W	4.3 to 26.5	3.3								BD33FC0WFP	BD33FC0WEFJ
BD50FC0W	6.0 to 26.5	5.0				0.3 (I_O=500mA)				BD50FC0WFP	BD50FC0WEFJ
BD60FC0W	7.0 to 26.5	6.0					50			BD60FC0WFP	BD60FC0WEFJ
BD70FC0W	8.0 to 26.5	7.0								BD70FC0WFP	BD70FC0WEFJ
BD80FC0W	9.0 to 26.5	8.0								BD80FC0WFP	BD80FC0WEFJ
BD90FC0W	10.0 to 26.5	9.0								BD90FC0WFP	BD90FC0WEFJ
BDJ0FC0W	11.0 to 26.5	10.0								BDJ0FC0WFP	BDJ0FC0WEFJ
BDJ2FC0W	13.0 to 26.5	12.0								BDJ2FC0WFP	BDJ2FC0WEFJ
BDJ5FC0W	16.0 to 26.5	15.0								BDJ5FC0WFP	BDJ5FC0WEFJ

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package/Part No.	
										TO220FP-5	TO252-5
BA00CC0W	4 to 25	Variable 3.0 to 15.0	±2	1.0	2.5	0.3 (I_O=0.5A)	55	50 (I_O=5mA to 1A)	Over-Voltage/ Over-Current/ Temperature	BA00CC0WT/ BA00CC0WCP-V5 (TO220CP-V5)	BA00CC0WFP
BA03CC0W		3.0								BA03CC0WT	—
BA033CC0W		3.3								BA033CC0WT	BA033CC0WFP
BA05CC0W		5.0								BA05CC0WT	BA05CC0WFP
BA06CC0W		6.0								—	BA06CC0WFP
BA07CC0W		7.0								BA07CC0WT	BA07CC0WFP
BA08CC0W		8.0								BA08CC0WT	BA08CC0WFP
BA09CC0W		9.0								BA09CC0WT	BA09CC0WFP
BAJ0CC0W		10.0								BAJ0CC0WT	—
BAJ2CC0W		12.0								BAJ2CC0WT	BAJ2CC0WFP

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (V)	Protection Circuit	Package/Part No.	
										TO252-5	TO220CP-V5
BD00C0AW	4.0 to 26.5	Variable 3.0 to 15.0	±1	1.0	0.5	0.3 (I_O=500mA)	55	V_O*×0.01 (I_O=5mA to 1A)	Over-Current/ Temperature	BD00C0AWFP	BD00C0AWCP-V5
BD33C0AW	4.3 to 26.5	3.3				—				BD33C0AWFP	—
BD50C0AW	6.0 to 26.5	5.0				0.3 (I_O=500mA)				BD50C0AWFP	—

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Saturation Voltage (V)	Circuit Current (mA)	Operating Temperature (°C)	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00C0AWFPS-M	4.0 to 26.5	Variable 3.0 to 15.0	±3 (T_a=−40 to +105°C)	1.0	0.3 (I_O=500mA)	0.5	−40 to +105	Over-Current/ Temperature	TO252S-5	YES

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (V)	Protection Circuit	Package/Part No.			Automotive Grade AEC-Q100
										TO252-5	HRP5	TO263-5	
BD00C0AW	4.0 to 26.5	Variable 1.0 to 15.0	±3 (T_a=−40 to +125°C)	1.0	0.5	0.3 (I_O=500mA)	55	V_O*×0.01 (I_O=5mA to 1A)	Over-Current/ Temperature	BD00C0AWFP-C	BD00C0AWHFP-C	BD00C0AWFP2-C	YES
BD33C0AW	4.3 to 26.5	3.3				—				BD33C0AWFP-C	BD33C0AWHFP-C	BD33C0AWFP2-C	YES
BD50C0AW	6.0 to 26.5	5.0				0.3 (I_O=500mA)				BD50C0AWFP-C	BD50C0AWHFP-C	BD50C0AWFP2-C	YES
BD80C0AW	9.0 to 26.5	8.0					50			BD80C0AWFP-C	BD80C0AWHFP-C	BD80C0AWFP2-C	YES
BD90C0AW	10.0 to 26.5	9.0								BD90C0AWFP-C	BD90C0AWHFP-C	BD90C0AWFP2-C	YES

35V Resistance 300mA LDO Regulator with Shutdown Switch

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation	Protection Circuit	Package
BA3662CP-V5	4 to 25	Variable 3.0 to 15.0	±2	0.3	2.5	0.3 (I_O=0.2A)	55	40mV (I_O=5to 200mA)	Over-Voltage/ Over-Current/ Temperature	TO220CP-V5

30V Resistance 100mA LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Load Regulation (%)	Protection Circuit	Input Capacitor (µF)	Output Capacitor (µF)	Package
BD33FA1FP3	V_O+3 to 25	3.3	±1	0.1	0.3	1 (I_O=100mA)	±1.5	Over-Current/ Temperature	1.0	1.0	SOT89-3
BD50FA1FP3		5.0									SOT89-3
BD54FA1FP3		5.4									SOT89-3
BDJ2FA1FP3		12.0			0.4						SOT89-3

30V Resistance 100mA LDO Regulators with Shutdown Switch

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Load Regulation (%)	Protection Circuit	Input Capacitor (µF)	Output Capacitor (µF)	Package	Automotive Grade AEC-Q100
BD50FA1MG-M	V_O+3 to 25	5	±1	0.1	0.5	2 (I_O=100mA)	±1.5	Over-Current/ Temperature	1.0	1.0	SSOP5	YES

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Load Regulation (%)	Protection Circuit	Input Capacitor (µF)	Output Capacitor (µF)	Package
BD00FA1WEFJ	V_O+3 to 25	Variable (3.0 to 12.0)	±1	0.1	0.3	2 (I_O=100mA)	±1.5	Over-Current/ Temperature	2.2	2.2	HTSOP-J8

*V_O is Output voltage/Unit: V

Single-Output LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

18V Resistance 1.5A LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Protection Circuit	Package
BA15JC5T	3 to 16	1.5	±1	1.5	0.5	0.3 (I_O=500mA)	55	5 (I_O=5mA to 1.5A)	0.33	22.0	Over-Current/ Temperature	TO220FP-3
BA18JC5T		1.8										TO220FP-3
BA25JC5T		2.5										TO220FP-3
BA30JC5T		3.0										TO220FP-3
BA33JC5T		3.3										TO220FP-3
BA50JC5T		5.0										TO220FP-3
BA60JC5T		6.0										TO220FP-3
BA80JC5T		8.0										TO220FP-3
BA90JC5T		9.0										TO220FP-3

18V Resistance 1.5A LDO Regulator with Shutdown Switch

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
BA00JC5WT	3 to 16	Variable 1.5 to 12.0	±1	1.5	0.5	0.3 (I_O=500mA)	55	5 (I_O=5mA to 1.5A)	0.33	22.0	✓	Over-Current/ Temperature	TO220FP-5

18V Resistance 1A LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Protection Circuit	Package/Part No.	
												TO252-3	TO220FP-3
BA15BC0	3 to 16	1.5	±2	1.0	0.5	0.3 (I_O=200mA)	55	35 (I_O=0 to 1A)	0.33	22.0	Over-Current/ Temperature	BA15BC0FP	BA15BC0T
BA18BC0		1.8										BA18BC0FP	BA18BC0T
BA25BC0		2.5										BA25BC0FP	BA25BC0T
BA30BC0		3.0										BA30BC0FP	BA30BC0T
BA33BC0		3.3										BA33BC0FP	BA33BC0T
BA50BC0		5.0										BA50BC0FP	BA50BC0T
BA60BC0		6.0										BA60BC0FP	BA60BC0T
BA70BC0		7.0			0.6							BA70BC0FP	BA70BC0T
BA80BC0		8.0										BA80BC0FP	BA80BC0T
BA90BC0		9.0										BA90BC0FP	BA90BC0T
BAJ0BC0		10.0										BAJ0BC0FP	BAJ0BC0T

18V Resistance 1A LDO Regulators with Shutdown Switch

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Pprecision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package/Part No.	
													TO252-5	TO220FP-5
BA00BC0W	3 to 16	Variable 1.5 to 12.0	±2	1.0	0.5 (V_O≤6.0)	0.3 (I_O=200mA)	55	35 (I_O=0 to 1A)	0.33	22.0	✓	Over-Current/ Temperature	BA00BC0WFP/ BA00BC0WCP-V5 (TO220CP-V5)	BA00BC0WT
BA15BC0W		1.5			0.5								BA15BC0WFP	BA15BC0WT
BA18BC0W		1.8											BA18BC0WFP	BA18BC0WT
BA25BC0W		2.5											BA25BC0WFP	BA25BC0WT
BA30BC0W		3.0											BA30BC0WFP	BA30BC0WT
BA33BC0W		3.3											BA33BC0WFP	BA33BC0WT
BA50BC0W		5.0											BA50BC0WFP	BA50BC0WT
BA60BC0W		6.0											BA60BC0WFP	BA60BC0WT
BA70BC0W		7.0			0.6								BA70BC0WFP	BA70BC0WT
BA80BC0W		8.0											BA80BC0WFP	BA80BC0WT
BA90BC0W		9.0											BA90BC0WFP	BA90BC0WT
BAJ0BC0W		10.0											BAJ0BC0WFP	BAJ0BC0WT

*V_O is Output Voltage/Unit: V

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

15V Resistance 1A LDO Regulators with Shutdown Switch

Part No. / Consumer/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00GC0WEFJ/BD00GC0MEFJ-M	4.5 to 14.0	Variable 1.5 to 13.0	±1 (T_a=+25°C)/ ±3 (T_a=−40 to +105°C) <Automotive Grade>	1.0	0.6	0.6 (I_O=1A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/YES
BD15GC0WEFJ/BD15GC0MEFJ-M		1.5											HTSOP-J8	—/YES
BD18GC0WEFJ/BD18GC0MEFJ-M		1.8											HTSOP-J8	—/YES
BD25GC0WEFJ/BD25GC0MEFJ-M		2.5											HTSOP-J8	—/YES
BD30GC0WEFJ/BD30GC0MEFJ-M		3.0											HTSOP-J8	—/YES
BD33GC0WEFJ/BD33GC0MEFJ-M		3.3											HTSOP-J8	—/YES
BD50GC0WEFJ/BD50GC0MEFJ-M		5.0											HTSOP-J8	—/YES
BD60GC0WEFJ/BD60GC0MEFJ-M		6.0											HTSOP-J8	—/YES
BD70GC0WEFJ/BD70GC0MEFJ-M		7.0											HTSOP-J8	—/YES
BD80GC0WEFJ/BD80GC0MEFJ-M		8.0											HTSOP-J8	—/YES
BD90GC0WEFJ/BD90GC0MEFJ-M		9.0											HTSOP-J8	—/YES
BDJ0GC0WEFJ/BDJ0GC0MEFJ-M		10.0											HTSOP-J8	—/YES
BDJ2GC0WEFJ/BDJ2GC0MEFJ-M		12.0											HTSOP-J8	—/YES

15V Resistance 1A Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
BD00GC0MEFJ-LB	4.5 to 14.0	Variable 1.5 to 13.0	±1/±3 (T_a=−40 to +105°C)	1.0	0.6	0.6 (I_O=1A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
BD15GC0MEFJ-LB		1.5											HTSOP-J8
BD18GC0MEFJ-LB		1.8											HTSOP-J8
BD25GC0MEFJ-LB		2.5											HTSOP-J8
BD30GC0MEFJ-LB		3.0											HTSOP-J8
BD33GC0MEFJ-LB		3.3											HTSOP-J8
BD50GC0MEFJ-LB		5.0											HTSOP-J8
BD60GC0MEFJ-LB		6.0											HTSOP-J8
BD70GC0MEFJ-LB		7.0											HTSOP-J8
BD80GC0MEFJ-LB		8.0											HTSOP-J8
BD90GC0MEFJ-LB		9.0											HTSOP-J8
BDJ0GC0MEFJ-LB		10.0											HTSOP-J8
BDJ2GC0MEFJ-LB		12.0											HTSOP-J8

15V Voltage Resistance 500mA LDO Regulators with Shutdown Switch

Part No. / Consumer/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output voltage precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection circuit	Package	Automotive Grade AEC-Q100
BD00GA5WEFJ/BD00GA5MEFJ-M	4.5 to 14.0	Variable 1.5 to 13.0	±1 (T_a=25°C)/ ±3 (T_a=−40 to +105°C) <Automotive Grade>	0.5	0.6	0.6 (I_O=500mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/YES
BD15GA5WEFJ/BD15GA5MEFJ-M		1.5											HTSOP-J8	—/YES
BD18GA5WEFJ/BD18GA5MEFJ-M		1.8											HTSOP-J8	—/YES
BD25GA5WEFJ/BD25GA5MEFJ-M		2.5											HTSOP-J8	—/YES
BD30GA5WEFJ/BD30GA5MEFJ-M		3.0											HTSOP-J8	—/YES
BD33GA5WEFJ/BD33GA5MEFJ-M		3.3											HTSOP-J8	—/YES
BD50GA5WEFJ/BD50GA5MEFJ-M		5.0											HTSOP-J8	—/YES
BD60GA5WEFJ/BD60GA5MEFJ-M		6.0											HTSOP-J8	—/YES
BD70GA5WEFJ/BD70GA5MEFJ-M		7.0											HTSOP-J8	—/YES
BD80GA5WEFJ/BD80GA5MEFJ-M		8.0											HTSOP-J8	—/YES
BD90GA5WEFJ/BD90GA5MEFJ-M		9.0											HTSOP-J8	—/YES
BDJ0GA5WEFJ/BDJ0GA5MEFJ-M		10.0											HTSOP-J8	—/YES
BDJ2GA5WEFJ/BDJ2GA5MEFJ-M		12.0											HTSOP-J8	—/YES

Single-Output LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

15V Resistance 500mA Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
BD00GA5MEFJ-LB	4.5 to 14.0	Variable 1.5 to 13.0	±1/±3 (T_a=−40 to +105°C)	0.5	0.6	0.6 (I_O=500mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
BD15GA5MEFJ-LB		1.5											HTSOP-J8
BD18GA5MEFJ-LB		1.8											HTSOP-J8
BD25GA5MEFJ-LB		2.5											HTSOP-J8
BD30GA5MEFJ-LB		3.0											HTSOP-J8
BD33GA5MEFJ-LB		3.3											HTSOP-J8
BD50GA5MEFJ-LB		5.0											HTSOP-J8
BD60GA5MEFJ-LB		6.0											HTSOP-J8
BD70GA5MEFJ-LB		7.0											HTSOP-J8
BD80GA5MEFJ-LB		8.0											HTSOP-J8
BD90GA5MEFJ-LB		9.0											HTSOP-J8
BDJ0GA5MEFJ-LB		10.0											HTSOP-J8
BDJ2GA5MEFJ-LB		12.0											HTSOP-J8

15V Resistance 300mA LDO Regulators with Shutdown Switch

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package/Part No.	
													HTSOP-J8	VSON008X2030
BD00GA3W	4.5 to 14.0	Variable 1.5 to 13.0	±1	0.3	0.6	0.6 (I_O=300mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	BD00GA3WEFJ	BD00GA3WNUX
BD15GA3W		1.5											BD15GA3WEFJ	☆BD15GA3WNUX
BD18GA3W		1.8											BD18GA3WEFJ	☆BD18GA3WNUX
BD25GA3W		2.5											BD25GA3WEFJ	☆BD25GA3WNUX
BD30GA3W		3.0											BD30GA3WEFJ	BD30GA3WNUX
BD33GA3W		3.3											BD33GA3WEFJ	☆BD33GA3WNUX
BD50GA3W		5.0											BD50GA3WEFJ	BD50GA3WNUX
BD60GA3W		6.0											BD60GA3WEFJ	BD60GA3WNUX
BD70GA3W		7.0											BD70GA3WEFJ	☆BD70GA3WNUX
BD80GA3W		8.0											BD80GA3WEFJ	☆BD80GA3WNUX
BD90GA3W		9.0											BD90GA3WEFJ	☆BD90GA3WNUX
BDJ0GA3W		10.0											BDJ0GA3WEFJ	☆BDJ0GA3WNUX
BDJ2GA3W		12.0											BDJ2GA3WEFJ	☆BDJ2GA3WNUX

15V Resistance 300mA LDO Regulators with Shutdown Switch

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00GA3MEFJ-M	4.5 to 14.0	Variable 1.5 to 13.0	±3 (T_a=−40 to +105°C) <Automotive Grade>	0.3	0.6	0.6 (I_O=300mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	YES
BD15GA3MEFJ-M		1.5											HTSOP-J8	YES
BD18GA3MEFJ-M		1.8											HTSOP-J8	YES
BD25GA3MEFJ-M		2.5											HTSOP-J8	YES
BD30GA3MEFJ-M		3.0											HTSOP-J8	YES
BD33GA3MEFJ-M		3.3											HTSOP-J8	YES
BD50GA3MEFJ-M		5.0											HTSOP-J8	YES
BD60GA3MEFJ-M		6.0											HTSOP-J8	YES
BD70GA3MEFJ-M		7.0											HTSOP-J8	YES
BD80GA3MEFJ-M		8.0											HTSOP-J8	YES
BD90GA3MEFJ-M		9.0											HTSOP-J8	YES
BDJ0GA3MEFJ-M		10.0											HTSOP-J8	YES
BDJ2GA3MEFJ-M		12.0											HTSOP-J8	YES

15V Resistance 300mA Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
BD00GA3MEFJ-LB	4.5 to 14.0	Variable 1.5 to 13.0	±3 (T_a=−40 to +105°C)	0.3	0.6	0.6 (I_O=300mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
BD15GA3MEFJ-LB		1.5											HTSOP-J8
BD18GA3MEFJ-LB		1.8											HTSOP-J8
BD25GA3MEFJ-LB		2.5											HTSOP-J8
BD30GA3MEFJ-LB		3.0											HTSOP-J8
BD33GA3MEFJ-LB		3.3											HTSOP-J8
BD50GA3MEFJ-LB		5.0											HTSOP-J8
BD60GA3MEFJ-LB		6.0											HTSOP-J8
BD70GA3MEFJ-LB		7.0											HTSOP-J8
BD80GA3MEFJ-LB		8.0											HTSOP-J8
BD90GA3MEFJ-LB		9.0											HTSOP-J8
BDJ0GA3MEFJ-LB		10.0											HTSOP-J8
BDJ2GA3MEFJ-LB		12.0											HTSOP-J8

☆: Under Development

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

10V Resistance 1.5A LDO Regulators with Shutdown Switch

Part No. / Consumer/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output Voltage precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00HC5WEFJ/BD00HC5MEFJ-M	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T_a=25°C)/ ±3 (T_a=−40 to +105°C) <Automotive Grade>	1.5	0.6	0.6 (I_O=1.5A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1.5A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/YES
BD15HC5WEFJ/BD15HC5MEFJ-M		1.5											HTSOP-J8	—/YES
BD18HC5WEFJ/BD18HC5MEFJ-M		1.8											HTSOP-J8	—/YES
BD25HC5WEFJ/BD25HC5MEFJ-M		2.5											HTSOP-J8	—/YES
BD30HC5WEFJ/BD30HC5MEFJ-M		3.0											HTSOP-J8	—/YES
BD33HC5WEFJ/BD33HC5MEFJ-M		3.3											HTSOP-J8	—/YES
BD50HC5WEFJ/BD50HC5MEFJ-M		5.0											HTSOP-J8	—/YES
BD60HC5WEFJ/BD60HC5MEFJ-M		6.0											HTSOP-J8	—/YES
BD70HC5WEFJ/BD70HC5MEFJ-M		7.0											HTSOP-J8	—/YES

10V Resistance 1.5A Variable/Fixed Output LDO Regulators

Part No. / Industrial Equipment/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00HC5MEFJ-LB	4.5 to 8.0	Variable 1.5 to 7.0	±1/±3 (T_a=−40 to +105°C)	1.5	0.6	0.6 (I_O=1.5A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1.5A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—
BD15HC5MEFJ-LB		1.5											HTSOP-J8	—
BD18HC5MEFJ-LB		1.8											HTSOP-J8	—
BD25HC5MEFJ-LB		2.5											HTSOP-J8	—
BD30HC5MEFJ-LB		3.0											HTSOP-J8	—
BD33HC5MEFJ-LB		3.3											HTSOP-J8	—
BD50HC5MEFJ-LB/ BD50HC5MEFJ-C		5.0											HTSOP-J8	—/YES
BD60HC5MEFJ-LB		6.0											HTSOP-J8	—
BD70HC5MEFJ-LB		7.0											HTSOP-J8	—

10V Resistance 1A LDO Regulators with Shutdown Switch

Part No. / Consumer/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00HC0WEFJ/BD00HC0MEFJ-M	4.5 to 8.0	Variable 0.8 to 7.0 (Automotive Grade Variable 1.5 to 7.0)	±1 (T_a=+25°C)/ ±3 (T_a=−40 to +105°C) <Automotive Grade>	1.0	0.6	0.6 (I_O=1A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/YES
BD15HC0WEFJ/BD15HC0MEFJ-M		1.5											HTSOP-J8	—/YES
BD18HC0WEFJ/BD18HC0MEFJ-M		1.8											HTSOP-J8	—/YES
BD25HC0WEFJ/BD25HC0MEFJ-M		2.5											HTSOP-J8	—/YES
BD30HC0WEFJ/BD30HC0MEFJ-M		3.0											HTSOP-J8	—/YES
BD33HC0WEFJ/BD33HC0MEFJ-M		3.3											HTSOP-J8	—/YES
BD50HC0WEFJ/BD50HC0MEFJ-M		5.0											HTSOP-J8	—/YES
BD60HC0WEFJ/BD60HC0MEFJ-M		6.0											HTSOP-J8	—/YES
BD70HC0WEFJ/BD70HC0MEFJ-M		7.0											HTSOP-J8	—/YES

10V Resistance 1A Variable/Fixed Output LDO Regulators(Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
BD00HC0MEFJ-LB	4.5 to 8.0	Variable 0.8 to 7.0 (Variable 1.5 to 7.0)	±1/±3 (T_a=−40 to +105°C)	1.0	0.6	0.6 (I_O=1A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
BD15HC0MEFJ-LB		1.5											HTSOP-J8
BD18HC0MEFJ-LB		1.8											HTSOP-J8
BD25HC0MEFJ-LB		2.5											HTSOP-J8
BD30HC0MEFJ-LB		3.0											HTSOP-J8
BD33HC0MEFJ-LB		3.3											HTSOP-J8
BD50HC0MEFJ-LB		5.0											HTSOP-J8
BD60HC0MEFJ-LB		6.0											HTSOP-J8
BD70HC0MEFJ-LB		7.0											HTSOP-J8

10V Resistance 500mA LDO Regulators with Shutdown Switch

Part No. / Consumer/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00HA5WEFJ/BD00HA5MEFJ-M	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T_a=+25°C)/ ±3 (T_a=−40 to +105°C) <Automotive Grade>	0.5	0.6	0.6 (I_O=500mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/YES
BD15HA5WEFJ/BD15HA5MEFJ-M		1.5											HTSOP-J8	—/YES
BD18HA5WEFJ/BD18HA5MEFJ-M		1.8											HTSOP-J8	—/YES
BD25HA5WEFJ/BD25HA5MEFJ-M		2.5											HTSOP-J8	—/YES
BD30HA5WEFJ/BD30HA5MEFJ-M		3.0											HTSOP-J8	—/YES
BD33HA5WEFJ/BD33HA5MEFJ-M		3.3											HTSOP-J8	—/YES
BD50HA5WEFJ/BD50HA5MEFJ-M		5.0											HTSOP-J8	—/YES
BD60HA5WEFJ/BD60HA5MEFJ-M		6.0											HTSOP-J8	—/YES
BD70HA5WEFJ/BD70HA5MEFJ-M		7.0											HTSOP-J8	—/YES

Single-Output LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

10V Resistance 500mA Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
BD00HA5MEFJ-LB	4.5 to 8.0	Variable 1.5 to 7.0	±1/±3 (T_a=−40 to +105°C)	0.5	0.6	0.6 (I_O=500mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
BD15HA5MEFJ-LB		1.5											HTSOP-J8
BD18HA5MEFJ-LB		1.8											HTSOP-J8
BD25HA5MEFJ-LB		2.5											HTSOP-J8
BD30HA5MEFJ-LB		3.0											HTSOP-J8
BD33HA5MEFJ-LB		3.3											HTSOP-J8
BD50HA5MEFJ-LB		5.0											HTSOP-J8
BD60HA5MEFJ-LB		6.0											HTSOP-J8
BD70HA5MEFJ-LB		7.0											HTSOP-J8

10V Resistance 300mA LDO Regulators with Shutdown Switch

Part No. / Consumer/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection circuit	Package	Automotive Grade AEC-Q100
BD00HA3WEFJ/BD00HA3MEFJ-M	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T_a= +25°C) /±3 (T_a=−40 to +105°C) <Automotive Grade>	0.3	0.6	0.6 (I_O=300mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/YES
BD15HA3WEFJ/BD15HA3MEFJ-M		1.5											HTSOP-J8	—/YES
BD18HA3WEFJ/BD18HA3MEFJ-M		1.8											HTSOP-J8	—/YES
BD25HA3WEFJ/BD25HA3MEFJ-M		2.5											HTSOP-J8	—/YES
BD30HA3WEFJ/BD30HA3MEFJ-M		3.0											HTSOP-J8	—/YES
BD33HA3WEFJ/BD33HA3MEFJ-M		3.3											HTSOP-J8	—/YES
BD50HA3WEFJ/BD50HA3MEFJ-M		5.0											HTSOP-J8	—/YES
BD60HA3WEFJ/BD60HA3MEFJ-M		6.0											HTSOP-J8	—/YES
BD70HA3WEFJ/BD70HA3MEFJ-M		7.0											HTSOP-J8	—/YES

10V Resistance 300mA Variable/Fixed Output Industrial LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection circuit	Package
BD00HA3MEFJ-LB	4.5 to 8.0	Variable 1.5 to 7.0	±1/±3 (T_a=−40 to +105°C)	0.3	0.6	0.6 (I_O=300mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
BD15HA3MEFJ-LB		1.5											HTSOP-J8
BD18HA3MEFJ-LB		1.8											HTSOP-J8
BD25HA3MEFJ-LB		2.5											HTSOP-J8
BD30HA3MEFJ-LB		3.0											HTSOP-J8
BD33HA3MEFJ-LB		3.3											HTSOP-J8
BD50HA3MEFJ-LB		5.0											HTSOP-J8
BD60HA3MEFJ-LB		6.0											HTSOP-J8
BD70HA3MEFJ-LB		7.0											HTSOP-J8

7V Resistance 1A LDO Regulators with Shutdown Switch

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package/Part No. HTSOP-J8	Package/Part No. HVSOF6
BD00IC0W	2.4 to 5.5	Variable 0.8 to 4.5	±1	1.0	0.3	0.4 (I_O=1A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	BD00IC0WEFJ	BD00IC0WHFV
BD10IC0W		1.0											BD10IC0WEFJ	BD10IC0WHFV
BD12IC0W		1.2											BD12IC0WEFJ	BD12IC0WHFV
BD1CIC0W		1.25											—	BD1CIC0WHFV
BD15IC0W		1.5											BD15IC0WEFJ	BD15IC0WHFV
BD18IC0W		1.8											BD18IC0WEFJ	BD18IC0WHFV
BD25IC0W		2.5											BD25IC0WEFJ	BD25IC0WHFV
BD26IC0W		2.6											—	BD26IC0WHFV
BD30IC0W		3.0											BD30IC0WEFJ	BD30IC0WHFV
BD33IC0W		3.3											BD33IC0WEFJ	BD33IC0WHFV

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00IC0MEFJ-M	2.4 to 5.5	Variable 0.8 to 4.5	±3 (T_a=−40 to +105°C)	1.0	0.3	0.4 (I_O=1A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	YES
BD10IC0MEFJ-M		1.0											HTSOP-J8	YES
BD12IC0MEFJ-M		1.2											HTSOP-J8	YES
BD15IC0MEFJ-M		1.5											HTSOP-J8	YES
BD18IC0MEFJ-M		1.8											HTSOP-J8	YES
BD25IC0MEFJ-M		2.5											HTSOP-J8	YES
BD30IC0MEFJ-M		3.0											HTSOP-J8	YES
BD33IC0MEFJ-M		3.3											HTSOP-J8	YES

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

7V Resistance 1A Variable/Fixed Output LDO Regulators

Part No. / Industrial Equipment/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection circuit	Package	Automotive Grade AEC-Q100
BD00IC0MEFJ-LB	2.3 to 5.5	Variable 0.8 to 4.5	±3 (T_a=−40 to +105°C)	1.0	0.3	0.4 (I_O=1A)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—
BD10IC0MEFJ-LB	2.4 to 5.5	1.0											HTSOP-J8	—
BD12IC0MEFJ-LB		1.2											HTSOP-J8	—
BD15IC0MEFJ-LB		1.5											HTSOP-J8	—
BD18IC0MEFJ-LB		1.8											HTSOP-J8	—
BD25IC0MEFJ-LB		2.5											HTSOP-J8	—
BD30IC0MEFJ-LB		3.0											HTSOP-J8	—
BD33IC0MEFJ-LB/ BD33IC0MEFJ-C		3.3											HTSOP-J8	—/YES

7V Resistance 500mA LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Protection Circuit	Package
BD10KA5FP	2.3 to 5.5	1.0	±1	0.5	0.35	0.12 (I_O=200mA)	50	25 (I_O=0 to 500mA)	1.0	1.0	Over-Current/ Temperature	TO252-3
BD12KA5FP		1.2										TO252-3
BD15KA5FP		1.5										TO252-3
BD18KA5FP		1.8										TO252-3
BD25KA5FP		2.5										TO252-3
BD30KA5FP		3.0										TO252-3
BD33KA5FP		3.3										TO252-3

7V Resistance 500mA LDO Regulators with Shutdown Switch

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package/Part No. TO252-5	Package/Part No. SOP8
BD00KA5W	2.3 to 5.5	Variable 1.0 to 4.0	±1	0.5	0.35	0.12 (I_O=200mA)	50	25 (0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	BD00KA5WFP	BD00KA5WF
BD10KA5W		1.0											BD10KA5WFP	BD10KA5WF
BD12KA5W		1.2											BD12KA5WFP	BD12KA5WF
BD15KA5W		1.5											BD15KA5WFP	BD15KA5WF
BD18KA5W		1.8											BD18KA5WFP	BD18KA5WF
BD25KA5W		2.5											BD25KA5WFP	BD25KA5WF
BD30KA5W		3.0											BD30KA5WFP	BD30KA5WF
BD33KA5W		3.3											BD33KA5WFP	BD33KA5WF

Part No. / Consumer/Automotive Grade	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00IA5WEFJ/BD00IA5MEFJ-M	2.4 to 5.5	Variable 0.8 to 4.5	±1 (T_a=+25°C)/ ±3 (T_a=−40 to +105°C) <Automotive Grade>	0.5	0.25	0.4 (I_O=500mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/YES
BD10IA5WEFJ/BD10IA5MEFJ-M		1.0											HTSOP-J8	—/YES
BD12IA5WEFJ/BD12IA5MEFJ-M		1.2											HTSOP-J8	—/YES
BD15IA5WEFJ/BD15IA5MEFJ-M		1.5											HTSOP-J8	—/YES
BD18IA5WEFJ/BD18IA5MEFJ-M		1.8											HTSOP-J8	—/YES
BD25IA5WEFJ/BD25IA5MEFJ-M		2.5											HTSOP-J8	—/YES
BD30IA5WEFJ/BD30IA5MEFJ-M		3.0											HTSOP-J8	—/YES
BD33IA5WEFJ/BD33IA5MEFJ-M		3.3											HTSOP-J8	—/YES

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	Automotive Grade AEC-Q100
BD00IA5MHFV-M	2.4 to 5.5	Variable 0.8 to 4.5	±1 (T_a=+25°C)/ ±3 (T_a=−40 to +105°C) <Automotive Grade>	0.5	0.25	0.4 (I_O=500mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HVSOF6	YES

Single-Output LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

7V Resistance 500mA Variable/Fixed Output LDO Regulators(Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (µF)	Output Capacitor (µF)	Shutdown Switch	Protection Circuit	Package
BD00IA5MEFJ-LB	2.4 to 5.5	Variable 0.8 to 4.5	±1/±3 (T_a=−40 to +105°C)	0.5	0.25	0.4 (I_O=500mA)	60 (f=100Hz, 50mV_{PP}, I_O=0A)	25 (I_O=0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
BD10IA5MEFJ-LB		1.0											HTSOP-J8
BD12IA5MEFJ-LB		1.2											HTSOP-J8
BD15IA5MEFJ-LB		1.5											HTSOP-J8
BD18IA5MEFJ-LB		1.8											HTSOP-J8
BD25IA5MEFJ-LB		2.5											HTSOP-J8
BD30IA5MEFJ-LB		3.0											HTSOP-J8
BD33IA5MEFJ-LB		3.3											HTSOP-J8

6.5V Resistance 500mA Full CMOS LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (µA)	I/O Voltage Difference (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package
BU18SD5WG	1.7 to 6.0	1.8	±1	0.5	33.0	150 (I_O=100mA)	68	0.5	Over Current/ Temperature	SSOP5
BU33SD5WG		3.3				85 (I_O=100mA)				SSOP5

6.5V Resistance 500mA Full CMOS LDO Regulators with Shutdown Switch WL-CSP type

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package
BU30SA5WGWZ	1.8 to 5.0	3	±1	0.5	0.033	0.08 (I_O=100mA)	70dB (f=1kHz)	6 (I_{OUT}=0.01mA to 300mA)	Over Current/ Temperature	UCSP30L1
BU33SA5WGWZ		3.3								UCSP30L1

6.5V Resistance 300mA CMOS LDO Regulators with Shutdown Switch

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (µA)	Output Short Current (mA)	Input Capacitor (µF)	Output Capacitor (µF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function	Soft Start Function	Package
BH15M0AWHFV	2.5 to 5.5	1.5	±25mV	0.3	–	60	6 (I_O=1 to 100mA)	65	100	1.0	1.0	✓	✓	✓	–	–	HVSOF6
BH18M0AWHFV		1.8															HVSOF6
BH20M0AWHFV		2.0															HVSOF6
BH21M0AWHFV		2.1															HVSOF6
BH25M0AWHFV		2.5	±1		60 (I_O=100mA)												HVSOF6
BH26M0AWHFV		2.6															HVSOF6
BH27M0AWHFV		2.7															HVSOF6
BH28M0AWHFV		2.8															HVSOF6
BH29M0AWHFV		2.9															HVSOF6
BH30M0AWHFV		3.0															HVSOF6
BH31M0AWHFV		3.1															HVSOF6
BH32M0AWHFV		3.2															HVSOF6
BH33M0AWHFV		3.3															HVSOF6
BH34M0AWHFV		3.4															HVSOF6

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

6.5V Resistance 200mA CMOS LDO Regulators with Shutdown Switch

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function	Package/Part No.	
																SSON004X1010	SSOP5
BUxxTD2WNVX series / **BUxxTD3WG** series	1.7 to 5.5	1.0	±25mV	0.2	—	70	10 (I_O=1 to 100mA)	35	70	0.47	0.47	✓	✓	✓	✓	BU10TD2WNVX	BU10TD3WG
		1.05														BU1ATD2WNVX	—
		1.1														BU11TD2WNVX	BU11TD3WG
		1.15														BU1BTD2WNVX	—
		1.2														BU12TD2WNVX	BU12TD3WG
		1.25														BU1CTD2WNVX	BU1CTD3WG
		1.3														—	BU13TD3WG
		1.5														BU15TD2WNVX	BU15TD3WG
		1.8														BU18TD2WNVX	BU18TD3WG
		1.85														BU1JTD2WNVX	BU1JTD3WG
		1.9														BU19TD2WNVX	BU19TD3WG
		2.0														BU20TD2WNVX	BU20TD3WG
		2.05														BU2ATD2WNVX	—
		2.1														BU21TD2WNVX	BU21TD3WG
		2.3														BU23TD2WNVX	—
		2.5	±1		280 (I_O=200mA)											BU25TD2WNVX	BU25TD3WG
		2.6														BU26TD2WNVX	BU26TD3WG
		2.7			260 (I_O=200mA)											BU27TD2WNVX	BU27TD3WG
		2.75														BU2HTD2WNVX	—
		2.8														BU28TD2WNVX	BU28TD3WG
		2.85														BU2JTD2WNVX	BU2JTD3WG
		2.9			240 (I_O=200mA)											BU29TD2WNVX	BU29TD3WG
		3.0														BU30TD2WNVX	BU30TD3WG
		3.1														BU31TD2WNVX	BU31TD3WG
		3.2			220 (I_O=200mA)											BU32TD2WNVX	BU32TD3WG
		3.3														BU33TD2WNVX	BU33TD3WG
		3.4														BU34TD2WNVX	BU34TD3WG

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function	Package/Part No.	
																SSON004X1216	HVSOF5
BU15TA2W	2.5 to 5.5	1.5	±25mV	0.2	—	70	10 (I_O=0.01 to 100mA)	40	70	1.0	1.0	✓	✓	✓	✓	BU15TA2WNVX	BU15TA2WHFV
BU18TA2W		1.8														BU18TA2WNVX	BU18TA2WHFV
BU25TA2W		2.5	±1		400 (I_O=200mA)	65										BU25TA2WNVX	BU25TA2WHFV
BU26TA2W		2.6														BU26TA2WNVX	BU26TA2WHFV
BU27TA2W		2.7			360 (I_O=200mA)											BU27TA2WNVX	BU27TA2WHFV
BU28TA2W		2.8														BU28TA2WNVX	BU28TA2WHFV
BU2JTA2W		2.85														BU2JTA2WNVX	BU2JTA2WHFV
BU29TA2W		2.9			330 (I_O=200mA)											BU29TA2WNVX	BU29TA2WHFV
BU30TA2W		3.0														BU30TA2WNVX	BU30TA2WHFV
BU31TA2W		3.1														BU31TA2WNVX	BU31TA2WHFV
BU32TA2W		3.2			300 (I_O=200mA)											BU32TA2WNVX	BU32TA2WHFV
BU33TA2W		3.3														BU33TA2WNVX	BU33TA2WHFV
BU34TA2W		3.4														BU34TA2WNVX	BU34TA2WHFV

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function	Package	Automotive Grade AEC-Q100
BU12SD2MG-M	1.7 to 6.0	1.2	±2 (T_a=−40 to +105°C)	0.2	400 (I_O=100mA)	68	1 (I_O=1 to 200mA)	33	100	1.0	1.0	✓	✓	✓	—	SSOP5	YES
BU15SD2MG-M		1.5			280 (I_O=100mA)											SSOP5	YES
BU18SD2MG-M		1.8			150 (I_O=100mA)											SSOP5	YES
BU25SD2MG-M		2.5			100 (I_O=100mA)											SSOP5	YES
BU28SD2MG-M		2.8			85 (I_O=100mA)											SSOP5	YES
BU30SD2MG-M		3.0														SSOP5	YES
BU33SD2MG-M		3.3														SSOP5	YES

Single-Output LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

6.5V Resistance 200mA CMOS LDO Regulators with Shutdown Switch

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function	Package	Automotive Grade AEC-Q100
BU10JA2MNVX-C	1.7 to 6.0	1.0	±36mV	0.2	800	70	10	35	70	0.47	0.47	✓	✓	✓	✓	SSON004R1010	YES
BU11JA2MNVX-C		1.1														SSON004R1010	YES
BU12JA2MNVX-C		1.2			600											SSON004R1010	YES
BU1CJA2MNVX-C		1.25														SSON004R1010	YES
BU15JA2MNVX-C		1.5			440											SSON004R1010	YES
BU18JA2MNVX-C		1.8	±2		380											SSON004R1010	YES
BU25JA2MNVX-C		2.5			280											SSON004R1010	YES
BU28JA2MNVX-C		2.8			260											SSON004R1010	YES
BU2JJA2MNVX-C		2.85														SSON004R1010	YES
BU29JA2MNVX-C		2.9			240											SSON004R1010	YES
BU30JA2MNVX-C		3.0														SSON004R1010	YES
BU33JA2MNVX-C		3.3			220											SSON004R1010	YES
New BU34JA2MNVX-C		3.4														SSON004R1010	YES
BU10JA2VG-C		1.0			–	68	0.5	33	100	1.0	1.0	✓	✓	✓	–	SSOP5	YES
BU12JA2VG-C		1.2														SSOP5	YES
BU1CJA2VG-C		1.25														SSOP5	YES
BU15JA2VG-C		1.5														SSOP5	YES
BU18JA2VG-C		1.8			160											SSOP5	YES
BU25JA2VG-C		2.5	±2		100											SSOP5	YES
BU28JA2VG-C		2.8			85											SSOP5	YES
BU2JJA2VG-C		2.85														SSOP5	YES
BU30JA2VG-C		3.0														SSOP5	YES
BU33JA2VG-C		3.3														SSOP5	YES
BU10JA2DG-C		1.0			–										✓	SSOP5	YES
BU12JA2DG-C		1.2														SSOP5	YES
BU1CJA2DG-C		1.25														SSOP5	YES
BU15JA2DG-C		1.5														SSOP5	YES
BU18JA2DG-C		1.8			160											SSOP5	YES
BU25JA2DG-C		2.5			100											SSOP5	YES
BU28JA2DG-C		2.8			85											SSOP5	YES
BU2JJA2DG-C		2.85														SSOP5	YES
BU30JA2DG-C		3.0														SSOP5	YES
BU33JA2DG-C		3.3														SSOP5	YES

6.5V Resistance 200mA CMOS LDO Regulators with Shutdown Switch WL-CSP type

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function	Package (mm)
BU18SA4WGWL	1.7 to 5.5	1.8	±2	0.2	100 (I_O=150mA)	70	2 (I_O=1 to 100mA)	40	100	0.47	0.47	✓	✓	✓	–	UCSP50L1 0.8×0.8, H=Max 0.55mm
BU25SA4WGWL		2.5														UCSP50L1 0.8×0.8, H=Max 0.55mm
BU2FSA4WGWL		2.55			80 (I_O=150mA)											UCSP50L1 0.8×0.8, H=Max 0.55mm
BU28SA4WGWL		2.8														UCSP50L1 0.8×0.8, H=Max 0.55mm
BU30SA4WGWL		3.0														UCSP50L1 0.8×0.8, H=Max 0.55mm
BU33SA4WGWL		3.3														UCSP50L1 0.8×0.8, H=Max 0.55mm

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

6.5V Resistance 150mA CMOS LDO Regulators with Shutdown Switch

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over Current Protection	Temperature Protection	Package
BH25NB1WHFV	2.5 to 5.5	2.5	±1	0.15	250 (I_O=100mA)	80	6 (I_O=1 to 100mA)	60	50	0.1	2.2	✓	✓	✓	HVSOF5
BH28NB1WHFV		2.8													HVSOF5
BH2JNB1WHFV		2.85													HVSOF5
BH29NB1WHFV		2.9													HVSOF5
BH30NB1WHFV		3.0													HVSOF5
BH31NB1WHFV		3.1													HVSOF5
BH33NB1WHFV		3.3													HVSOF5

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over Current Protection	Temperature Protection	Package (mm)
BH15RB1WGUT	2.5 to 5.5	1.5	±25mV	0.15	—	63	2 (I_O=1 to 100mA)	34	40	1.0	1.0	✓	✓	✓	VCSP60N1 1.04×1.0, H=Max 0.675
BH18RB1WGUT		1.8													VCSP60N1 1.04×1.0, H=Max 0.675
BH25RB1WGUT		2.5	±1		100 (I_O=100mA)										VCSP60N1 1.04×1.0, H=Max 0.675
BH28RB1WGUT		2.8													VCSP60N1 1.04×1.0, H=Max 0.675
BH29RB1WGUT		2.9													VCSP60N1 1.04×1.0, H=Max 0.675
BH30RB1WGUT		3.0													VCSP60N1 1.04×1.0, H=Max 0.675
BH31RB1WGUT		3.1													VCSP60N1 1.04×1.0, H=Max 0.675
BH33RB1WGUT		3.3													VCSP60N1 1.04×1.0, H=Max 0.675

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)		Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)		Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function	Package
			High Speed Mode	Low I_{CC} Mode					High Speed Mode	Low I_{CC} Mode								
BH12PB1WHFV	1.7 to 5.5	1.2	±25mV	−3.3 to +4.3	0.15	—	60 (High speed mode)	10 (I_O=10 to 100mA)	20	2	50	0.47	0.47	✓	✓	✓	✓	HVSOF5
BH15PB1WHFV		1.5																HVSOF5
BH18PB1WHFV		1.8																HVSOF5
BH25PB1WHFV		2.5	±1	−3.0 to +3.8		210 (I_O=100mA)												HVSOF5
BH28PB1WHFV		2.8																HVSOF5
BH29PB1WHFV		2.9																HVSOF5
BH30PB1WHFV		3.0																HVSOF5
BH31PB1WHFV		3.1																HVSOF5
BH33PB1WHFV		3.3																HVSOF5

Ultra LDO type, Fast Transient Response

Part No.	Output Current (A)	Input Voltage (V)		Output Voltage (V)	Voltage Accuracy (%)	Power Good	Adjustable Soft Start	UVLO	OCP	TSD	Package
		V_{CC}	V_{IN}								
BD3550HFN	0.5	4.3 to 5.5	0.95 to (V_{CC}−1)	0.65 to 2.70	±1	—	✓	✓	Recovery	Recovery	HSON8
BD3507HFV	0.55	4.5 to 5.5	1.2 to (V_{CC}−1)								HVSOF6
BD3551HFN	1.0	4.3 to 5.5	0.95 to (V_{CC}−1)								HSON8
BD3506F	2.5		1.2 to (V_{CC}−1)	0.65 to 2.50							SOP8
BD3552HFN	2.0		0.95 to (V_{CC}−1)	0.65 to 2.70							HSON8
BD3508MUV	3.0		0.75 to (V_{CC}−1)								VQFN020V4040
BD3540NUV	0.5	3.0 to 5.5	0.95 to (V_{CC}−1)	0.65 to 2.70	±1	✓	✓	✓	Recovery	Recovery	VSON010V3030
BD3541NUV	1.0										VSON010V3030
BD3512MUV	3.0	4.3 to 5.5	0.7 to (V_{CC}−1)							Latch	VQFN020V4040
BD3509MUV	4.0									Recovery	VQFN020V4040
BD3504FVM	External FET	4.5 to 5.5	V_O+(I_O×Ron) to (V_{CC}−1)	0.65 to 2.50	±1	—	✓	✓	Latch	Latch	MSOP8
BD3521FVM	External FET			1.5							MSOP8

Power Supply ICs for High Fidelity Audio

Part No.	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Reference Voltage Accuracy (%)	Dropout Voltage (mV)	Noise Level (μVrms)	PSRR (dB)	Over Current Protection	Thermal Protection	Package
BD37201NUX	0.5	2.7 to 5.5	Variable 1.0 to 4.5	±1	200	4.72	90 (f=1kHz) 55 (f=1MHz)	✓	✓	VSON008X2030
☆BD37210AMUV	1.0	3.0 to 16.0	Variable 1.0 to 15.0	±1	300	4.6	78 (f=1kHz) 53 (f=1MHz)	✓	✓	VQFN020V4040
☆BD37215AMUV	1.0	−16.0 to −3.0	Variable −15.0 to −1.0	±1	300	5.1	90 (f=1kHz) 55 (f=1MHz)	✓	✓	VQFN020V4040

UVLO: Under Voltage Lock Out, OCP : Over Current Protection, TSD : Thermal Shut Down

☆: Under Development

Please ensure that minimum input voltage always exceeds the sum of output voltage and drop out voltage for the device.

LDO Regulators with Voltage Detector and Watchdog Timer

550mA Output LDO Regulators with Voltage Detector and Watchdog Timer

Part No.	Input Voltage (V)	LDO				Voltage Detector			Circuit Current (μA)	Operating Temperature (°C)	Package	Automotive Grade AEC-Q100
		Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Detection Voltage (V)	Voltage Detection Precision (%)	Function				
BD4271HFP-C	5.5 to 45.0	5	±2 (T_j=−40 to +150°C)	0.55	0.2 (I_O=300mA)	4.65	±2.6	4.65V Voltage Detector+WDT	75	T_j=−40 to +150	HRP7	YES
BD4271FP2-C											TO263-7	YES

500mA Output LDO Regulators with Voltage Detector and Watchdog Timer

BD3021HFP	5.6 to 36.0	5	±2 (T_a=−40 to +125°C)	0.5	0.3 (I_O=200mA)	4.5	±2	4.5V Voltage Detector+WDT (Active switch)	80	T_a=−40 to +125	HRP7	Preparing
BD3020HFP						Variable (at Vs open: 4.1V)		Adjustable Voltage Detector+WDT			HRP7	Preparing

200mA Output LDO Regulators with Voltage Detector and Watchdog Timer

New BD820F50EFJ-C	5.9 to 42.0	5	±2 (T_j=−40 to +150°C)	0.2	0.4 (I_O=200mA)	4.2	±2.62	4.2V Voltage Detector+WDT	5	T_j=−40 to +150	HTSOP-J8	YES

LDO Regulators with Voltage Detector

500mA Output LDO Regulators with Voltage Detector

Part No.	Input Voltage (V)	LDO				Voltage Detector		Shutdown Switch	Circuit Current (μA)	Operating Temperature (°C)	Package	Automotive Grade AEC-Q100
		Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Detection Voltage (V)	Voltage Detection Precision (%)					
BD42754FPJ-C	5.5 to 45.0	5	±2 (T_j=−40 to +150°C, V_{CC}=6.0 to 28V, I_O=5 to 400mA)	0.5	0.25 (I_O=300mA)	4.62	±2.8	—	75	T_j=−40 to +150	TO252-J5	YES
BD42754FP2-C											TO263-5	YES

200mA/300mA Output LDO Regulators with Voltage Detector

BD4269FJ-C	5.5 to 45.0	5	±2 (T_j=−40 to +150°C, V_{CC}=6.0 to 16V, I_O=1 to 100mA)	0.2	0.25 (I_O=100mA)	Variable (with RADJ not used: 4.62V)	±2.6	—	70	T_j=−40 to +150	SOP-J8	YES
BD4269EFJ-C				0.3							HTSOP-J8	YES

Voltage Tracker

500mA Voltage Tracker

Part No.	Input Voltage (V)	Output Current (A)	Offset Voltage (mV)	Circuit Current (μA)	Operating Temperature (°C)	Package	Automotive Grade AEC-Q100
BD3925FP-C	4.5 to 36.0	0.5	±10 (T_a=−40 to +125°C, V_{CC}=6 to 36V, I_O=5 to 200mA)	45	T_a=−40 to +125	TO252-5	—
BD3925HFP-C						HRP5	—

50mA/70mA Voltage Tracker

BD42500G-C	5.3* to 42.0	0.05	±15 (T_j=−40 to +150°C, V_{CC}=6 to 40V, I_O=1 to 50mA)	40	T_j=−40 to +150	SSOP5	YES
BD42540FJ-C	5.4* to 42.0	0.07	±10 (T_j=−40 to +150°C, V_{CC}=5.5 to 26V, I_O=0.1 to 60mA)	40	T_j=−40 to +150	SOP-J8	YES

250mA Voltage Tracker

BD42530EFJ-C	5.6* to 42.0	0.25	±10 (T_j=−40 to +150°C, V_{CC}=6 to 32V, I_O=0.1 to 250mA)	40	T_j=−40 to +150	HTSOP-J8	YES
BD42530FP2-C	5.6* to 42.0	0.25	±10 (T_j=−40 to +150°C, V_{CC}=6 to 32V, I_O=0.1 to 250mA)	40	T_j=−40 to +150	TO263-5	YES
BD42530FPJ-C	5.6* to 42.0	0.25	±10 (T_j=−40 to +150°C, V_{CC}=6 to 32V, I_O=0.1 to 250mA)	40	T_j=−40 to +150	TO252-J5	YES

*5V setting

Multi-Output LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

2ch LDO Regulators

Part No.	Input Voltage (V)	Output Voltage1 (V)	Output Voltage2 (V)	Output voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (µF)	Output Capacitor (µF)	Shut Down Switch	Protection Circuit	Package
BA30E00WHFP	4.1 to 16.0	3.3	Variable 0.8 to 3.3	±2	0.6/0.6	0.7	0.3 (I_O=300mA)	68 (3.3V output)	30 (I_O=0 to 0.6A)	1.0	47	✓	Over-Current/ Temperature	HRP7
BA3259HFP	4.75 to 14.00				1.0/1.0	3.0	1.1 (I_O=1A)	52	5 (I_O=5mA to 1A)	3.3	1.0	–		HRP5
BA33D15HFP	4.1 to 16.0		1.5		0.5/0.5	0.7	0.25 (I_O=250mA)	58 (1.5V output)	30 (I_O=0 to 500mA)	1.0				HRP5
BA33D18HFP			1.8											HRP5

2ch High Efficiency CMOS Regulator

Part No.	Output Voltage (V)		Output Voltage Precision (%)	Output Current (A)	Ripple Rejection (dB)	Load Regulation (%)	Output Short Current (mA)	Output Capacitor (µF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function
BD70511GWL	LDO1	1.2	1.5	0.15	60	10	30	1.0	✓	✓	✓	✓
	LDO2			0.3			65					

2ch Variable Step CMOS LDO Regulators

Part No.	Input Voltage (V)	V_{OUT}	Selectable Output Voltage (V)									Output Voltage Precision (%)	Output Current (A)	Vsat (mV) (I_O=100mA)	Ripple Rejection (dB)	Load Regulation (%)	Circuit Current (µA)	Output Short Current (mA)	Input Capacitor (µF)	Output Capacitor (µF)	Shut Down Switch	Over Current Protection	Temperature Protection	Low Voltage Protection
BD7003NUX	2.5 to 5.5	1ch	1.5	1.8	1.8	1.8	1.8	2.6	2.8	2.9	2.8	1.8	0.3	90	66	0.2 (I_O=1 to 300mA)	55	150	1.0	1.0	✓	✓	✓	✓
		2ch	2.8	2.6	2.7	2.8	2.9	2.8	2.8	2.9	3.3													
BD7004NUX		1ch	1.2	1.2	1.8	1.8	1.8	1.8	2.8	3.0	3.3													
		2ch	1.5	1.8	1.5	1.8	3.0	3.3	3.0	3.0	3.3													
BD7602GUL	2.7 to 5.5	1ch	3.0									2	0.1	–	45	0.7	10	–		4.7				
		2ch	2.8	2.9	2.95	3.0	3.05	3.1	3.2	3.3	–		0.15											

3ch CMOS LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision	Output Current (A)	Vsat (mV) (I_O=200mA)	Ripple Rejection (dB)	Load Regulation (%)	ch	Circuit Current (µA)	Output Short Current (mA)	Input Capacitor (µF)	Output Capacitor (µF)	Shut Down Switch	Over Current Protection	Temperature Protection	Discharge Function	Package
BU6650NUX	2.5 to 5.5	2.8	±1%	0.2	360	65	10 (I_O=1 to 100mA)	1	120	70	2.2	1.0	✓	✓	✓	✓	VSON008X2030
		2.8	±1%		360	65		2									
		1.8	±25mV		–	70		3									
BU6651NUX		2.8	±1%		360	65		1									VSON008X2030
		1.8	±25mV		–	70		2									
		1.5	±25mV		–	70		3									
BU6652NUX		2.8	±1%		360	65		1									VSON008X2030
		2.8	±1%		360	65		2									
		1.5	±25mV		–	70		3									
BU6653NUX		2.8	±1%		360	65		1									VSON008X2030
		1.8	±25mV		–	70		2									
		1.8	±25mV		–	70		3									
BU6654NUX		3.3	±1%		300	65		1									VSON008X2030
		1.8	±25mV		–	70		2									
		1.5	±25mV		–	70		3									
BU6655NUX		3.3	±1%		300	65		1									VSON008X2030
		2.8	±1%		360	65		2									
		1.8	±25mV		–	70		3									

Linear Regulators for DDR SDRAM

Termination Regulators for DDR SDRAM

Part No.	V_{CC} Input Voltage (V)	V_{TT_IN} Termination Input Voltage (V)	V_{DDQ} Reference Input Voltage (V)	V_{TT} Output Voltage (V)	V_{TT} Voltage Precision (mV)	V_{TT} Output Current (A)	V_{REF} Output Current (mA)	Features															Package
								Enable	Soft Start	Power Good	UVLO	Output Ceramic Capacitors	Thermal Protection	DDR(VDDQ)									
														DDR1 (2.5V/2.6V)	DDR2 (1.8V)	DDR2L (1.5V)	LPDDR2 (1.2V)	DDR3 (1.5V)	DDR3L (1.35V)	DDR3U (1.25V)	LPDDR3 (1.2V)	DDR4 (1.2V)	
BD3533F	2.7 to 5.5	1.0 to 5.5	1.00 to 2.75	0.75 to 1.25	±30	±1.0	±20	✓	✓	–	✓	–	Recovery	✓	✓	–	–	–	–	–	–	–	SOP8
BD3533FVM																							MSOP8
BD3533HFN																							HSON8
BD3539FVM	2.7 to 5.5	1.0 to 5.5	1.00 to 2.75	0.75 to 1.25	±15	±1.0	±25	✓	✓	–	✓	✓	Recovery	✓	✓	✓	–	✓	–	–	–	–	MSOP8
BD3539NUX																							VSON008X2030
BD35390FJ	2.7 to 5.5	1.0 to 5.5	1.00 to 2.75	0.75 to 1.25	±15	±1.0	–	✓	✓	✓	✓	✓	Recovery	✓	✓	✓	–	✓	–	–	–	–	SOP-J8

Part No.	V_{CC} Input Voltage (V)	V_{TT_IN} Termination Input Voltage (V)	V_{DDQ} Reference Input Voltage (V)	V_{TT} Output Voltage (V)	V_{TT} Voltage Precision (mV)	V_{TT} Output Current (A)	V_{REF} Output Current (mA)	Features															Package	Automotive Grade AEC-Q100
								Enable	Soft Start	Power Good	UVLO	Output Ceramic Capacitors	Thermal Protection	DDR(VDDQ)										
														DDR1 (2.5V/2.6V)	DDR2 (1.8V)	DDR2L (1.5V)	LPDDR2 (1.2V)	DDR3 (1.5V)	DDR3L (1.35V)	DDR3U (1.25V)	LPDDR3 (1.2V)	DDR4 (1.2V)		
BD35395FJ-M	2.7 to 5.5	1.0 to 5.5	1.00 to 2.75	0.500 to 1.375	±13.5	±1.0	–	✓	✓	✓	✓	✓	Recovery	✓	✓	✓	–	✓	✓	–	–	–	SOP-J8	YES

General-purpose ICs

Switching Regulators

Switching Regulators

- Integrated MOSFET Switching Regulators
  - Single Output Buck Converters $V_{IN} \leq 6V$ ▶P.47
  - Single Output Buck Converters $V_{IN} \leq 20V$ ▶P.48
  - Single Output Buck Converters $V_{IN} \geq 20V$ ▶P.48
  - Dual Output Buck Converters ▶P.49
  - Boost and Buck-Boost Converters ▶P.49
- External Switch Switching Regulators
  - Buck Controllers ▶P.49
  - Boost and Buck-Boost Converters ▶P.49
- For Automotive Switching Regulators
  - Primary Integrated Switch Buck Converter ▶P.50
  - Secondary Integrated Switch Buck Converter ▶P.50
  - Primary Integrated Switch Buck/Boost Converter (Quick Buck Booster®) ▶P.50
  - Primary External Swich Buck Controller ▶P.50
  - Primary External Swich Buck/Boost Controller ▶P.50

Switching Regulators

Integrated MOSFET Switching Regulators

Single Output Buck Converters $V_{IN} \leq 6V$

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Control Mode	Features						Package (mm)
							Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	
BD9122GUL	7	0.3	2.5 to 5.5	1 to 2	1	Current	–	–	✓	✓	Latch	Latch	VCSP50L2 2.5×1.1, H=0.55
Nano BD70522GUL	6	0.5	2.5 to 5.5	1.2 to 3.3*	1	On-time	✓	–	✓	✓	Recovery	Recovery	VCSP50L1C 1.76×1.56, H=0.57
BD9161FVM	7	0.6	2.5 to 4.5	1.0 to 3.3	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BD9161FVM-LB	7	0.6	2.5 to 4.5	1.0 to 3.3	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BU9006GUZ	7	0.75	2.5 to 4.5	1.0 to V_{IN}	2	Current	–	–	✓	–	Recovery	Recovery	VCSP35L1 1.6×1.6, H=0.4
BD9109FVM	7	0.8	4.5 to 5.5	3.3	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BD9109FVM-LB	7	0.8	4.5 to 5.5	3.3	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BD9102FVM	7	0.8	4.0 to 5.5	1.24	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BD8966FVM	7	0.8	4.0 to 5.5	1.0 to 2.5	1	Current	–	–	✓	–	Latch	Latch	MSOP8
BD9106FVM	7	0.8	4.0 to 5.5	1.0 to 2.5	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BD9106FVM-LB	7	0.8	4.0 to 5.5	1.0 to 2.5	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BD9120HFN	7	0.8	2.7 to 4.5	1.0 to 1.5	1	Current	–	–	✓	✓	Latch	Latch	HSON8
BD8967FVM	7	0.8	4.5 to 5.5	3.3	1	Current	–	–	✓	–	Latch	Latch	MSOP8
BD9104FVM	7	0.8	4.5 to 5.5	3.3	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BU90008GWZ	7	1	2.3 to 5.5	1	3.6	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90003GWZ	7	1	2.3 to 5.5	1.2	4	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90007GWZ	7	1	2.3 to 5.5	1.25	4	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90009GWZ	7	1	2.3 to 5.5	1.3	4.2	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90004GWZ	7	1	2.3 to 5.5	1.8	5.4	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90104GWZ	7	1	2.3 to 5.5	1.8	5.4	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90090GWZ	7	1	2.3 to 5.5	1.83	5.4	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90005GWZ	7	1	2.3 to 5.5	2.5	6	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90006GWZ	7	1	2.3 to 5.5	3	6	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BU90002GWZ	7	1	4.0 to 5.5	3.3	6	On-time	–	–	✓	✓	Recovery	Recovery	UCSP35L1 1.3×0.9, H=0.4
BD9A100MUV	7	1	2.7 to 5.5	0.8 to (V_{IN}×0.7)	1	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9A101MUV-LB	7	1	2.7 to 5.5	0.8 to (V_{IN}×0.7)	1	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9B100MUV	7	1	2.7 to 5.5	0.8 to (V_{IN}×0.8)	2/1	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD8964FVM	7	1.2	4.0 to 5.5	1.0 to 1.8	1	Current	–	–	✓	–	Latch	Latch	MSOP8
BD9107FVM	7	1.2	4.0 to 5.5	1.0 to 1.8	1	Current	–	–	✓	✓	Latch	Latch	MSOP8
BD9123MUV	7	1.2	2.7 to 5.5	0.85 to 1.2	1	Current	✓	–	✓	✓	Latch	Latch	VQFN016V3030
BU90023NUX	7	1.5	2.3 to 5.5	1.23	1	On-time	–	–	✓	✓	Recovery	Recovery	VSON008X2030
BU90028NUX	7	1.5	2.3 to 5.5	1.18	1	On-time	–	–	✓	✓	Recovery	Recovery	VSON008X2030
BD8961NV	7	2	4.5 to 5.5	3.3	1	Current	–	–	✓	–	Latch	Latch	SON008V5060
BD9111NV	7	2	4.5 to 5.5	3.3	1	Current	–	–	✓	✓	Latch	Latch	SON008V5060
BD9110NV	7	2	4.5 to 5.5	1.0 to 2.5	1	Current	–	–	✓	✓	Latch	Latch	SON008V5060
BD89630EFJ	7	2	2.7 to 5.5	1.0 to 2.5*	1	Current	–	–	✓	–	Latch	Latch	HTSOP-J8
BD8960NV	7	2	2.7 to 5.5	1.0 to 2.5*	1	Current	–	–	✓	–	Latch	Latch	SON008V5060
BD9130NV	7	2	2.7 to 5.5	1.0 to 2.5*	1	Current	–	–	✓	✓	Latch	Latch	SON008V5060
BD9B200MUV	7	2	2.7 to 5.5	0.8 to (V_{IN}×0.8)	2/1	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD8962MUV	7	3	2.7 to 5.5	0.8 to 2.5*	1	Current	–	–	✓	–	Latch	Latch	VQFN020V4040
BD8963EFJ	7	3	2.7 to 5.5	1.0 to 2.5*	1	Current	–	–	✓	–	Latch	Latch	HTSOP-J8
BD9139MUV	7	3	2.7 to 5.5	0.8 to 3.3*	1	Current	–	–	✓	✓	Latch	Latch	VQFN016V3030
BD9A300MUV	7	3	2.7 to 5.5	0.8 to (V_{IN}×0.7)	1	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9A301MUV-LB	7	3	2.7 to 5.5	0.8 to (V_{IN}×0.7)	1	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9B300MUV	7	3	2.7 to 5.5	0.8 to (V_{IN}×0.8)	2/1	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD9B301MUV-LB	7	3	2.7 to 5.5	0.8 to (V_{IN}×0.8)	2/1	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD9A302QWZ	7	3	2.7 to 5.5	0.8 to (V_{IN}×0.7)	1	Current	–	–	✓	✓	Recovery	Recovery	UMMP008AZ020 2.0×2.0, H=0.4
BD9B304QWZ	7	3	2.7 to 5.5	0.8 to (V_{IN}×0.8)	2/1	On-time	–	–	✓	Deep	Recovery	Recovery	UMMP008AZ020 2.0×2.0, H=0.4
New BD9B305QUZ	7	3	2.7 to 5.5	0.6 to (V_{IN}×0.8)	1	On-time	✓	✓	✓	✓	Recovery	Recovery	VMMP08LZ2020 2.0×2.0, H=0.4
BD9B333GWZ	7	3	2.7 to 5.5	0.6 to (V_{IN}×0.8)	1.3	On-time	✓	✓	✓	Deep	Recovery	Recovery	UCSP35L1 1.98×1.8, H=0.4
BD9137MUV	7	4	2.7 to 5.5	0.8 to 3.3*	1	Current	–	–	✓	✓	Recovery	Recovery	VQFN020V4040
BD91361MUV	7	4	2.7 to 5.5	0.8 to 3.3*	1	Current	–	–	✓	✓	Latch	Latch	VQFN020V4040
BD9A400MUV	7	4	2.7 to 5.5	0.8 to (V_{IN}×0.7)	1	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9B400MUV	7	4	2.7 to 5.5	0.8 to (V_{IN}×0.8)	2/1	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD91364BMUU	7	5	2.9 to 5.5	0.8 to (V_{IN}×0.8)	1.7	On-time	✓	✓	✓	✓	Latch	Recovery	VQFN20U4040M
BD9B500MUV	7	5	2.7 to 5.5	0.8 to (V_{IN}×0.8)	2/1	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD9A600MUV	7	6	2.7 to 5.5	0.8 to (V_{IN}×0.7)	1	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9B600MUV	7	6	2.7 to 5.5	0.8 to (V_{IN}×0.8)	2/1	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030

◎The Nano mark is applicable to both Nano Energy technology and Nano Pulse Control® products.
Nano Pulse Control® is trademark of ROHM.
*Restrictions depend on input/output voltage conditions.

Integrated MOSFET Switching Regulators

Single Output Buck Converters V_{IN}≤20V

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Control Mode	Features							Package (mm)
							Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD8312HFN	15	0.8	3.5 to 14.0	1.2 to 12.0*	1.5	Current	–	–	✓	–	–	Recovery	–	HSON8
BD9227F	22	1	6 to 20	(V_{IN}×0.252) to V_{IN} (V_{IN}×0.252)≥1.0	1	Current	–	–	–	–	Recovery	Recovery	–	SOP8
BD8313HFN	15	1	3.5 to 14.0	1.2 to 12.0*	1	Current	–	–	✓	–	–	Recovery	–	HSON8
BD9141MUV	15	2	4.5 to 13.2	2.5 to 6.0*	0.5	Current	–	–	✓	✓	Latch	Latch	–	VQFN020V4040
BD95821MUV	15.2	2	7.5 to 15.0	0.8 to (V_{IN}×0.5) (V_{IN}×0.5)≤5.5	0.5 to 0.8	H³Reg	✓	–	✓	–	Latch	Recovery	✓	VQFN016V3030
BD9325FJ	20	2	4.75 to 18.0	0.9 to (V_{IN}×0.9)	0.38	Current	–	✓	–	–	Recovery	Recovery	–	SOP-J8
BD9325FJ-LB	20	2	4.75 to 18.0	0.9 to (V_{IN}×0.9)	0.38	Current	–	✓	–	–	Recovery	Recovery	–	SOP-J8
BD9C301FJ	20	3	4.5 to 18.0	(V_{IN}×0.125) to (V_{IN}×0.7)	0.5	Current	–	–	✓	–	Latch	Recovery	–	SOP-J8
BD9C301FJ-LB	20	3	4.5 to 18.0	(V_{IN}×0.125) to (V_{IN}×0.7)	0.5	Current	–	–	✓	–	Latch	Recovery	–	SOP-J8
BD95831MUV	15.2	3	7.5 to 15.0	0.8 to (V_{IN}×0.5) (V_{IN}×0.5)≤5.5	0.5 to 0.8	H³Reg	✓	–	✓	–	Latch	Recovery	✓	VQFN016V3030
New BD9D300MUV	20	3	4.0 to 17.0	0.9 to 5.25	1.25	On-time	✓	✓	✓	✓	Recovery	Recovery	✓	VQFN016V3030
BD9D320EFJ	20	3	4.5 to 18.0	0.765 to 7.0 (V_{IN}×0.07) to (V_{IN}×0.65)	0.7	On-time	–	✓	✓	–	Recovery	Recovery	–	HTSOP-J8
BD9D321EFJ	20	3	4.5 to 18.0	0.765 to 7.0 (V_{IN}×0.07) to (V_{IN}×0.65)	0.7	On-time	–	✓	✓	✓	Recovery	Recovery	–	HTSOP-J8
BD9D322QWZ	20	3	4.5 to 18.0	0.765 to 7.0 (V_{IN}×0.07) to (V_{IN}×0.65)	0.7	On-time	–	✓	✓	✓	Recovery	Recovery	–	UMMP008Z2020 2.0×2.0, H=0.4
BD9D323QWZ	20	3	4.5 to 18.0	0.765 to 7.0 (V_{IN}×0.07) to (V_{IN}×0.65)	0.7	On-time	–	✓	✓	–	Recovery	Recovery	–	UMMP008Z2020 2.0×2.0, H=0.4
BD9859EFJ	15	3	5 to 14	1.0 to (V_{IN}×0.7)	0.75	Current	–	–	–	–	Recovery	Recovery	–	HTSOP-J8
BD9326EFJ	20	3	4.75 to 18.0	0.9 to (V_{IN}×0.9)	0.38	Current	–	✓	–	–	Recovery	Recovery	–	HTSOP-J8
BD9326EFJ-LB	20	3	4.75 to 18.0	0.9 to (V_{IN}×0.9)	0.38	Current	–	✓	–	–	Recovery	Recovery	–	HTSOP-J8
BD9C401EFJ	20	4	4.5 to 18.0	(V_{IN}×0.125) to (V_{IN}×0.7) (V_{IN}×0.125)≥0.8	0.5	Current	–	–	✓	–	Latch	Recovery	–	HTSOP-J8
BD95841MUV	15.2	4	7.5 to 15.0	0.8 to (V_{IN}×0.5) (V_{IN}×0.5)≤5.5	0.5 to 0.8	H³Reg	✓	–	✓	–	Latch	Recovery	✓	VQFN016V3030
BD9327EFJ	20	4	4.75 to 18.0	0.9 to (V_{IN}×0.9)	0.38	Current	–	✓	–	–	Recovery	Recovery	–	HTSOP-J8
BD9327EFJ-LB	20	4	4.75 to 18.0	0.9 to (V_{IN}×0.9)	0.38	Current	–	✓	–	–	Recovery	Recovery	–	HTSOP-J8
BD9C501EFJ	20	5	4.5 to 18.0	(V_{IN}×0.075) to (V_{IN}×0.7) (V_{IN}×0.075)≥0.8	0.5	Current	–	–	✓	–	Latch	Recovery	–	HTSOP-J8
BD95861MUV	20	6	7.5 to 18.0	0.8 to (V_{IN}×0.5) (V_{IN}×0.5)≤5.5	0.35 to 0.80	H³Reg	✓	–	✓	–	Latch	Recovery	✓	VQFN024V4040
BD9C601EFJ	20	6	4.5 to 18.0	(V_{IN}×0.075) to (V_{IN}×0.7) (V_{IN}×0.075)≥0.8	0.5	Current	–	–	✓	–	Latch	Recovery	–	HTSOP-J8
BD95500MUV	24	6	3 to 20	0.7 to 5.0	0.2 to 1.0	H³Reg	✓	✓	✓	✓	Latch	Recovery	✓	VQFN040V6060

Single Output Buck Converters V_{IN}≥20V

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Control Mode	Features							Package (mm)
							Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD9G201EFJ-LB	45	1.5	4.5 to 42.0	0.8 to V_{IN}*	0.3	Current	–	–	–	–	Recovery	Recovery	–	HTSOP-J8ES
BD9G102G-LB	45	0.5	6 to 42	(V_{IN}×0.08) to (V_{IN}×0.8) (V_{IN}×0.08)≥0.75	1	Current	–	–	–	–	Recovery	Recovery	✓	SSOP6
BD9E104FJ	30	1	7 to 26	(V_{IN}×0.143) to (V_{IN}×0.5) (V_{IN}×0.143)≥1.0	0.57	Current	–	–	✓	✓	Recovery	Recovery	✓	SOP-J8
BD9G101G	45	0.5	6 to 42	(V_{IN}×0.15) to (V_{IN}×0.7) (V_{IN}×0.15)≥1.0	1.5	Current	–	–	–	–	Recovery	Recovery	–	SSOP6
BD9E100FJ-LB	40	1	7 to 36	(V_{IN}×0.15) to (V_{IN}×0.7) (V_{IN}×0.15)≥1.0	1	Current	–	–	✓	–	Recovery	Recovery	✓	SOP-J8
BD9E101FJ-LB	40	1	7 to 36	(V_{IN}×0.0855) to (V_{IN}×0.7) (V_{IN}×0.0855)≥1.0	0.57	Current	–	–	✓	–	Recovery	Recovery	✓	SOP-J8
BD9E151NUX	30	1.2	6 to 28	(V_{IN}×0.06) to (V_{IN}×0.7) (V_{IN}×0.06)≥1.0*	0.6	Current	–	✓	–	–	Recovery	Recovery	✓	VSON008X2030
BD9701CP-V5	36	1.5	8 to 35	1.0 to (V_{IN}−3.0)	0.1	Voltage	–	–	–	–	Recovery	Recovery	–	TO220CP-V5
BD9701FP	36	1.5	8 to 35	1.0 to (V_{IN}−3.0)	0.1	Voltage	–	–	–	–	Recovery	Recovery	–	TO252-5
BD9703CP-V5	36	1.5	8 to 35	1.0 to (V_{IN}−3.0)	0.3	Voltage	–	–	–	–	Recovery	Recovery	–	TO220CP-V5
BD9703FP	36	1.5	8 to 35	1.0 to (V_{IN}−3.0)	0.3	Voltage	–	–	–	–	Recovery	Recovery	–	TO252-5
BD9870FPS	36	1.5	8 to 35	1.0 to (0.8×(V_{IN}-I_O×RON)	0.9	Voltage	–	–	–	–	Recovery	Recovery	–	TO252S-5
BD9873CP-V5	36	1.5	8 to 35	1.0 to (0.8×(V_{IN}-I_O×RON)	0.11	Voltage	–	–	–	–	Recovery	Recovery	–	TO220CP-V5
BD9778HFP	36	2	7 to 35	(V_{IN}×0.06) to V_{IN} (V_{IN}×0.06)≥1.0	0.05 to 0.50	Voltage	–	–	–	–	Recovery	Recovery	–	HRP7
BD9E300EFJ-LB	40	2.5	7 to 36	(V_{IN}×0.15) to (V_{IN}×0.7) (V_{IN}×0.15)≥1.0	1	Current	–	–	✓	–	Recovery	Recovery	✓	HTSOP-J8
BD9E301EFJ-LB	40	2.5	7 to 36	(V_{IN}×0.0855) to (V_{IN}×0.7) (V_{IN}×0.0855)≥1.0	0.57	Current	–	–	✓	–	Recovery	Recovery	✓	HTSOP-J8
BD9E303EFJ-LB	40	3	7 to 36	(V_{IN}×0.06) to (V_{IN}×0.8) (V_{IN}×0.06)≥1.0	0.3	Current	–	–	✓	–	Recovery	Recovery	✓	HTSOP-J8
BD9702CP-V5	36	3	8 to 35	1.0 to (V_{IN}−3.0)	0.11	Voltage	–	–	–	–	Recovery	Recovery	–	TO220CP-V5
BD9874CP-V5	36	3	8 to 35	1.0 to (0.8×(V_{IN}-I_O×RON)	0.11	Voltage	–	–	–	–	Recovery	Recovery	–	TO220CP-V5
BD9E302EFJ	30	3	7 to 28	(V_{IN}×0.11) to (V_{IN}×0.7) (V_{IN}×0.11)≥1.0	0.55	Current	–	–	✓	✓	Recovery	Recovery	✓	HTSOP-J8
BD95513MUV	30	3	4.5 to 28.0	0.7 to 5.0	0.2 to 1.0	H³Reg	✓	✓	✓	✓	Latch	Recovery	✓	VQFN032V5050
BD9G341AEFJ	80	3	12 to 76	1.0 to (V_{IN}×0.7)*	0.05 to 0.75	Current	–	–	–	–	Recovery	Recovery	✓	HTSOP-J8
BD9G341AEFJ-LB	80	3	12 to 76	1.0 to (V_{IN}×0.7)*	0.05 to 0.75	Current	–	–	–	–	Recovery	Recovery	✓	HTSOP-J8
BD95514MUV	30	4	4.5 to 28.0	0.7 to 5.0	0.2 to 1.0	H³Reg	✓	✓	✓	✓	Latch	Recovery	✓	VQFN032V5050
Nano BD9V101MUF-LB	70	1	16 to 60	0.8 to 5.5	1.9 to 2.3	Current	✓	–	✓	–	Recovery	Recovery	✓	VQFN24FV4040
BD9F800MUX	30	8	4.5 to 28.0	0.765 to 13.5*	0.3, 0.6	On-time	✓	–	✓	–	Recovery	Recovery	–	VQFN11X3535A

◎The Nano mark is applicable to both Nano Energy technology and Nano Pulse Control® products.
Nano Pulse Control® is trademark of ROHM.
*Restrictions depend on input/output voltage conditions.

Dual Output Buck Converters

Part No.	Number of Channels	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Control Mode	Features: Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	Description	Package
BD91501MUV	2	7	I_O1: 0.4 I_O2: 0.3	2.55 to 5.50	V_O1: 2.55 V_O2: 1.80	1.65	Current	✓	✓	Latch	Recovery	–	100% Duty	VQFN016V3030
BD9151MUV	2	7	I_O1: 0.4 I_O2: 0.8	2.8 to 5.5	V_O1: 1.8 V_O2: 1.2	1	Current	✓	✓	Latch	Latch	–	Voltage Detector, High-side gate controller	VQFN020V4040
BD9152MUV	2	7	I_O1: 1.5 I_O2: 1.5	4.5 to 5.5	V_O1: 3.3 V_O2: 0.8 to 2.5	1	Current	✓	✓	Latch	Latch	–	–	VQFN020V4040
BD93291EFJ	2	30	I_O1: 2.5 I_O2: 1.5	8 to 26	V_O1: 5.0 V_O2: 0.8 to 4.0	1.5 to 2.5	H³Reg	✓	✓	Recovery	Recovery	–	–	HTSOP-J8
BD95830MUV	2	15.1	I_O1: 3.0 I_O2: 3.0	7.5 to 15	V_O1: 0.8 to 5.5 V_O2: 0.8 to 5.5	0.4 to 0.8	H³Reg	✓	–	Latch	Recovery	Latch	–	VQFN032V5050

Boost and Buck-Boost Converters

Part No.	Number of Channels	Switch Current Limit (mA)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (kHz)	Control Mode	Features: Boost	Buck-Boost	SEPIC	Inverting	Synchronous Rectifier	Light-Load Efficiency	Soft Start	Input Pass Through	UVLO	Over-Current Protection	Thermal Protection	Package
BU33DV5G	1	10	1.75 to 4.50	3.3	100	Current	✓	–	–	–	✓	–	–	–	✓	Recovery	✓	SSOP5
BU33DV7NUX	1	300	1.8 to 5.5	3.3	600	Current	✓	–	–	–	✓	✓	✓	✓	✓	Recovery	✓	VSON010V3030
BU34DV7NUX	1	300	1.8 to 5.5	3.4	600	Current	✓	–	–	–	✓	✓	✓	✓	✓	Recovery	✓	VSON010V3030
BU33UV7NUX	1	500	0.6 to 4.5	3.3	800	Current	✓	–	–	–	✓	✓	✓	✓	✓	Recovery	✓	VSON010X3020
BD8316GWL	2	1,000	2.5 to 5.5	V_O1: −9.0 to −1.0 V_O2: V_{IN} to 18	1,600	Current	✓	–	–	✓	–	–	✓	–	✓	Latch	✓	UCSP50L1
BD8317GWL	2	1,000	2.5 to 5.5	V_O1: −9.0 to −1.0 V_O2: V_{IN} to 18	800	Current	✓	–	–	✓	–	–	✓	–	✓	Latch	✓	UCSP50L1
BD83854GWL	2	600	2.5 to 4.5	±5.4	1000/500	Current	✓	–	–	✓	✓	–	–	–	✓	Latch	✓	UCSP50L1C
BD83854MUV	2	600	2.5 to 4.5	±5.4	1000/500	Current	✓	–	–	✓	✓	–	–	–	✓	Latch	✓	VQFN20PV3535
BD8152FVM	1	1,400	2.5 to 5.5	V_{IN} to 14	600/1,200	Current	✓	✓	✓	–	–	–	Adj.	–	✓	Recovery	✓	MSOP8
BD8158FVM	1	1,400	2.1 to 4.0	V_{IN} to 14	600/1,200	Current	✓	✓	✓	–	–	–	Adj.	–	✓	Recovery	✓	MSOP8
BD8306MUV	1	2,000	1.8 to 5.5	1.8 to 5.2	300 to 2,000	Voltage	✓	✓	–	–	✓	–	✓	–	✓	Latch	✓	VQFN016V3030
BD8311NUV	1	2,500	3.5 to 11.0	4 to 11	1,200	Voltage	✓	–	–	–	–	–	✓	–	✓	Latch	✓	VSON010V3030
BD8314NUV	1	2,500	3 to 12	4 to 12	1,200	Voltage	✓	–	–	–	–	–	✓	–	✓	Latch	✓	VSON010V3030
BD83070GWL	1	2,000	2.0 to 5.5	2.5 or 3.3	1,500	Current	–	✓	–	–	✓	✓	✓	–	✓	Recovery	✓	UCSP50L1C

External Switch Switching Regulators

Buck Controllers

Part No.	Number of Channels	Input Voltage Maximum Rating (V)	Input Voltage (V)	Supply Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Control Mode	Features: Power Good	Enable	Externally Synchronizable	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Package
BD9305AFVM	1	20	4.2 to 18.0	–	1.25 to V_{IN}*	0.1 to 0.8	Voltage	–	✓	–	–	–	–	SCP Latch	Recovery	MSOP8
BD95601MUV-LB	1	28	4.5 to 25.0	–	0.75 to 2.0	0.2 to 0.5	H³Reg	✓	✓	–	✓	✓	✓	Latch	Recovery	VQFN020V4040
BD63536FJ	1	32	3 to 30	–	1.25 to V_{IN}*	0.01 to 0.3	Voltage	–	–	–	–	–	–	Recovery	Recovery	SOP-J8
BD9845FV	1	36	3.6 to 35.0	–	1.0 to V_{IN}*	0.1 to 1.5	Voltage	–	✓	–	✓	–	–	Recovery	Recovery	SSOP-B14
BD9611MUV	1	60	10 to 56	–	(V_{IN}×0.02) to (V_{IN}×0.97) (V_{IN}×0.02)≥0.8*	0.05 to 0.50	Voltage	–	✓	✓	✓	✓	–	Recovery	Recovery	VQFN020V4040
BD9536FV	2	16	7.5 to 15.0	–	0.7 to 5.5	0.2 to 0.6	H³Reg	–	✓	–	✓	✓	–	Latch	Recovery	SSOP-B28
BD9535MUV	2	30	3 to 28	4.5 to 5.5	0.7 to 2.0	0.2 to 0.6	H³Reg	✓	✓	–	✓	✓	✓	Latch	Recovery	VQFN032V5050
BD95602MUV-LB	2	30	5.5 to 28.0	–	1.0 to 5.5	0.15 to 0.50	H³Reg	✓	✓	–	✓	✓	✓	Latch	Recovery	VQFN032V5050
BD9848FV	2	36	3.6 to 35.0	–	1.0 to V_{IN}*	0.1 to 1.5	Voltage	–	✓	–	✓	–	–	Recovery	Recovery	SSOP-B20

Boost and Buck-Boost Converters

Part No.	Number of Channels	Input Voltage Maximum Rating (V)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (kHz)	Control Mode	Features: Boost	Buck-Boost	Inverting	Buck	Enable	Externally Synchronizable	Adjustable Soft Start	Synchronous Rectifier	Over-Current Protection	Thermal Protection	Package
BD8303MUV	1	15	2.7 to 14.0	1 to 12	200 to 1,000	Voltage	–	✓	–	–	✓	–	–	✓	Latch	Recovery	VQFN016V3030
BD9306AFVM	1	20	4.2 to 18.0	V_{IN} to (V_{IN}/0.3)	100 to 800	Voltage	✓	–	–	–	✓	–	–	–	Latch	Recovery	MSOP8
BD9851EFV	2	20	4 to 18	1.0 or more	10 to 300	Voltage	✓	–	✓	✓	–	–	✓	–	Latch	Recovery	HTSSOP-B20
BA9743AFV	2	36	3.6 to 35.0	2.505 or more	10 to 800	Voltage	✓	–	✓	✓	–	–	✓	–	Latch	Recovery	SSOP-B16
BA9744FV	2	36	2.5 to 35.0	1.222 or more	10 to 800	Voltage	✓	–	✓	✓	–	–	✓	–	Latch	Recovery	SSOP-B16
BA9741F	2	36	3.6 to 35.0	2.5 or more	10 to 800	Voltage	✓	–	✓	✓	–	–	✓	–	Latch	Recovery	SOP16
BA9741FS	2	36	3.6 to 35.0	2.5 or more	10 to 800	Voltage	✓	–	✓	✓	–	–	✓	–	Latch	Recovery	SSOP-A16
BD9615MUV-LB	1	62	3.5 to 60.0	V_{IN} to (V_{IN}/0.2)	100 to 2,500	Voltage	✓	–	–	–	✓	✓	✓	–	Recovery	Recovery	VQFN16KV3030

*Restrictions depend on input/output voltage conditions.

For Automotive Switching Regulators

Primary Integrated Switch Buck Converter

Part No.	Number of Outputs	Output FET		Input Voltage Maximum Rating (V)	Output Current (A) Max	Input Voltage (V)		Output Voltage (V) Typ	Output Voltage Accuracy (%)	Quiescent Current (μA) Typ	Switching Frequency		Control Mode	Features							Orerating Temperature (°C)	Package	Automotive Grade AEC-Q100
		Upper (Typ)	Bottom (Typ)			Min	Max				Range (kHz)	Accuracy (%)		Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Spread Spectrum			
Nano BD8P250MUF-C	1	Nch (110mΩ)	Nch (110mΩ)	42	2.0	3.5	36	5.0	±2.0	8	2,200	±10	Current	✓	–	–	✓	✓	✓	✓	−40 to +125	VQFN24FV4040	YES
Nano BD9P233MUF-C	1	Pch (190mΩ)	Nch (120mΩ)	42	2.0	3.0	36	3.3	±2.0	26	200 to 2,400	±9	Current	✓	✓	✓	✓	✓	✓	✓	−40 to +125	VQFN32FAV050	YES
BD99010EFV-M	1	Pch (170mΩ)	Nch (130mΩ)	42	2.0	3.6	35	3.3	±2.0	22	200 to 500	±20	Current	–	–	–	✓	✓	✓	–	−40 to +105	HTSSOP-B24	YES
BD99011EFV-M	1	Pch (170mΩ)	Nch (130mΩ)	42	2.0	3.6	35	5.0	±2.0	22	200 to 500	±20	Current	–	–	–	✓	✓	✓	–	−40 to +105	HTSSOP-B24	YES
BD90610EFJ-C	1	Pch (160mΩ)	–	42	1.25	3.5	36	Adj. (0.8 to V_{IN})	±2.0	2200	50 to 600	±10	Current	–	✓	–	–	–	–	–	−40 to +125	HTSOP-J8	YES
BD90620EFJ-C	1	Pch (160mΩ)	–	42	2.5	3.5	36	Adj. (0.8 to V_{IN})	±2.0	2200	50 to 600	±10	Current	–	✓	–	–	–	–	–	−40 to +125	HTSOP-J8	YES
BD90620HFP-C	1	Pch (160mΩ)	–	42	2.5	3.5	36	Adj. (0.8 to V_{IN})	±2.0	2200	50 to 600	±10	Current	–	✓	–	–	–	–	–	−40 to +125	HRP7	YES
BD90640EFJ-C	1	Pch (160mΩ)	–	42	4.0	3.5	36	Adj. (0.8 to V_{IN})	±2.0	2200	50 to 600	±10	Current	–	✓	–	–	–	–	–	−40 to +125	HTSOP-J8	YES
BD90640HFP-C	1	Pch (160mΩ)	–	42	4.0	3.5	36	Adj. (0.8 to V_{IN})	±2.0	2200	50 to 600	±10	Current	–	✓	–	–	–	–	–	−40 to +125	HRP7	YES
BD9060F-C	1	Pch (300mΩ)	–	42	2.0	5.0	35	Adj. (0.8 to V_{IN})	±2.0	4500	50 to 500	±5	Voltage	–	✓	–	–	–	–	–	−40 to +125	SOP8	YES
BD9060HFP-C	1	Pch (300mΩ)	–	42	2.0	5.0	35	Adj. (0.8 to V_{IN})	±2.0	4500	50 to 500	±5	Voltage	–	✓	–	–	–	–	–	−40 to +125	HRP7	YES
Nano BD9V100MUF-C	1	Nch (600mΩ)	Nch (400mΩ)	70	1.0	16	60	Adj. (0.8 to 5.5)	±2.0	2500	1,900 to 2,300	±10	Current	✓	–	–	✓	–	✓	–	−40 to +125	VQFN24FV4040	YES

Secondary Integrated Switch Buck Converter

Part No.	Number of Outputs	Output FET		Input Voltage Maximum Rating (V)	Output Current (A) Max	Input Voltage (V)		Output Voltage (V) Typ	Output Voltage Accuracy (%)	Quiescent Current (μA) Typ	Switching Frequency		Control Mode	Features							Orerating Temperature (°C)	Package	Automotive Grade AEC-Q100
		Upper (Typ)	Bottom (Typ)			Min	Max				Range (kHz)	Accuracy (%)		Power Good	SLLM	Sync	Adjustable Soft Start	Synchronous Rectification	Over-Voltage Protection	Output Discharge			
BD9S000NUX-C	1	Pch (270mΩ)	Nch (180mΩ)	7	0.6	2.7	5.5	Adj. (0.8 to V_{IN})	±1.5	350	2,200	±10	Current	✓	–	–	✓	✓	✓	✓	−40 to +125	VSON008X2020	YES
BD9S012NUX-C	1	Pch (270mΩ)	Nch (180mΩ)	7	0.6	2.7	5.5	1.1	±1.5	350	2,200	±10	Current	✓	–	–	✓	✓	✓	✓	−40 to +125	VSON008X2020	YES
BD9S100NUX-C	1	Pch (270mΩ)	Nch (180mΩ)	7	1.0	2.7	5.5	Adj. (0.8 to V_{IN})	±1.5	350	2,200	±10	Current	✓	–	–	✓	✓	✓	✓	−40 to +125	VSON008X2020	YES
BD9S110NUX-C	1	Pch (270mΩ)	Nch (180mΩ)	7	1.0	2.7	5.5	1.2	±1.5	350	2,200	±10	Current	✓	–	–	✓	✓	✓	✓	−40 to +125	VSON008X2020	YES
BD9S111NUX-C	1	Pch (270mΩ)	Nch (180mΩ)	7	1.0	2.7	5.5	1.8	±1.5	350	2,200	±10	Current	✓	–	–	✓	✓	✓	✓	−40 to +125	VSON008X2020	YES
BD9S200MUF-C	1	Nch (35mΩ)	Nch (35mΩ)	7	2.0	2.7	5.5	Adj. (0.8 to V_{IN}×0.8)	±1.5	650	2,200	±10	Current	✓	✓	✓	✓	✓	✓	–	−40 to +125	VQFN16FV3030	YES
BD9S300MUF-C	1	Nch (35mΩ)	Nch (35mΩ)	7	3.0	2.7	5.5	Adj. (0.8 to V_{IN}×0.8)	±1.5	650	2,200	±10	Current	✓	✓	✓	✓	✓	✓	–	−40 to +125	VQFN16FV3030	YES
BD9S400MUF-C	1	Nch (35mΩ)	Nch (35mΩ)	7	4.0	2.7	5.5	Adj. (0.8 to V_{IN}×0.8)	±1.5	650	2,200	±10	Current	✓	✓	✓	✓	✓	✓	–	−40 to +125	VQFN16FV3030	YES

Primary Integrated Switch Buck/Boost Converter (Quick Buck Booster®)

Part No.	Number of Outputs	Output FET		Input Voltage Maximum Rating (V)	Output Current (A) Max	Input Voltage (V)		Output Voltage (V) Typ	Output Voltage Accuracy (%)	Quiescent Current (μA) Typ	Switching Frequency		Control Mode	Features							Orerating Temperature (°C)	Package	Automotive Grade AEC-Q100
		Upper (Typ)	Bottom (Typ)			Min	Max				Range (kHz)	Accuracy (%)		Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Spread Spectrum			
BD8P250MUF-C + BD90302NUF-C	1	Nch (110mΩ)	Nch (110mΩ)	42	0.8	2.7	36	5.0	±2.0	8	2,200	±10	Current	✓	–	–	✓	✓	✓	✓	−40 to +125	VQFN24FV4040	YES
	1	Pch (55mΩ)	Nch (65mΩ)	7						65												VSON10FV3030	YES

Primary External Switch Buck Controller

Part No.	Number of Outputs	Output FET		Input Voltage Maximum Rating (V)	Output Current (A) Max	Input Voltage (V)		Output Voltage (V) Typ	Output Voltage Accuracy (%)	Quiescent Current (μA) Typ	Switching Frequency		Control Mode	Features							Orerating Temperature (°C)	Package	Automotive Grade AEC-Q100
		Upper (Typ)	Bottom (Typ)			Min	Max				Range (kHz)	Accuracy (%)		Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Spread Spectrum			
BD9015KV-M	2	Ext. Nch	Ext. Nch	35	–	3.9	30	Adj. (0.8 to 10)	±1.5	4,000	250 to 550	±10	Current	✓	✓	✓	✓	–	✓*1	–	−40 to +105	VQFP48C	YES
BD9016KV-M	2	Ext. Nch	Ext. Nch	35	–	3.9	30	Adj. (0.8 to 10)	±1.5	4,000	250 to 550	±10	Current	✓	✓	✓	✓	–	✓*2	–	−40 to +105	VQFP48C	YES

Primary External Switch Buck/Boost Controller

Part No.	Number of Outputs	Output FET		Input Voltage Maximum Rating (V)	Output Current (A) Max	Input Voltage (V)		Output Voltage (V) Typ	Output Voltage Accuracy (%)	Quiescent Current (μA) Typ	Switching Frequency		Control Mode	Features							Orerating Temperature (°C)	Package	Automotive Grade AEC-Q100
		Upper (Typ)	Bottom (Typ)			Min	Max				Range (kHz)	Accuracy (%)		Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Spread Spectrum			
BD9035AEFV-C	1	Ext. Pch	Ext. Nch	40	–	3.8	30	Adj.	±1.5	7,000	100 to 600	±7	Voltage	✓	✓	✓	–	–	✓	–	−40 to +125	HTSSOP-B24	YES

◎The Nano mark is applicable to both Nano Energy technology and Nano Pulse Control® products.
Nano Pulse Control® is trademark of ROHM.
*1 When over voltage is detected, Bottom FET is OFF
*2 When over voltage is detected, Bottom FET is ON

General-purpose ICs

Switching Regulators (System Power Supplies)

Switching Regulators (System Power Supplies)

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Switching Regulators (System Power Supplies)

System Power Supply ICs for Car Audio

System Power Supply ICs for Car Audio Systems

Part No.	Supply Voltage (V)	Function		Reference Voltage (V)	Output Current (A)	Protection Circuit		Input I/F	Package	Automotive Grade AEC-Q100
						Over Current	Temperature			
BD49101AEFS-M*1/ BD49101ARFS-M*2	5.5 to 25.0	Buck DC/DC1	Controller	0.8	—	Current Limit with Short Current Protection Circuit	✓	I²C	HTSSOP-A44 (EXP-PAD down HTSSOP-A44 package) HTSSOP-A44R (EXP-PAD up HTSSOP-A44R package)	YES
		Buck DC/DC2	Low Power Standby REG	0.8	1.0					
		REG1	Secondly	0.6	0.5	Foldback				
		REG2	—	0.8	0.1					
		REG3	Secondly	0.8	0.3					
		REG4	Secondly, Voltage Calibration	0.8	1.5 (Variable)					
		REG5	—	0.8	0.1					
		High Side Switch	—	—	0.5					
		+B Detection Circuit	Over/Under Current Detection	—	—	—				

*1 BD49101AEFS-M: EXP-PAD down HTSSOP-A44 package
*2 BD49101ARFS-M: EXP-PAD up HTSSOP-A44R package

System Power Supply ICs for LCD Panels

Single-Channel Source Voltage Output Power Supply IC with Gamma Buffer Amplifier

Part No.	Supply Voltage (V)	Operating Temperature (°C)	Operating Frequency (MHz)	Output for Source Voltage (V)	V COM (ch)	Buffer for Gamma (ch)	Package
BD8157EFV	2.1 to 4.0	−40 to +125	0.6/1.2	up to 14	1	4	HTSSOP-B20

Multi-Channel System Power Supply ICs for Small- to Midium-Sized Panels

Part No.	Supply Voltage (V)	Operating Temperature (°C)	Operating Frequency (MHz)	Output for Source Voltage (V)	Output for Logic Voltage (V)	Output for Gate Voltage (V)	Start up Sequence Circuit	V COM (ch)	Package
BD8153EFV	2.1 to 6.0	−40 to +125	1.1	up to 18.0	3.3	Variable	✓	—	HTSSOP-B24
BD8163EFV	2.1 to 6.0	−40 to +125	1.1	up to 18.0	2.5	Variable	✓	—	HTSSOP-B24
BD8179MUV	2.6 to 5.5	−40 to +85	1.2	up to 19.0	—	Variable	✓	1 (Buffer 4ch)	VQFN032V5050
BD9862MUV	1.8 to 5.5	−40 to +85	0.7 to 1.4	up to 15.0	—	Variable	✓	—	VQFN024V4040
BM81028AMWV	2.5 to 5.5	−40 to +85	0.6/1.2	8.0 to 14.5 0.1V step	1.1 to 1.3 50mV step 1.7 to 1.9/2.4 to 2.6 50mV step	13 to 26 0.2V step/ −4.0 to −9.3 0.1V step	✓	1	UQFN28V4040P

Multi-Channel System Power Supply ICs for Large Panels

Part No.	Supply Voltage (V)	Operating Temperature (°C)	Operating Frequency (MHz)	Output for Source Voltage (V)	Output for Logic Voltage 1	Output for Logic Voltage 2	Output for Gate Voltage	Start up Sequence Circuit	V COM (ch)	Package
BD8166EFV	6.0 to 18.0	−40 to +85	0.5	up to 18.0	Variable	—	Variable	✓	1	HTSSOP-B40
BD8160AEFV	8.0 to 18.0	−40 to +85	0.5/0.75	up to 18.0	Variable	—	Variable	✓	—	HTSSOP-B28
BD8165MUV	4.2 to 14.0	−40 to +105	0.65	up to 18.0	Variable	Variable	Variable	✓	1	VQFN048V7070
BM81100MUW	7.6 to 14.0	−40 to +85	0.75	up to 19.8	Variable	—	Variable	✓	1	VQFN40W6060A
BM81110MUW	8.6 to 14.7	−40 to +85	0.75/1.0	up to 19.8	Variable	Variable	Variable	✓	—	VQFN40W6060A
BM81004MUV	8.6 to 14.0	−40 to +105	0.75/1.0	up to 18.0	Variable	Variable	Variable	✓	1	VQFN48V7070A

Automotive Panel Power Management ICs

Part No.	Supply Voltage (V)	Operating Temperature (°C)	Operating Frequency (MHz)	Output for Source Voltage1 (V)	Output for Source Voltage2 (V)	Output for Logic Voltage (V)	Output for Gate Voltage (V)	Start up Sequence Circuit	V COM (ch)	Package	Automotive Grade AEC-Q100
BD81842MUV-M	2.0 to 5.5	−40 to +105	2.1	up to 18.0	—	—	Variable	✓	1	VQFN24SV4040	YES
BM81810MUV-M	2.6 to 5.5	−40 to +105	0.525/1.05/2.1	5.0 to 17.0 0.1V step	—	0.9 to 3.4 50mV step	8.0 to 35.0 0.2V step/ −14.0 to −4.0 0.1V step	✓	1	VQFN32SV5050	YES
BD81870EFV-M	2.5 to 5.5	−40 to +105	2.1	up to 18.0	V_{DD}−13.0 to −1.0	—	—	✓	—	HTSSOP-B20	YES

Programmable Gamma-Voltage Generator/Gamma Buffer Amplifiers

High-precision Gamma Correction ICs with Built-in DAC

Part No.	Supply Voltage (V)		Operating Temperature (°C)	Clock Frequency (MHz)	DAC (bit)	Serial I/F	Auto Data Read	V COM (ch)	Buffer for Gamma (ch)	Package
	Gamma Collection Input	Logic								
BD8132FV	6 to 18	2.3 to 4.0	−30 to +85	5.0	10	3Wire	Built-in	1	18	SSOP-B40
BD8139AEFV	6 to 18	2.3 to 4.0	−30 to +85	0.4	10	I²C BUS	Built-in	1	10	HTSSOP-B40
BD8143MUV	8 to 18	2.3 to 5.5	−40 to +105	2.0	10	3Wire	—	—	12	VQFN032V5050
BD81010MUV	8 to 18	2.1 to 3.6	−40 to +85	0.4	10	I²C BUS	—	1	14	VQFN032V5050
BD8149MUV	10 to 18	2.1 to 3.6	−25 to +85	0.4	10	I²C BUS	Built-in	—	12	VQFN032V5050
BD81026MUV	8 to 18	2.1 to 3.6	−25 to +85	0.4	10	I²C BUS	—	—	12	VQFN024V4040

High-precision Gamma Correction IC with Built-in DAC for Automotive Panels

Part No.	Supply Voltage (V)		Operating Temperature (°C)	Clock Frequency (MHz)	DAC (bit)	Serial I/F	Auto Data Read	V COM (ch)	Buffer for Gamma (ch)	Package	Automotive Grade AEC-Q100
	Gamma Collection Input	Logic									
BD81849MUV-C	10 to 18	2.1 to 3.6	−40 to +105	0.4	10	I²C BUS	Built-in	—	12	VQFN32SV5050	YES

System Power Supply ICs for Mobile Phones

Multifunction System Power Supply ICs

Part No.	Supply Voltage (V)	Item	DC/DC		LDO						Input I/F	Protection Circuit			Package (mm)
			DC/DC1	DC/DC2	LDO1	LDO2	LDO3	LDO4	LDO5	LDO6		Over Current	Temperature	Low Voltage	
BH6173GUL	2.2 to 5.2	Output Voltage (V)	0.8 to 2.4	—	1.0 to 3.3	1.0 to 3.3	1.2 to 3.3	—	—	—	I²C	LDO1 to 3 is fold back DC/DC is dropping type	✓	✓	VCSP50L2 2.05×2.05, H=Max 0.55
		Output Current (mA)	500	—	300	300	300	—	—	—					
		Ripple Rejection (dB) (at 120Hz)	—	—	60	60	60	—	—	—					
BH6172GU	2.2 to 5.5	Output Voltage (V)	0.8 to 2.4	—	1.0 to 3.3	1.0 to 3.3	1.2 to 3.3	1.2 to 3.3	1.2 to 3.3	—	I²C/Parallel	LDO1 to 5 is fold back DC/DC is dropping type	✓	✓	VCSP85H2 2.6×2.6, H=Max 1.0
		Output Current (mA)	500	—	150	150	300	300	150	—					
		Ripple Rejection (dB) (at 120Hz)	—	—	60	60	60	60	60	—					
BH6174GUL	2.6 to 5.5	Output Voltage (V)	0.8 to 2.4	0.8 to 2.4	1.0 to 3.3	1.0 to 3.3	1.2 to 3.3	1.2 to 3.3	1.2 to 3.3	—	I²C/Parallel	LDO1 to 5 is fold back DC/DC is dropping type	✓	✓	VCSP50L2 2.8×2.8, H=Max 0.55
		Output Current (mA)	600	600	300	300	300	300	300	—					
		Ripple Rejection (dB) (at 120Hz)	—	—	60	60	60	60	60	—					
BH6178GUL	2.7 to 4.5	Output Voltage (V)	1.8	1.235	1.8	1.8	1.215	1.2	2.7	—	Parallel	LDO1 to 5 is fold back DC/DC is dropping type	✓	✓	VCSP50L2 2.8×2.8, H=Max 0.55
		Output Current (mA)	400	650	50	50	50	50	50	—					
		Ripple Rejection (dB) (at 120Hz)	—	—	60	60	60	60	60	—					
BH6176GU	2.2 to 5.5	Output Voltage (V)	0.80 to 2.35	—	1.0 to 3.3	1.0 to 3.3	1.2 to 3.3	1.2 to 3.3	1.2 to 3.3	1.2 to 3.3	I²C/Parallel	LDO1 to 6 is fold back DC/DC is dropping type	✓	✓	VCSP85H2 2.6×2.6, H=Max 1.0
		Output Current (mA)	500	—	150	150	300	300	150	300					
		Ripple Rejection (dB) (at 120Hz)	—	—	60	60	60	60	60	60					
BH6179GU	2.2 to 5.5	Output Voltage (V)	0.80 to 2.35	—	1.0 to 3.3	1.0 to 3.3	1.2 to 3.3	1.2 to 3.3	1.2 to 3.3	1.2 to 3.3	I²C/Parallel	LDO1 to 6 is fold back DC/DC is dropping type	✓	✓	VCSP85H2 2.6×2.6, H=Max 1.0
		Output Current (mA)	600	—	150	150	300	300	150	300					
		Ripple Rejection (dB) (at 120Hz)	—	—	50	50	50	50	50	50					

Part No.	Supply Voltage (V)	Item	DC/DC Output			LDO Output									Buffer for TCXO	Lithiumion Charging Control	USB Tranceiver	Protection Cincuiee	Protection Circuit			Package
			DC/DC1	DC/DC2	DC/DC6	LDO1	LDO1, 2	LDO2	LDO3	LDO4, 5	LDO6, 7	LDO8	LDO9	LDO10					Over Current	Temperature	Low Voltage	
BH6062GW	2.9 to 4.6	Output Voltage (V)	1.175	1.825	1.920	2.8	—	1.175	1.835	—	—	—	—	—	✓	—	—	✓	LDO is fold back DC/DC is dropping type	✓	✓	UCSP75M3
		Output Current (mA)	900	800	400	40	—	50	30	—	—	—	—	—								

Part No.	Supply Voltage (V)	Item	DC/DC Output					LDO Output											Buffer for TCXO	SIM I/F	Protection Cincuiee	Protection Circuit			Package
			SWREG1	SWREG2	SWREG3	SWREG4	SWREG5	LDO1	LDO2	LDO3	LDO4	LDO5	LDO6	LDO7	LDO8	LDO9	LDO10	LDO11	LDO12				Over Current	Temperature	Low Voltage	
BD71801AGWL	2.6 to 5.5	Output Voltage (V)	1.1	1.8	1.2	1.4	3.2	2.6/1.8	3.3	1.8	2.8	1.2	2.8	2.8	2.5	2.8	2.8	1.2	1.2	✓	✓	✓	LDO is fold back DC/DC is dropping type	✓	✓	UCSP50L3C
		Output Current (mA)	1,000	500	1,000	500	1,400	300	50	50	300	150	150	50	150	150	150	150	150							

LDOs, detectors and charge control in a single chip

System Power Supply ICs for DSC/DVCs

System Switching Regulator ICs with Built-in FET (5V)

Part No.	ch	Operating Frequency (MHz)	Supply Voltage (V)	Reference Voltage (V)	Reference Voltage Precision (%)	Topology					Built-in FET (ch)	Synchronous Rectifier (ch)	Load Switch (ch)	Package (mm)
						Step up (ch)	Step Down (ch)	Step up/down (ch)	Inverting (ch)	Buck-Boost (ch)				
BD9639MWV	6	0.5 to 2.0	2.5 to 5.5	0.4	±2.5	2	2	—	—	2	6	5	1	UQFN056V7070
BD9355MWV	7	2.0/1.0	1.5 to 5.5	0.8	±1.25	3	2	—	1	1	7	3	1	UQFN036V5050
				1.0	±1.0									
BD9757MWV	8	1.2	1.5 to 5.5	1.0	±1.0	3	4	—	1	—	7	5	2	UQFN044V6060
				0.8	±1.25									

System Switching Regulator ICs for Digital Video Cameras/for DSLRs

Part No.	ch	Operating Frequency (MHz)	Supply Voltage (V)	Reference Voltage (V)	Reference Voltage Precision (%)	Step up (ch)	Step Down (ch)	Buck-Boost (ch)	Inverting/ Stepdown (ch)	Built-in FET (ch)	Synchronous Rectifier (ch)	Load Switch (ch)	Package (mm)
BD9865MWV	4	0.6 to 1.5	4 to 14	1.0	±1.0	—	2	1	1	4	3	—	UQFN040V5050
				0.8	±1.25								
BD9866GUL	4	0.6 to 1.5	4 to 14	0.6	±1.66	—	3	1	—	4	4	—	VCSP50L3 3.75×3.75, H=Max 0.55
				0.8	±1.25								
BD8355MWV	7	0.5 to 1.8	4 to 10	0.8	±1.25	1	6	—	—	7	6	—	UQFN056V7070
				1.0	±1.0								

Strobe Charge Control ICs

Part No.	Supply Voltage (V_{CC}) (V)	Peak Current (A)	Full Charge Detection Voltage (V)	100nsec pluse AC Full Charge Detection Voltage (V)	Full Terminal Output	Power Transistor Saturation Voltage I_{SW}=1A (V)	IGBTOUTN (mA)	IGBTOUTP (mA)	Package
BD4233NUX	2.5 to 5.5	0.5 to 2.0	1±1.1%	1.0–1.1% to ±1.6%	Nch Open drain	0.4	60	140	VSON010X3020
BD4234NUX	2.5 to 5.5	0.5 to 2.0	1±1.1%	1.0–1.1% to ±1.6%	Nch Open drain	0.4	30	140	VSON010X3020

Backup Battery Switching ICs

Part No.	Input Voltage (V)	Output Voltage (V)		Input Detection Voltage (V)		Output Detection Voltage (V)		Switching Voltage (V)	Unreg Reset Voltage (V)		Package
	V_{IN}	VRO	V_{OUT}	–VDET1	+VDET1	–VDET2	+VDET2	V_{SW}1	–VDET3 (VDETSEL=L)	–VDET4 (VDETSEL=H)	
BD7212MUV	3.50 to 6.00	3.2	3.2	3.5	3.6	2.10	2.23	3.06	1.5	2.5	VQFN016V3030
BD7213MUV	3.50 to 8.00	3.2	3.2	3.3	3.4	2.05	2.14	2.89	1.5	2.5	VQFN016V3030
BD7214MUV	3.50 to 8.00	3.2	3.2	3.3	3.4	2.05	2.14	2.89	—	—	VQFN016V3030

System Power Supply ICs for Automotive

2ch System Power Supply IC for Automotive

Part No.	Supply Voltage (V)	Operating Frequency (kHz)	Operating Temperature (°C)	Sequence	Initial Accuracy	Output		Function					Package	Automotive Grade AEC-Q100
						ch	V_{OUT}/Max I_{OUT}	Over Current Protection	TSD	Under/Over Voltage Detection	Reset	WDT		
BD39012EFV-C	4 to 36 (Rating 45V)	200 to 600	−40 to +125	External Control EN1: DC/DC EN2: LDO	±2	1ch (DC/DC)	Synchronous Buck DC/DC Converter (V_{OUT} variable, 1A)	✓	✓	✓	–	WINDOW WDT	HTSSOP-B24	YES
						2ch (LDO)	LDO (5V, 0.4A)				✓			

System Power Supply ICs for Industrial/Consumer Applications

Power Management IC (PMIC) for Intel® Atom™ E3800 series Platform

Part No.	Supply Voltage (V)	Item	DC/DC Output							SW	LDO output								I/F	Protection Circuit	Package (mm)
			DC/DC1 V1P0A	DC/DC2 V1P0S	DC/DC3 V1P8A	DC/DC4 VDDQ	DC/DC5 V1P05S	DC/DC6 VCC	DC/DC7 VNN	V1P8S	LDO1 VRTC	LDO2 V3P3A	LDO3 V3P3S	LDO4 V1P24A	LDO5 VSDIO	LDO6 V1P24S	LDO7 VTT	LDO8 VSFR			
BD9596BMWV	3.5 to 5.5	Output Voltage (V)	1.0	1.0	1.8	1.2 to 1.6	1.05	0.5 to 1.2	0.5 to 1.2	1.8	3.3	3.3	3.3	1.24	1.8 or 3.3	1.24	VDDQ/2	1.35	IMVP7	UVLO, TSD, SCP, OVP	UQFN88MV0100 10×10×1.0
		Output Current (mA)	700	2,600	1,800	4,500	1,300	13,000	13,000	800	120	100	500	50	20	50	530	500			

Power Management ICs for NXP i.MX series Applications Processors

Part No.	Correspondance	Item	DC/DC Output								LDO Output										White LED Driver	Lithiumion Charging Control	Coulomb Counter	RTC	GPO (ch)	I²C I/F	Package
			BUCK1	BUCK2	BUCK3	BUCK4	BUCK5	BUCK6	BUCK7	BUCK8	LDO1	LDO2	LDO3	LDO4	LDO5	LDO6	LDO7	LDOSNVS	LDOLPSR	LDODVREF							
BD71815AGW	i.MX 7Solo i.MX 7Dual	Output Voltage (V)	0.8 to 2.0	0.8 to 2.0	1.2 to 2.7	1.10 to 1.85	1.8 to 3.3	–	–	–	0.8 to 3.3	0.8 to 3.3	0.8 to 3.3	0.8 to 3.3	0.8 to 3.3	–	–	3	1.8	0.5× DVREFIN	✓	✓	✓	✓	1	✓	UCSP55M4C
		Output Current (mA)	800	1,000	500	1,000	1,000				100	100	50	400	250			25	100	10							
BD71837MWV	i.MX 8M Quad/ QuadLite/ Dual	Output Voltage (V)	0.7 to 1.3	0.7 to 1.3	0.7 to 1.3	0.7 to 1.3	0.7 to 1.35	3.0 to 3.3	1.605 to 1.995	0.8 to 1.4	3.0 to 3.3, 1.6 to 1.9	0.9, 0.8	1.8 to 3.3	0.9 to 1.8	1.8 to 3.3	0.9 to 1.8	1.8 to 3.3	–	–	–	–	–	–	–	–	✓	UQFN68CV8080
		Output Current (mA)	3,600	4,000	2,100	1,000	2,500	3,000	1,500	3,000	10	10	300	250	300	300	150										
BD71837AMWV	System PMIC for i.MX 8M Family	Output Voltage (V)	0.7 to 1.3	0.7 to 1.3	0.7 to 1.3	0.7 to 1.3	0.7 to 1.35	3.0 to 3.3	1.605 to 1.995	0.8 to 1.4	3.0 to 3.3, 1.6 to 1.9	0.9, 0.8	1.8 to 3.3	0.9 to 1.8	1.8 to 3.3	0.9 to 1.8	1.8 to 3.3	–	–	–	–	–	–	–	–	✓	UQFN068CV8080
		Output Current (mA)	3,600	4,000	2,100	1,000	2,500	3,000	1,500	3,000	10	10	300	250	300	300	150										
BD71847AMWV	System PMIC for i.MX 8M Mini Family	Output Voltage (V)	0.7 to 1.3	0.7 to 1.3	–	–	0.7 to 1.35	2.6 to 3.3	1.605 to 1.995	0.8 to 1.4	3.0 to 3.3, 1.6 to 1.9	0.9, 0.8	1.8 to 3.3	0.9 to 1.8	0.8 to 3.3	0.9 to 1.8	–	–	–	–	–	–	–	–	–	✓	UQFN56BV7070
		Output Current (mA)	3,000	3,000	–	–	3,000	3,000	1,500	3,000	10	10	300	250	300	300	–										

Isolated/Non-isolated Power Supply

Integrated SiC MOSFET AC/DC Converter ICs

AC/DC Converter ICs (Built-in SiC MOSFET)

Part No.	Supply Voltage (V)	SiC MOSFET V_{DS} (Max) (V)	Control Method	Maximum Frequency (kHz)	ON Resistance (Ω)	V_{CC} OVP	FB OLP	Package
BM2SCQ121T-LBZ	15 to 27.5	1700	QR	120	1.12	Latch	Auto Restart	TO220-6M
BM2SCQ122T-LBZ	15 to 27.5	1700	QR	120	1.12	Latch	Latch	TO220-6M
BM2SCQ123T-LBZ	15 to 27.5	1700	QR	120	1.12	Auto Restart	Auto Restart	TO220-6M
BM2SCQ124T-LBZ	15 to 27.5	1700	QR	120	1.12	Auto Restart	Latch	TO220-6M

AC/DC Converter ICs

Non-isolated AC/DC Converer ICs (PWM Driver Built-in MOSFET and Sense Resistor)

Part No.	Output Voltage (V)	MOSFET V_{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	ON Resistance (Ω)	OCP Current (A)	Freqency Reduction	Max Duty (%)	Package
BM2P109TF	10.0	650	PWM	100	9.0	0.45	–	75	SOP8
BM2P101X-Z	10.0	650	PWM	65	1.5	2.00	✓	40	DIP7K
BM2P129TF	12.0	650	PWM	100	9.0	0.45	–	75	SOP8
BM2P121X-Z	12.0	650	PWM	65	1.5	2.00	✓	40	DIP7K
BM2P139TF	13.0	650	PWM	100	9.0	0.45	–	75	SOP8
BM2P137TKF	13.0	800	PWM	100	7.5	0.45	–	75	SOP8
New BM2P137QK-Z	13.0	800	PWM	100	7.5	0.80	–	75	DIP7K
New BM2P137QKF	13.0	800	PWM	100	7.5	0.80	–	75	SOP8
BM2P135TF	13.0	650	PWM	100	4.5	0.45	–	75	SOP8
New BM2P131X-Z	13.0	650	PWM	65	1.5	2.00	✓	40	DIP7K
New BM2P134Q-Z	13.0	650	PWM	100	4.0	0.80	–	75	DIP7K
New BM2P134QF	13.0	650	PWM	100	4.0	0.80	–	75	SOP8
BM2P141X-Z	14.0	650	PWM	65	1.5	2.00	✓	40	DIP7K
BM2P159PF	14.2	650	PWM	100	9.0	0.30	–	75	SOP8
BM2P159T1F	15.0	650	PWM	100	9.0	0.45	–	75	SOP8
BM2P151X-Z	15.0	650	PWM	65	1.5	2.00	✓	40	DIP7K
New BM2P151S-Z	15.0	650	PWM	65	1.5	2.30	✓	40	DIP7K
BM2P161W-Z	16.8	650	PWM	65	1.9	1.46	✓	40	DIP7K
BM2P161X-Z	16.8	650	PWM	65	1.5	2.00	✓	40	DIP7K
New BM2P181X-Z	18.0	650	PWM	65	1.5	2.00	✓	40	DIP7K
New BM2P189TF	18.0	650	PWM	100	9.5	0.45	–	75	SOP8
New BM2P209TF	20.0	650	PWM	100	9.5	0.45	–	75	SOP8
BM2P201X-Z	20.0	650	PWM	65	1.5	2.00	✓	40	DIP7K
New BM2P249Q-Z	24.8	650	PWM	100	9.5	0.80	✓	40	DIP7K
BM2P249TF	24.8	650	PWM	100	9.0	0.45	–	75	SOP8
New BM2P241X-Z	24.8	650	PWM	65	1.5	2.00	✓	40	DIP7K

AC/DC Converter ICs (PWM Driver Built-in MOSFET)

Part No.	Supply Voltage (V)	MOSFET V_{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	ON Resistance (Ω)	Peak Current (A)	Brown Out	V_{CC} OVP	Package
New BM2P0151-Z	8.9 to 26.0	650	PWM	65	1.0	12.0	–	Latch	DIP7K
BM2P0161-Z	8.9 to 26.0	650	PWM	65	1.0	12.0	–	Auto Restart	DIP7K
New BM2P0161K-Z	8.9 to 26.0	800	PWM	65	1.6	9.0	–	Auto Restart	DIP7K
New BM2P015-Z	8.9 to 26.0	650	PWM	65	1.4	10.4	–	Latch	DIP7K
New BM2P016-Z	8.9 to 26.0	650	PWM	65	1.4	10.4	–	Auto Restart	DIP7K
BM2P016T	8.9 to 26.0	650	PWM	65	1.4	10.4	–	Auto Restart	TO220
New BM2P0163T-Z	8.9 to 26.0	650	PWM	65	1.4	10.4	–	Auto Restart	TO220-7M
BM2P011	8.9 to 26.0	650	PWM	65	1.4	10.4	✓ (adjustable)	Latch	DIP7K
BM2P012	8.9 to 26.0	650	PWM	65	1.4	10.4	✓ (adjustable)	Auto Restart	DIP7K
BM2P013	8.9 to 26.0	650	PWM	65	1.4	10.4	–	Latch	DIP7K
BM2P014	8.9 to 26.0	650	PWM	65	1.4	10.4	–	Auto Restart	DIP7K
BM2P031	8.9 to 26.0	650	PWM	65	2.4	5.2	✓ (adjustable)	Latch	DIP7K
BM2P032	8.9 to 26.0	650	PWM	65	2.4	5.2	✓ (adjustable)	Auto Restart	DIP7K
BM2P033	8.9 to 26.0	650	PWM	65	2.4	5.2	–	Latch	DIP7K
BM2P034	8.9 to 26.0	650	PWM	65	2.4	5.2	–	Auto Restart	DIP7K
BM2P0361-Z	8.9 to 26.0	650	PWM	65	3.0	4.0	–	Auto Restart	DIP7K
New BM2P0362-Z	8.9 to 26.0	650	PWM	65	3.0	12.0	–	Auto Restart	DIP7K
BM2P0391	8.9 to 26.0	650	PWM	100	4.0	5.2	✓ (adjustable)	Auto Restart	DIP7K
BM2P051	8.9 to 26.0	650	PWM	65	4.0	2.6	✓ (adjustable)	Latch	DIP7K
BM2P051F	8.9 to 26.0	650	PWM	65	4.0	2.6	✓ (adjustable)	Latch	SOP8
BM2P052	8.9 to 26.0	650	PWM	65	4.0	2.6	✓ (adjustable)	Auto Restart	DIP7K
BM2P052F	8.9 to 26.0	650	PWM	65	4.0	2.6	✓ (adjustable)	Auto Restart	SOP8
BM2P053	8.9 to 26.0	650	PWM	65	4.0	2.6	–	Latch	DIP7K
BM2P053F	8.9 to 26.0	650	PWM	65	4.0	2.6	–	Latch	SOP8
BM2P054	8.9 to 26.0	650	PWM	65	4.0	2.6	–	Auto Restart	DIP7K
BM2P054F	8.9 to 26.0	650	PWM	65	4.0	2.6	–	Auto Restart	SOP8
BM2P091	8.9 to 26.0	650	PWM	65	8.5	1.3	✓ (adjustable)	Latch	DIP7K
BM2P091F	8.9 to 26.0	650	PWM	65	8.5	1.3	✓ (adjustable)	Latch	SOP8
BM2P092	8.9 to 26.0	650	PWM	65	8.5	1.3	✓ (adjustable)	Auto Restart	DIP7K
BM2P092F	8.9 to 26.0	650	PWM	65	8.5	1.3	✓ (adjustable)	Auto Restart	SOP8
BM2P093	8.9 to 26.0	650	PWM	65	8.5	1.3	–	Latch	DIP7K
BM2P093F	8.9 to 26.0	650	PWM	65	8.5	1.3	–	Latch	SOP8
BM2P094	8.9 to 26.0	650	PWM	65	8.5	1.3	–	Auto Restart	DIP7K
BM2P094F	8.9 to 26.0	650	PWM	65	8.5	1.3	–	Auto Restart	SOP8
BM2P095F	8.9 to 26.0	650	PWM	65	8.5	1.3	–	Latch	SOP8
BM2PA96F	8.9 to 26.0	650	PWM	65	8.5	1.3	–	Auto Restart	SOP8
New BM2P061E	8.9 to 26.0	650	PWM	65	0.955	12.0	✓ (adjustable)	Auto Restart	DIP7AK
New BM2P064E	8.9 to 26.0	650	PWM	65	3.0	4.0	✓ (adjustable)	Auto Restart	DIP7AK
New BM2P101E	8.9 to 26.0	650	PWM	100	0.955	12.0	✓ (adjustable)	Auto Restart	DIP7AK
New BM2P104E	8.9 to 26.0	650	PWM	100	3.0	4.0	✓ (adjustable)	Auto Restart	DIP7AK
New BM2P131E	8.9 to 26.0	650	PWM	130	0.955	12.0	✓ (adjustable)	Auto Restart	DIP7AK
New BM2P134E	8.9 to 26.0	650	PWM	130	3.0	4.0	✓ (adjustable)	Auto Restart	DIP7AK
BM2P061EK-LB	10.9 to 30.0	800	PWM	65	1.6	5.0	✓ (adjustable)	Auto Restart	DIP7AK
New BM2P061FK-LBZ	10.9 to 30.0	800	PWM	65	1.6	9.0	✓ (adjustable)	Auto Restart	DIP7AK
BM2P101EK-LB	10.9 to 30.0	800	PWM	100	1.6	5.0	✓ (adjustable)	Auto Restart	DIP7AK
New BM2P101FK-LBZ	10.9 to 30.0	800	PWM	100	1.6	9.0	✓ (adjustable)	Auto Restart	DIP7AK
New BM2P131FK-LBZ	10.9 to 26.0	800	PWM	130	1.6	9.0	✓ (adjustable)	Auto Restart	DIP7AK
BM2P074KF	10.2 to 26.0	800	PWM	65	6.7	2.0	–	Auto Restart	SOP8

AC/DC Converter ICs (PWM Driver Built-in MOSFET and Sense Resistor)

Part No.	Supply Voltage (V)	MOSFET V_{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	ON Resistance (Ω)	OCP Current (A)	Brown Out (V)	V_{CC} OVP	Package
BM2P26CK	11.9 to 26.0	800	PWM	100	6.0	0.13	100	Latch	DIP7K

AC/DC Converter ICs (PWM Controller)

Part No.	Supply Voltage (V)	Control Method	START-UP Circuit	Switching Frequency (kHz)	AC Line Voltage Correction	V_{CC} Recharge	Brown Out	V_{CC} OVP	Package
BM1P061FJ	8.9 to 26.0	PWM	✓	65	✓	✓	✓ (adjustable)	Auto Restart	SOP-J8
BM1P062FJ	8.9 to 26.0	PWM	✓	65	✓	✓	✓ (adjustable)	Latch	SOP-J8
BM1P065FJ	8.9 to 26.0	PWM	✓	65	✓	–	✓ (adjustable)	Auto Restart	SOP-J8
BM1P066FJ	8.9 to 26.0	PWM	✓	65	✓	–	✓ (adjustable)	Latch	SOP-J8
BM1P067FJ	8.9 to 26.0	PWM	✓	65	✓	–	–	Auto Restart	SOP-J8
BM1P068FJ	8.9 to 26.0	PWM	✓	65	✓	–	–	Latch	SOP-J8
BM1P101FJ	8.9 to 26.0	PWM	✓	100	✓	✓	✓ (adjustable)	Auto Restart	SOP-J8
BM1P102FJ	8.9 to 26.0	PWM	✓	100	✓	✓	✓ (adjustable)	Latch	SOP-J8
BM1P105FJ	8.9 to 26.0	PWM	✓	100	✓	–	✓ (adjustable)	Auto Restart	SOP-J8
BM1P107FJ	8.9 to 26.0	PWM	✓	100	✓	–	–	Auto Restart	SOP-J8
BD7672BG	8.5 to 25.0	PWM	–	65	–	–	–	Latch	SSOP6
BD7673AG	8.5 to 25.0	PWM	–	65	–	–	–	Latch	SSOP6
BD7679G	8.5 to 25.0	PWM	–	65	–	–	–	Auto Restart	SSOP6
BD7678FJ	8.5 to 25.5	PWM	–	65	✓	–	✓ (adjustable)	Latch	SOP-J8

AC/DC Converter ICs (Quasi-Resonant Controller)

Paart No.	Supply Voltage (V)	Control Method	START-UP Circuit	Maximum Frequency (kHz)	AC line Voltage Correction	FBOLP	V_{CC} OVP	ZT OVP	Package
BM1Q002FJ	8.9 to 26.0	QR	✓	120	✓	Self-restart	Latch	Latch	SOP-J8
BM1Q011FJ	8.9 to 26.0	QR	✓	120	✓	Self-restart	Self-restart	none	SOP-J7
BM1Q021FJ	8.9 to 26.0	QR	✓	120	✓	Self-restart	Self-restart	Self-restart	SOP-J8
BM1Q104FJ	14.0 to 30.0	QR	✓	111	–	Self-restart	–	Latch	SOP-J8

AC/DC Converter ICs (PFC, PFC+Quasi-Resonant Controller)

Part No.	Supply Voltage (V)	Control Method	START-UP Circuit	X-cap Discharge	QR Maximum Frequency (kHz)	PFC Maximum Frequency (kHz)	PFC Output Voltage Conversion	V_{CC} OVP/ZT OVP	Package
BD7690FJ	10.0 to 26.0	PFC	–	–	–	220	–	–	SOP-J8
BD7691FJ	10.0 to 26.0	PFC	–	–	–	220	–	–	SOP-J8
New BD7692FJ	10.0 to 26.0	PFC	–	–	–	450	–	–	SOP-J8
BM1050AF	8.9 to 26.0	PFC+QR	✓	–	120	65	–	Selectable Externally	SOP24
BM1051F	8.9 to 26.0	PFC+QR	✓	–	120	65	–	Selectable Externally	SOP24
BM1C101F	8.9 to 26.0	PFC+QR	✓	✓	120	400	✓	✓	SOP18
BM1C102F	8.9 to 26.0	PFC+QR	✓	✓	120	400	–	✓	SOP18

AC/DC Converter ICs (For SiC MOSFET Driving)

Part No.	Supply Voltage (V)	Control Method	MOSFET	MOSFET Performance	Maximum Frequency (kHz)	FBOLP	Browm Out	V_{CC} OVP	Package
BD7682FJ-LB	15.0 to 27.5	QR	External	–	120	Self-restart	✓ (adjustable)	Latch	SOP-J8
BD7683FJ-LB	15.0 to 27.5	QR	External	–	120	Latch	✓ (adjustable)	Latch	SOP-J8
BD7684FJ-LB	15.0 to 27.5	QR	External	–	120	Self-restart	✓ (adjustable)	Self-restart	SOP-J8
BD7685FJ-LB	15.0 to 27.5	QR	External	–	120	Latch	✓ (adjustable)	Self-restart	SOP-J8

AC/DC Converter ICs (Secondary Side Synchronous Rectification with Shunt Regulator)

Part No.	Supply Voltage (V)	Control Method	Shunt Regulator Accuracy (%)	Drain Terminal Maximum Voltage (V)	Compulsion OFF Time (µs)	V_{CC} OVP	Auto Sleep Function	CCM Mode	Package
BM1R00146F	2.7 to 32.0	SR	±0.5	120	1.3	Self-restart	✓	✓	SOP8
BM1R00147F	2.7 to 32.0	SR	±0.5	120	2.0	Self-restart	✓	✓	SOP8
BM1R00148F	2.7 to 32.0	SR	±0.5	120	3.0	Self-restart	✓	✓	SOP8
BM1R00149F	2.7 to 32.0	SR	±0.5	120	3.6	Self-restart	✓	✓	SOP8
BM1R00150F	2.7 to 32.0	SR	±0.5	120	4.6	Self-restart	✓	✓	SOP8
BM1R00178F	2.7 to 32.0	SR	±0.5	120	3.0	Self-restart	–	✓	SOP8
New BD85506F	5.0 to 32.0	SR for LLC	±1.0	120	–	Self-restart	✓	–	SOP14

Isolated DC/DC Converter ICs

Isolated DC/DC Converter ICs

Part No.	Output Power (W)	Input Voltage Maximum Rating (V)	Switch Current Limit (A)	Input Voltage (V)	Switching Frequency (kHz)	Control Mode	Features						Package
							Enable	Soft Start	Light-Load Efficiency	UVLO	Over Current Protection	Thermal Protection	
BD7F100EFJ-LB	1W at V_{IN} 5.0V 5W at V_{IN} 24V	45	1.25	3.0 to 40.0	400	Adaptive on-time	✓	✓	✓	✓	Recovery	Recovery	HTSOP-J8
BD7F100HFN-LB													HSON8
BD7F200EFJ-LB	5W at V_{IN} 12V 10W at V_{IN} 24V	45	2.75	8.0 to 40.0	400	Adaptive on-time	✓	✓	✓	✓	Recovery	Recovery	HTSOP-J8
BD7F200HFN-LB													HSON8
☆BD7J200EFJ-LA	10W at V_{IN} 48V	80	2.13	8.0 to 80.0	400	Adaptive on-time	✓	✓	✓	✓	Recovery	Recovery	HTSOP-J8
☆BD7J200HFN-LA													HSON8

☆: Under Development

Gate Drivers

Isolated Gate Drivers

Isolated Gate Drivers

Part No.	Input-side Supply Voltage (V)	Output-side Positive Supply Voltage (V)	Output-side Negative Supply Voltage (V)	Isolation Voltage (Vrms)	I/O Delay Time (ns)	Minimum Input Pulse Width (ns)	Maximum Output Current (A)	Operating Temperature (˚C)	Function	Package	Automotive Grade AEC-Q100
BM6101FV-C	4.5 to 5.5	14 to 24	–12 to 0	2,500	350	180	3	–40 to +125	Active miller clamping/ Fault signal output/UVLO/SCP/ DESAT/Soft turn-off function for SCP	SSOP-B20W	YES
BM6102FV-C	4.5 to 5.5	14 to 20	–	2,500	200	100	3	–40 to +125	Active miller clamping/ Fault signal output/UVLO/SCP/ DESAT/Soft turn-off function for SCP	SSOP-B20W	YES
BM6104FV-C	4.5 to 5.5	10 to 24	–12 to 0	2,500	150	90	3	–40 to +125	Active miller clamping/ Fault signal output/UVLO/SCP/ DESAT/Soft turn-off function for SCP	SSOP-B20W	YES
BM61M41RFV-C	4.5 to 5.5	9 to 24	–	3,750	65	60	4	–40 to +125	Active miller clamping/UVLO	SSOP-B10W	YES
BM61S40RFV-C	4.5 to 5.5	16 to 20	–	3,750	65	60	4	–40 to +125	Active miller clamping/UVLO/OVP	SSOP-B10W	YES
BM61S41RFV-C	4.5 to 5.5	16 to 24	–	3,750	65	60	4	–40 to +125	Active miller clamping/UVLO	SSOP-B10W	YES

Isolated Gate Drivers (For Industrial Equipment)

Part No.	Input-side Supply Voltage (V)	Output-side Positive Supply Voltage (V)	Output-side Negative Supply Voltage (V)	Isolation Voltage (Vrms)	I/O Delay Time (ns)	Minimum Input Pulse Width (ns)	Maximum Output Current (A)	Operating Temperature (˚C)	Function	Package
BM6108FV-LB	4.5 to 5.5	10 to 24	–12 to 0	2,500	150	90	3	–40 to +105	Active miller clamping/Fault signal output/UVLO/ SCP/DESAT/Soft turn-off function for SCP	SSOP-B20W
BM6105AFW-LBZ	4.5 to 5.5	13.3 to 20.0	–12 to 0	2,500	120	60	3	–40 to +105	Active miller clamping/Fault signal output/ Ready output/UVLO/DESAT	SOP16WM

Isolated Gate Drivers with Flyback Controller

Part No.	Input-side Supply Voltage (V)	Output-side Positive Supply Voltage (V)	Output-side Negative Supply Voltage (V)	Isolation Voltage (Vrms)	I/O Delay Time (ns)	Minimum Input Pulse Width (ns)	Maximum Output Current (A)	Operating Temperature (˚C)	Function	Package	Automotive Grade AEC-Q100
BM60055FV-C	4.5 to 30.0	9 to 24	–	2,500	250	170	5	–40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/ Soft turn-off function for SCP/OCP/2 level turn off	SSOP-B28W	YES
BM60052AFV-C	4 to 32	10 to 20	–12 to 0	2,500	120	90	3	–40 to +125	Active miller clamping/Fault signal output/UVLO/ DESAT/Ready output/Soft turn-off function for DESAT	SSOP-B28W	YES
BM60054AFV-C	4 to 32	10 to 20	–12 to 0	2,500	120	90	3	–40 to +125	Active miller clamping/Fault signal output/UVLO/ SCP/Ready output/Soft turn-off function for SCP	SSOP-B28W	YES

Others

IGBT/MOSFET High-side Low-side Gate Drivers

Part No	Input-side Supply Voltage (V)	High-side Floating Supply Voltage (V)	I/O Delay Time (ns)	minimum Output Current (A)	Dead Time (ns)	ch	Operating Temperature (°C)	Package	Automotive Grade AEC-Q100
BS2101F	10 to 18	600	220	0.06/–0.13	–	2	–40 to +125	SOP8	–
BS2103F	10 to 18	600	220	0.06/–0.13	160	2	–40 to +125	SOP8	–
BS2114F	10 to 20	600	250	0.5/–0.5	160	2	–40 to +125	SOP8	–
BM60212FV-C	10 to 24	1,200	75	3/–3	–	2	–40 to +125	SSOP-B20W	YES
New BM60213FV-C	10 to 24	1,200	75	3/–3	–	2	–40 to +125	SSOP-B20W	YES

IGBT/MOSFET High-side Low-side 3 Phase Bridge Drivers

Part No	Input-side Supply Voltage (V)	High-side Floating Supply Voltage (V)	I/O Delay Time (ns)	Output Current (A)	Dead Time (ns)	ch	Built-in Boot Diode	Operating Temperature (°C)	Package
BS2130F-G	11.5 to 20.0	600	630/580	0.2/–0.35	300	6	–	–40 to +125	SOP28
BS2132F	11.5 to 20.0	600	630/580	0.2/–0.35	300	6	✓	–40 to +125	SOP28

(LAPIS Semiconductor products)

Non-insulated Gate Driver for Battery Management System (BMS)

Part No.	Supply Voltage (V)	Gate Driving Voltage (V) Min	Turn on Time (µs) Max	Turn off Time (µs) Max	Operating temperature (°C)	Package	Halogen Free Support	Automotive Grade Available AEC-Q100
☆ML5810	6.5 to 64	10	350	70	–40 to +105	P-TSSOP20-0225-0.65	✓	YES
ML5810A	6.5 to 64	10	350	70	–40 to +105	P-TSSOP20-0225-0.65	–	–

☆: Under Development

Temperature Monitor

Isolated Temperature Monitor

Part No.	Supply Voltage 1 (V)	Supply Voltage 2 (V)	Isolation Voltage (Vrms)	Circuit Current 1 (mA)	Circuit Current 2 (mA)	Input Voltage (V)	Output Current Accuracy (%)	Output Duty Accuracy (%)	Operating Temperature (°C)	Package	Automotive Grade AEC-Q100
BM66002FV-C	9 to 24	3.0 to 5.5	2,500	3.75	0.2	1.4 to 4.0	±2.0	±2.0	–40 to +125	SSOP-B20W	YES

Power Management

1 Channel Compact High Side Switch ICs

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package
BD6538G	2.7 to 5.5	150	H Active	0.5	0.5/–/1.0	1.0	Latch	Recovery	15	–	SSOP5
BD2220G	2.7 to 5.5	160	H Active	0.5	0.5/–/1.0	1.0	Latch	Recovery	15	–	SSOP5
BD2221G	2.7 to 5.5	160	L Active	0.5	0.5/–/1.0	1.0	Latch	Recovery	15	–	SSOP5
BD2224G	2.7 to 5.5	150	H Active	0.5	0.55/0.78/1.0	1.0	Recovery	Recovery	15	–	SSOP5
BD2225G	2.7 to 5.5	150	L Active	0.5	0.55/0.78/1.0	1.0	Recovery	Recovery	15	–	SSOP5
BD2226G	2.7 to 5.5	150	H Active	0.65	0.75/1.0/1.35	1.0	Recovery	Recovery	15	–	SSOP5
BD2227G	2.7 to 5.5	150	L Active	0.65	0.75/1.0/1.35	1.0	Recovery	Recovery	15	–	SSOP5
BD2232G	2.7 to 5.5	100	H Active	1.0	1.15/1.275/1.4	1.0	Recovery	Recovery	15	60	SSOP5
BD2233G	2.7 to 5.5	100	L Active	1.0	1.15/1.275/1.4	1.0	Recovery	Recovery	15	60	SSOP5
BD2240G	2.7 to 5.5	110	H Active	0.75	0.82/0.97/1.12	1.0	Recovery	Recovery	15	60	SSOP5
BD2241G	2.7 to 5.5	110	L Active	0.75	0.82/0.97/1.12	1.0	Recovery	Recovery	15	60	SSOP5
BD2246G	2.7 to 5.5	110	H Active	0.5	0.63/0.765/0.9	1.0	Recovery	Recovery	15	60	SSOP5
BD2247G	2.7 to 5.5	110	L Active	0.5	0.63/0.765/0.9	1.0	Recovery	Recovery	15	60	SSOP5
BD2248G	2.7 to 5.5	110	H Active	0.2	0.2/0.3/0.4	1.0	Recovery	Recovery	15	60	SSOP5
BD2222G*	2.8 to 5.5	90	H Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery	7	–	SSOP6
BD2242G*	2.8 to 5.5	90	H Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery	7	60	SSOP6
BD2243G*	2.8 to 5.5	90	L Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery	7	60	SSOP6

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package	Automotive Grade AEC-Q100
BD22621G-M	2.7 to 5.5	120	H Active	0.15	0.18/0.30/0.42	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD2262G-M	2.7 to 5.5	120	H Active	0.2	0.2/0.3/0.4	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD22641G-M	2.7 to 5.5	120	H Active	0.5	0.57/0.76/0.96	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD2264G-M	2.7 to 5.5	120	H Active	0.5	0.63/0.765/0.9	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD2265G-M	2.7 to 5.5	120	L Active	0.5	0.63/0.765/0.9	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD2266G-M	2.7 to 5.5	120	H Active	0.75	0.82/0.97/1.12	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD2267G-M	2.7 to 5.5	120	L Active	0.75	0.82/0.97/1.12	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD2268G-M	2.7 to 5.5	110	H Active	1.0	1.15/1.275/1.4	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD2269G-M	2.7 to 5.5	110	L Active	1.0	1.15/1.275/1.4	1.0	Recovery	Recovery	15	60	SSOP5	YES
BD2244G-M*	2.8 to 5.5	100	H Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery	7	60	SSOP6	YES
BD2245G-M*	2.8 to 5.5	100	L Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery	7	60	SSOP6	YES

1 Channel Compact High Side Switch ICs (Industrial Equipment)

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package
BD6538G-LB	2.7 to 5.5	150	H Active	0.5	0.5/–/1.0	1.0	Latch	Recovery	15	–	SSOP5
BD2220G-LB	2.7 to 5.5	160	H Active	0.5	0.5/–/1.0	1.0	Latch	Recovery	15	–	SSOP5
BD2221G-LB	2.7 to 5.5	160	L Active	0.5	0.5/–/1.0	1.0	Latch	Recovery	15	–	SSOP5
BD2224G-LB	2.7 to 5.5	150	H Active	0.5	0.55/0.78/1.0	1.0	Recovery	Recovery	15	–	SSOP5
BD2225G-LB	2.7 to 5.5	150	L Active	0.5	0.55/0.78/1.0	1.0	Recovery	Recovery	15	–	SSOP5
BD2226G-LB	2.7 to 5.5	150	H Active	0.65	0.75/1.0/1.35	1.0	Recovery	Recovery	15	–	SSOP5
BD2227G-LB	2.7 to 5.5	150	L Active	0.65	0.75/1.0/1.35	1.0	Recovery	Recovery	15	–	SSOP5

*UL approved File No. E243261

1 Channel High Side Switch ICs

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package
BD2051AFJ	2.7 to 5.5	80	H Active	0.5	0.7/1.0/1.6	1.2	Recovery	Recovery	1.3	–	SOP-J8
BD82001FVJ	2.7 to 5.5	70	H Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J
BD82000FVJ	2.7 to 5.5	70	L Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J
BD2065AFJ	2.7 to 5.5	80	H Active	1.0	1.1/1.5/2.3	1.2	Recovery	Recovery	2.5	–	SOP-J8
BD82065FVJ	2.7 to 5.5	70	H Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J
BD82061FVJ	2.7 to 5.5	70	L Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J
BD82020FVJ*	2.8 to 5.5	90	H Active	1.1	1.1/1.5/2.0	0.4	Recovery	Recovery	12	75	TSSOP-B8J
BD82021FVJ*	2.8 to 5.5	90	L Active	1.1	1.1/1.5/2.0	0.4	Recovery	Recovery	12	75	TSSOP-B8J
BD82022FVJ*	2.8 to 5.5	90	H Active	1.5	1.5/2.0/2.6	0.4	Recovery	Recovery	12	75	TSSOP-B8J
BD82023FVJ*	2.8 to 5.5	90	L Active	1.5	1.5/2.0/2.6	0.4	Recovery	Recovery	12	75	TSSOP-B8J
BD82024FVJ*	2.8 to 5.5	90	H Active	2.1	2.1/2.5/3.3	0.4	Recovery	Recovery	12	75	TSSOP-B8J
BD82025FVJ*	2.8 to 5.5	90	L Active	2.1	2.1/2.5/3.3	0.4	Recovery	Recovery	12	75	TSSOP-B8J
BD82028FVJ*	4.5 to 5.5	72	H Active	0.5	0.6/1.0/1.2	0.3	Recovery	Recovery	13	75	TSSOP-B8J
BD82029FVJ*	4.5 to 5.5	72	L Active	0.5	0.6/1.0/1.2	0.3	Recovery	Recovery	13	55	TSSOP-B8J
BD82030FVJ*	4.5 to 5.5	72	H Active	1.0	1.05/1.5/1.8	0.3	Recovery	Recovery	13	55	TSSOP-B8J
BD82031FVJ*	4.5 to 5.5	72	L Active	1.0	1.05/1.5/1.8	0.3	Recovery	Recovery	13	55	TSSOP-B8J
BD82032FVJ*	4.5 to 5.5	72	H Active	1.5	1.55/2.0/2.3	0.3	Recovery	Recovery	13	55	TSSOP-B8J
BD82033FVJ*	4.5 to 5.5	72	L Active	1.5	1.55/2.0/2.3	0.3	Recovery	Recovery	13	55	TSSOP-B8J
BD82034FVJ*	4.5 to 5.5	72	H Active	2.0	2.05/2.5/2.8	0.3	Recovery	Recovery	13	55	TSSOP-B8J
BD82035FVJ*	4.5 to 5.5	72	L Active	2.0	2.05/2.5/2.8	0.3	Recovery	Recovery	13	55	TSSOP-B8J
BD82038FVJ*	2.7 to 5.5	72	H Active	0.5	0.60/1.00/1.20	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82039FVJ*	2.7 to 5.5	72	L Active	0.5	0.60/1.00/1.20	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82040FVJ*	2.7 to 5.5	72	H Active	1.0	1.05/1.50/1.80	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82041FVJ*	2.7 to 5.5	72	L Active	1.0	1.05/1.50/1.80	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82042FVJ*	2.7 to 5.5	72	H Active	1.5	1.55/2.00/2.30	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82043FVJ*	2.7 to 5.5	72	L Active	1.5	1.55/2.00/2.30	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82044FVJ*	2.7 to 5.5	72	H Active	2.0	2.05/2.50/2.80	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82045FVJ*	2.7 to 5.5	72	L Active	2.0	2.05/2.50/2.80	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82046FVJ*	2.7 to 5.5	72	H Active	2.5	2.70/3.20/3.80	0.5	Recovery	Recovery	7	55	TSSOP-B8J
BD82047FVJ*	2.7 to 5.5	72	L Active	2.5	2.70/3.20/3.80	0.5	Recovery	Recovery	7	55	TSSOP-B8J

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package	Automotive Grade AEC-Q100
BD82004FVJ-M	2.7 to 5.5	70	H Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J	YES
BD82005FVJ-M	2.7 to 5.5	70	L Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J	YES
BD82006FVJ-M	2.7 to 5.5	70	H Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J	YES
BD82007FVJ-M	2.7 to 5.5	70	L Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J	YES

1 Channel High Side Switch ICs (Industrial Equipment)

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package
BD82001FVJ-LB	2.7 to 5.5	70	H Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J
BD82000FVJ-LB	2.7 to 5.5	70	L Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J
BD82065FVJ-LB	2.7 to 5.5	70	H Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J
BD82061FVJ-LB	2.7 to 5.5	70	L Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	TSSOP-B8J

2 Channel High Side Switch ICs

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package
BD6516F*	3.0 to 5.5	110	H Active	1.1	1.2/1.65/2.5	1.3	Recovery	Recovery	1	–	SOP8
BD2066FJ*	2.7 to 5.5	80	H Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	SOP-J8
BD2062FJ*	2.7 to 5.5	80	L Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	SOP-J8

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package	Automotive Grade AEC-Q100
BD2068FJ-M	2.7 to 5.5	80	H Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	SOP-J8	YES
BD2069FJ-M	2.7 to 5.5	80	L Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	SOP-J8	YES

2 Channel High Side Switch ICs (Industrial Equipment)

Part No.	Input Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over Current (ms)	Discharge Resistance (Ω)	Package
BD2066FJ-LB*	2.7 to 5.5	80	H Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	SOP-J8
BD2062FJ-LB*	2.7 to 5.5	80	L Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	–	SOP-J8

*UL approved File No. E243261

Load Switch ICs

Part No.	Input Voltage (V)	Current Consumption (μA)	ON Resistance (mΩ)	Number of Output channel (ch)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	Thermal Shut Down	Discharge Resistance (Ω)	Package (mm)
BD6528HFV	V_{DD}=2.7 to 4.5/ V_{IN}=0 to 2.7	20	110	1	H Active	0.5	—	0.5	—	70	HVSOF6
BD6529GUL	V_{DD}=2.7 to 4.5/ V_{IN}=0 to 2.7	20	100	1	H Active	0.5	—	0.5	—	70	VCSP50L1 1.0×1.5, H=0.55
BD2200GUL	2.7 to 5.5	20	100	1	H Active	0.5	—	1.0	—	70	VCSP50L1 1.0×1.5, H=0.55
BD2201GUL	2.7 to 5.5	20	100	1	H Active	1.0	—	1.0	—	70	VCSP50L1 1.0×1.5, H=0.55
BD2204GUL	V_{IN}1=2.7 to 4.5/ V_{IN}2=1.2 to 2.4	30	120	1	H Active	0.5	—	0.06	Recovery	80	VCSP50L1 1.0×1.5, H=0.55
BD2202G	2.7 to 3.6	70	150	1	H Active	0.2	0.25/—/1.0	1.2	Recovery	—	SSOP5
BD2206G	2.7 to 3.6	70	150	1	H Active	0.5	0.8/—/1.6	1.2	Recovery	—	SSOP5
BD6520F	3.0 to 5.5	110	50	1	H Active	2.0	—	2.0	Latch	350	SOP8
BD6522F	3.0 to 5.5	110	50	1	H Active	2.0	—	1.0	Latch	350	SOP8

Load Switch ICs (Industrial Equipment)

Part No.	Input Voltage (V)	Current Consumption (μA)	ON Resistance (mΩ)	Number of Output channel (ch)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	Thermal Shut Down	Discharge Resistance (Ω)	Package (mm)
BD2202G-LB	2.7 to 3.6	70	150	1	H Active	0.2	0.25/—/1.0	1.2	Recovery	—	SSOP5
BD2206G-LB	2.7 to 3.6	70	150	1	H Active	0.5	0.8/—/1.6	1.2	Recovery	—	SSOP5

1 Channel Compact High Side Load Switch ICs

Part No.	Input Voltage (V)	Current Consumption (μA)	ON Resistance (mΩ)	Number of Output channel (ch)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	Thermal Shut Down	Discharge Resistance (Ω)	Package (mm)
BUS1DJC0GWZ	1.1 to 5.0	0.35	63	1	H Active	2.0	—	0.012	—	80	UCSP30L1 0.8×0.8, H=0.35
BUS1DJC3GWZ	1.1 to 5.0	0.35	63	1	H Active	2.0	—	0.19	—	80	UCSP30L1 0.8×0.8, H=0.35

2 Channel Compact High Side Load Switch IC

Part No.	Input Voltage (V)	Current Consumption (μA)	ON Resistance (mΩ)	Number of Output channel (ch)	Control Input Logic	Output Current (A)	Over Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	Thermal Shut Down	Discharge Resistance (Ω)	Package (mm)
BDS2EJAAGUL	3.0 to 3.6	0.2	45	2	H Active	1.0	1.0	— (Soft Start)	Recovery	30	VCSP50L1 1.95×1.0, H=0.55

Controller IC for High Side NMOSFET

Part No.	Input Voltage (V)	Current Consumption (μA)	Output Voltage (V)		Number of Output channel (ch)	Control Input Logic	Output Turn on Time (ms)	Discharge Resistance (Ω)	Package
			V_{CC}=3.3V	V_{CC}=5.0V					
BD2270HFV	2.7 to 5.5	50	9.5	13.5	1	H Active	0.13	200	HVSOF5

Controller IC for High Side NMOSFET (Industrial Equipment)

Part No.	Input Voltage (V)	Current Consumption (μA)	Output Voltage (V)		Number of Output channel (ch)	Control Input Logic	Output Turn on Time (ms)	Discharge Resistance (Ω)	Package
			V_{CC}=3.3V	V_{CC}=5.0V					
BD2270HFV-LB	2.7 to 5.5	50	9.5	13.5	1	H Active	0.13	200	HVSOF5

Wireless Power

Receiver ICs

Part No.	Wireless Power Standard	Output Power (W)	Output Voltage (V)	Input Voltage (V)	Output Current (A)	Operating Frequency (kHz)	Operating Temperature (°C)	Package (mm)
BD57011AGWL	WPC (Qi) v1.2	5	4.3 to 5.3	20	1.1	210	−20 to +85	UCSP50L3C 3.36×2.62, H=Max 0.57
BD57015GWL	WPC (Qi) v1.2 and AirFuel (PMA SR1)	15	5.0 to 12.0	20	1.5	480	−30 to +85	UCSP50L4C 4.10×3.20, H=Max 0.57
BD57016GWL	WPC (Qi) v1.2 and AirFuel (PMA SR1)	15	5.0 to 12.0	20	1.5	100 to 480	−25 to +85	UCSP50L4C 4.20×3.40, H=Max 0.57

Transmitter ICs

Part No.	Wireless Power Standard	Output Power (W)	Operating Temperature (°C)	Recommendation MCU	Package (mm)
BD57021MWV	WPC (Qi) v1.2	5	−20 to +85	ML610Q772	UQFN040V5050 5.0×5.0, H=Max 1.0
BD57020MWV	WPC (Qi) v1.2	15	−20 to +85	ML62Q1300/ML62Q1500	UQFN040V5050 5.0×5.0, H=Max 1.0

(LAPIS Semiconductor products)

Power Receiver LSI (13.56MHz Wireless Charge)

Part No.	Function Overview	Supply Voltage (V)	Frequency Band (MHz)	Data Flash (Byte)	Function	I/F	ADC (method)	Clock Source	Operating Temperature (°C)	Package	Halogen Free Support*1
ML7630	Power Receiving	Generated from magnetic field	0.2 to 6.78	496	200mW Output Output Voltage setting	NFC Forum Type3 Tag I²C slave×1ch	10bit (SA type) ×3ch	Generated from magnetic field	−40 to +85	S-UFLGA34-2.59x2.59-0.40-W (WCSP34)	✓

Power Transmitter LSI (13.56MHz Wireless Charge)

Part No.	Function Overview	Supply Voltage (V)	Frequency Band (MHz)	Data Flash (Byte)	Function	I/F	ADC (method)	Clock Source	Operating Temperature (°C)	Package	Halogen Free Support*1
ML7631	Power Transmission	5	6.78	496	Transmission Power Adjust Control	I²C slave×1ch	10bit (SA type) ×3ch	27.12MHz (Crystal)	−40 to +85	P-WQFN32-0505-0.50-A63	✓

*1 A check mark of halogen free support means that we will be able to ship out the halogen free products. For details, please inquire to the sales.

Battery Management

Battery Charger ICs

Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Charge Voltage (V)	Charge Current Accuracy (%)	Switching Frequency (kHz)	Operating Temperature (°C)	Package
BD8664GW	4.1 to 5.5	70	8.3±0.5%	±2	1,000	−30 to +85	UCSP75M2
BD8665GW	4.1 to 5.5	70	8.4±0.5%	±3	1,000	−30 to +85	UCSP75M2
BD8668GW	4.1 to 5.5	70	8.4±0.5%	±3	1,000	−30 to +85	UCSP75M2
BD99950MUV	6.0 to 24.0	—	8.4/12.6±0.5%	±3	600 to 1,200	−10 to +85	VQFN020PV3535
BD99954GW	3.8 to 25.0	—	4.192/8.4/ 12.592/16.8±0.5%	±2 to ±40	600 to 1,200	−30 to +85	UCSP55M3C
BD99954MWV	3.8 to 25.0	—	4.192/8.4/ 12.592/16.8±0.5%	±2 to ±40	600 to 1,200	−30 to +85	UQFN040V5050

Charge Protection ICs

Standard Protection type

Part No.	Absolute Maximum Ratings (V)	Over Voltage Detection Level (V)	Under Voltage Detection Level (V)	Over Current Detection Level (A)	Ron (mΩ)	OK/FLGB PIN Logic			Package (mm)
						<UVLO	Normal	>OVLO	
BD6040GUL	+30	6.4±0.2	2.65±0.12	Min 1.2	125 (Typ)	H	L	H	VCSP50L1 1.6×1.6, H=Max 0.55
BD6041GUL	+30	5.85±0.15	2.65±0.12	Min 1.2	125 (Typ)	H	L	H	VCSP50L1 1.6×1.6, H=Max 0.55
BD6042GUL	+30	6.2±0.2	2.65±0.12	Min 1.2	125 (Typ)	H	L	H	VCSP50L1 1.6×1.6, H=Max 0.55
BD6044GUL	+36	6.4±0.2	2.65±0.12	Min 1.2	125 (Typ)	H	H	L	VCSP50L1 1.6×1.6, H=Max 0.55
BD6049GUL	+30	6.8±0.17	2.65±0.12	Min 1.2	125 (Typ)	H	H	L	VCSP50L1 1.6×1.6, H=Max 0.55
BD91409GW	+30	6.25±0.15	3.125±0.1	Min 2.0	75 (Typ)	—	—	—	UCSP75M2 2.8×2.8, H=Max 0.85

Negative Voltage Protection type

Part No.	Absolute Maximum Ratings (V)	Over Voltage Detection Level (V)	Under Voltage Detection Level (V)	Over Current Detection Level (A)	Ron (mΩ)	OK/FLGB PIN Logic			Package (mm)
						<UVLO	Normal	>OVLO	
BD6046GUL	±30	6.7±0.2	3.6±0.18	Min 1.2	250 (Typ)	H	H	L	VCSP50L2 2.5×2.5, H=Max 0.55
BD6047AGUL	±30	5.85±0.15	3.6±0.18	Min 1.7	125 (Typ)	H	H	L	VCSP50L1 1.95×1.95, H=Max 0.55

Standard Protection type: Charger protection IC provides over voltage protection for charger IC. Built-in circuits include overvoltage lockout, overcurrent limit, undervoltage protection, internal start up delay, and status flag.
Negative Voltage Protection type: Addition to the conventional standard charge protection IC, it prevents the negative voltage happened by the USB reverse insertion without any additional components.

Cell Balance IC of Power Storage Element Cells

EDLC Cell Balance IC (4 to 6 series)

Part No.	Absolute Maximum Ratings (V)	Cell Voltage Detection Range VCB (V)	Over-voltage Detection Voltage 1 (V)	Over-voltage Detection Voltage 2 (V)	Shunt SW Ron (Ω)	Function			Package (mm)
						EN	OVLO	Stack IC	
BD14000EFV-C	+28	2.4 to 3.1V± (1%) (0.1V/step usable)	VCB+0.15 or 0.25 (OVLOSEL=L or H)	VCB+0.3 or 0.5 (OVLOSEL=L or H)	1 (Typ)	✓	✓	✓	HTSSOP-B30 10.0×7.6, H=Max 1.0

Li-ion Battery Monitoring LSI

(LAPIS Semiconductor products)

Stand-alone type

Part No.	Description	Supply Voltage (V)	Overvoltage Detection Accuracy (Typ) (mV)	Charge/ Discharge Control FET driver	Cell Balancing Switch	Current Consumption (Typ) (μA)		Overvoltage/ Undervoltage Detection	Charge and Discharge Over-Current Detection	Temperature Detection	Short Circuit Detection	Open Wire Detection	Parameter Change	Operation Temperature (°C)	Package	Halogen Free Support*1
						Operating	Power-down									
ML5203	7-cells, cell voltage/current protection, cell voltage/current monitoring	+5 to +42	±25	NMOS	Internal (MCU Control)	30	0.1	✓	✓	—	—	—	Mask option	−40 to +85	P-SSOP30-56-0.65	—
ML5232	14-cells, 2nd protection	+7 to +80	±20	—	—	2.5	—	Overvoltage detection	—	—	—	—		−40 to +105	P-TSSOP20-0225-0.65	✓
ML5233	10-cells, cell votage/current/ temperature protection, cascade connection	+5 to +60	±15	NMOS	—	25	0.1	✓	✓	✓	✓	—		−40 to +85	P-LQFP32-0707-0.80	✓
New ML5240	5-cells, cell overvoltgage/ open wire protection	+5 to +25	±25	—	—	1	—	Overvoltage detection	—	—	—	✓		−40 to +85	P-VSSOP8-0150-0.65-TK6	✓
ML5241	5-cells, 2nd protection	+5 to +25	±25	—	—	1	0.1	Overvoltage detection	—	—	—	✓		−40 to +85	P-WSON10-0303-0.50	✓
ML5243	5-cells,cell voltage/current/ temperature protection	+5 to +25	±25	NMOS	—	6.5	0.1	✓	✓	✓	✓	✓		−40 to +85	P-TSSOP20-0225-0.65	✓
ML5245	13-cells, cell votage/current/ temperature protection, cell voltage monitoring	+7 to +80	±15	NMOS	—	25	0.1	✓	✓	✓	✓	—		−40 to +85	P-SSOP30-56-0.65	—

MCU Control type

Part No.	Description	Supply Voltage (V)	Cell Voltage Measurement Error (Typ) (mV)	Monitoring Output	Charge/ Discharge Control FET driver	Cell Balancing Switch	Current Consumption (Typ) (μA)		Overvoltage/ Undervoltage Detection	Chrage and Discharge Over-Current Detection	Short Circuit Detection	Parameter Change	Operation Temperature (°C)	Package	Halogen Free Support*1
							Operating	Power-down							
ML5204	5-cells, analog monitoring output	+3.3 to+42	±25	cell voltage/ current	—	internal	14	—	✓	✓	✓	Mask option	−40 to +85	P-TSSOP20-0225-0.65	✓
ML5238	16-cells, analog monitoring output	+7 to +80	±20	cell voltage/ current	NMOS	internal	50	0.1	—	—	✓	MCU control	−40 to +85	P-QFP44-910-0.80	—
ML5236	14-cells, ADC built-in, digital monitoring output	+8 to +64	±15	cell voltage/ current/temperature	High-side NMOS	internal	330		Overvoltage detection		✓		−40 to +85	P-TQFP44-1010-0.80	✓
ML5239	16-cells, ADC built-in, cascade connection, digital monitoring output	+10 to +72	±10	cell voltage/ temperature	—	external	1200		—		—		−40 to +85	P-TQFP64-1010-0.50	✓
ML5248	7-cells, analog monitoring output	+5 to +31.5	±20	cell voltage/ current	High-side NMOS	internal	32		✓		✓		−40 to +85	P-SSOP30-56-0.65	—

Dedicated Controller

Part No.	Description	Supply Voltage (V)		AD Converter	Current Consumption (Typ) (μA)			Package	Halogen Free Support*1
		V_{DD}	AV_{DD}		Operating	HALT mode	STOP mode		
ML610Q486P	nX-U8/100, 32KB Flash, 1KB RAM, master clock 500kHz	1.6 to 3.6	2.2 to 3.6	12bit, 4ch	400	15	0.2	P-TQFP48-0707-0.50	✓
ML610Q488P	nX-U8/100, 48KB Flash with ECC, 2KB RAM, master clock 1MHz	1.8 to 3.6	2.2 to 3.6	10bit, 3ch	175	1.4			✓

*1 A check mark of halogen free support means that we will be able to ship out the halogen free products. For details, please inquire to the sales.

General-purpose ICs

Voltage Detectors (Reset ICs)

Voltage Detectors (Reset ICs)

Voltage Detectors How to find part number

B	D	4	8	K	2	5	5	F	V	E	–	M

Series
48: Without Delay Time, Open-Drain Output type
49: Without Delay Time, CMOS Output type
45: Fixed Delay Time, Open-Drain Output type
46: Fixed Delay Time, CMOS Output type
52: Adjustable Delay Time, Open-Drain Output type
53: Adjustable Delay Time, CMOS Output type
47: Without Delay Time, Open-Collector Output type (Bipolar)
71: Without Delay Time, Open-Drain Output type

Series Option
E / None: SSOP5 (SOT23-5)/ HVSOF5/SOP4 (SC82)
K: SSOP3 (SOT23-3) 1pin: GND
L: SSOP3 (SOT23-3) 3pin: GND

Voltage Detection Value
Ex. 23: 2.3V

Reset Delay Time
None: Without/ Adjustable Delay Time
5: 50ms
1: 100ms
2: 200ms
4: 400ms

Package
G: SSOP5 (SOT23-5) SSOP3 (SOT23-3)
FVE: VSOF5
F: SOP4 (SC82)
HFV: HVSOF5

Product Grade
None: For Consumer
M: For Car Infotainment
C: For Car

Voltage Detectors (Reset ICs)

Voltage Detectors (Reset ICs)

Standard CMOS Voltage Detector ICs

Part No.	Types	Voltage Detection Precision (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) ON	Circuit Current (μA) OFF	Hysteresis Voltage (V)	"L" Output Current (mA) V_{DD}=1.2V	"L" Output Current (mA) V_{DD}=2.4V	Package
BD48ExxG series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.0	0.1	Open Drain	0.60 (V_S=4.8V)	0.85 (V_S=4.8V)	V_S×0.05	1	4	SSOP5
BD48xxFVE series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.0	0.1							VSOF5
BD48KxxG series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.0	0.1							SSOP3 (GND 1pin)
BD48LxxG series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.0	0.1							SSOP3 (GND 3pin)
BD49ExxG series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.0	0.1	CMOS						SSOP5
BD49xxFVE series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.0	0.1							VSOF5
BD49KxxG series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.0	0.1							SSOP3 (GND 1pin)
BD49LxxG series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.0	0.1							SSOP3 (GND 3pin)

Detection voltage (from 2.3V to 6.0V as 0.1V step) is applied in the xx of part No. Ex: In case of 2.3V detection voltage in BD48ExxG series, part No. is BD48E23G.

Voltage Detector ICs (Low Voltage Detection type)

Part No.	Types	Voltage detection Precision at T_a=+25°C (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) ON	Circuit Current (μA) OFF	Hysteresis Voltage (V)	"L" Output Current (mA) V_{DD}=1.2V	"L" Output Current (mA) V_{DD}=2.4V	Package
BU48xxG series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1	Open Drain	0.40 (V_{DET}=4.8V)	0.55 (V_{DET}=4.8V)	V_{DET}×0.05	3.3	6.5	SSOP5
BU48xxFVE series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1							VSOF5
BU48xxF series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1							SOP4
BU49xxG series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1	CMOS						SSOP5
BU49xxFVE series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1							VSOF5
BU49xxF series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1							SOP4

Bipolar Voltage Detector IC

Part No.	Types	Voltage detection Precision at T_a=+25°C (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) I_{CCL}	Circuit Current (μA) I_{CCH}	Hysteresis Voltage (mV)	"L" Output Current (mA)	Package
BD47xxG series	0.1V step 28 type	±1	1.9 to 4.6	0.85 to 10.00	0.1	Open Collector	1.5	1.6	50	15	SSOP5

Voltage Detector ICs (Low Voltage Detection Type): *Detection voltage (from 0.9V to 4.8V as 0.1V step) is applied in the xx of part No.. Ex: In case of 2.3V detection voltage in BU48xxG series, part No. is BU4823G.
Bipolar Voltage Detector ICs: *Detection voltage (from 1.9V to 4.6V as 0.1V step) is applied in the xx of part No. Ex: In case of 2.3V detection voltage in BD47xxG series, part No. is BD4723G.

Over Voltage Detectors (Reset ICs)

Over Voltage Detector ICs

Part No.	Voltage Detection Precision at T_a=+25°C (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) I_{CCL}	Circuit Current (μA) I_{CCH}	Hysteresis Voltage (mV)	"L" Output Current (mA)	Package
BD71L4LG-1	±0.8	4.05	1.2 to 7.0	—	Open Drain	0.6	0.7	30	4 (V_{DD}=4.25V)	SSOP5
BD71L4LHFV-1	±0.8	4.05	1.2 to 7.0	—					4 (V_{DD}=4.25V)	HVSOF5
BD71L3SHFV	±1.0	3.83	1.2 to 7.0	—					4 (V_{DD}=4.03V)	HVSOF5

Over Voltage Detector ICs (125°C Automotive Grade AEC-Q100 Corresponding)

Part No.	Types	Voltage Detection Precision Within The All Temperature (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) ON	Circuit Current (μA) OFF	Hysteresis Voltage (V)	"L" Output Current (mA) V_{DD}=1.2V	Package	Automotive Grade AEC-Q100
Nano BD70HxxG-2C series	0.1V step 4 type	±1.4	3.46 to 3.76	0.8 to 6.0	0.1	Open Drain	0.27	0.3	—	1.0mA or more	SSOP5	YES
Nano BD73HxxG-2C series	0.1V step 4 type		3.46 to 3.76	0.8 to 6.0	0.1	CMOS					SSOP5	YES

◎The Nano mark is applicable to both Nano Energy technology and Nano Pulse Control® products.
Nano Pulse Control® is trademark of ROHM.
*Detection voltage is applied in the xx of part No. Please see the Data sheet specifications.

Voltage Detectors with Adjustable Delay Time

Voltage Detectors with Adjustable Delay Time

Part No.	Types	Voltage detection Precision at T_a=+25°C (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) ON	Circuit Current (μA) OFF	Hysteresis Voltage (V)	"L" Output Current (mA) V_{DD}=1.2V	"L" Output Current (mA) V_{DD}=2.4V	RESET Active Timeout Period (ms)	Delay Circuit Resistance (MΩ)	Package
BD52ExxG series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.00	0.1	Open Drain	0.90 (V_{DET}=4.8V)	0.85 (V_{DET}=4.8V)	V_{DET}×0.05	1.2	5.0	Variable	9	SSOP5
BD52xxFVE series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.00	0.1		0.90 (V_{DET}=4.8V)	0.85 (V_{DET}=4.8V)	V_{DET}×0.05	1.2	5.0	Variable	9	VSOF5
BD53ExxG series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.00	0.1	CMOS	0.90 (V_{DET}=4.8V)	0.85 (V_{DET}=4.8V)	V_{DET}×0.05	1.2	5.0	Variable	9	SSOP5
BD53xxFVE series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.00	0.1		0.90 (V_{DET}=4.8V)	0.85 (V_{DET}=4.8V)	V_{DET}×0.05	1.2	5.0	Variable	9	VSOF5

Voltage Detectors with Adjustable Delay Time (Low Voltage Detection type)

BU42xxG series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1	Open Drain	0.40 (V_{DET}=4.8V)	0.55 (V_{DET}=4.8V)	V_{DET}×0.05	3.3	6.5	Variable	10	SSOP5
BU42xxFVE series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1							Variable	10	VSOF5
BU42xxF series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1							Variable	10	SOP4
BU43xxG series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1	CMOS						Variable	10	SSOP5
BU43xxFVE series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1							Variable	10	VSOF5
BU43xxF series	0.1V step 40 type	±1	0.9 to 4.8	0.7 to 7.0	0.1							Variable	10	SOP4

Voltage Detector with Adjustable Delay Time (SENSE type)

Part No.	Voltage Detection Precision at T_a=+25°C (%)	Voltage Detection (V)	Power Supply Voltage (V)	Output type	Circuit Current (μA)	Hysteresis Voltage (V)	Output ON Resistance (Ω)	RESET Active Timeout Period (ms)	Package
BD4142HFV	±1.8	0.5	3.0 to 5.5	Open Drain	7.5	0.01	100	Variable	HVSOF5

Voltage Detectors with Adjustable Delay Time: Detection voltage (from 2.3V to 6.0V as 0.1V step) is applied in the xx of part No. Ex: In case of 2.3V detection voltage in BD52ExxG series, part No. is BD52E23G.
Voltage Detectors with Adjustable Delay Time (Low Voltage Detection type): Detection voltage (from 0.9V to 4.8V as 0.1V step) is applied in the xx of part No. Ex: In case of 2.3V detection voltage in BU42xxG series, part No. is BU4223G.

Voltage Detectors with Built-in Delay Time

Voltage Detectors with Built-in Delay Time (Open Drain Output type)

Part No.	Types	Voltage Detection Precision (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) ON	Circuit Current (μA) OFF	Hysteresis Voltage (V)	"L" Output current (mA) V_{DD}=1.2V	"L" Output current (mA) V_{DD}=2.4V	RESET Active Timeout Period (ms)	Manual Reset PIN	Package
BD45xx5G series	0.1V step 26 type	±1	2.3 to 4.8	0.95 to 10.00	0.1	Open Drain	0.80 (V_{DET}=4.8V)	0.85 (V_{DET}=4.8V)	V_{DET}×0.05	1.2	5.0	50	YES	SSOP5
BD45xx1G series	0.1V step 26 type	±1	2.3 to 4.8	0.95 to 10.00	0.1							100	YES	SSOP5
BD45xx2G series	0.1V step 26 type	±1	2.3 to 4.8	0.95 to 10.00	0.1							200	YES	SSOP5
BU45Kxx2G series	0.1V step 26 type	±1	2.3 to 4.8	0.6 to 10.0	0.1		2.3 (V_{DET}=4.8V)	2.8 (V_{DET}=4.8V)				200	NO	SSOP3 (GND 1pin)
BU45Lxx2G series	0.1V step 26 type	±1	2.3 to 4.8	0.6 to 10.0	0.1							200	NO	SSOP3 (GND 3pin)
BU45Kxx4G series	0.1V step 26 type	±1	2.3 to 4.8	0.6 to 10.0	0.1							400	NO	SSOP3 (GND 1pin)
BU45Lxx4G series	0.1V step 26 type	±1	2.3 to 4.8	0.6 to 10.0	0.1							400	NO	SSOP3 (GND 3pin)

Detection voltage (from 2.3V to 4.8V as 0.1V step) is applied in the xx of part No.. Ex: In case of 2.3V detection voltage in BD45xx5G series, part No. is BD45235G.

Voltage Detectors with Built-in Delay Time (CMOS Output type)

Part No.	Types	Voltage Detection Precision (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) ON	Circuit Current (μA) OFF	Hysteresis Voltage (V)	"L" Output current (mA) V_{DD}=1.2V	"L" Output current (mA) V_{DD}=2.4V	RESET Active Timeout Period (ms)	Manual Reset PIN	Package
BD46xx5G series	0.1V step 26 type	±1	2.3 to 4.8	0.95 to 10.00	0.1	CMOS	0.80 (V_{DET}=4.8V)	0.85 (V_{DET}=4.8V)	V_{DET}×0.05	1.2	5.0	50	YES	SSOP5
BD46xx1G series	0.1V step 26 type	±1	2.3 to 4.8	0.95 to 10.00	0.1							100	YES	SSOP5
BD46xx2G series	0.1V step 26 type	±1	2.3 to 4.8	0.95 to 10.00	0.1							200	YES	SSOP5
BU46Kxx2G series	0.1V step 26 type	±1	2.3 to 4.8	0.6 to 10.0	0.1		2.3 (V_{DET}=4.8V)	2.8 (V_{DET}=4.8V)				200	NO	SSOP3 (GND 1pin)
BU46Lxx2G series	0.1V step 26 type	±1	2.3 to 4.8	0.6 to 10.0	0.1							200	NO	SSOP3 (GND 3pin)
BU46Kxx4G series	0.1V step 26 type	±1	2.3 to 4.8	0.6 to 10.0	0.1							400	NO	SSOP3 (GND 1pin)
BU46Lxx4G series	0.1V step 26 type	±1	2.3 to 4.8	0.6 to 10.0	0.1							400	NO	SSOP3 (GND 3pin)

Detection voltage (from 2.3V to 4.8V as 0.1V step) is applied in the xx of part No.. Ex: In case of 2.3V detection voltage in BD46xx5G series, part No. is BD46235G.

Voltage Detectors for Automotive

105°C Corresponding

Part No.	Types	Voltage Detection Precision at T_a=+25°C (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA) ON	Circuit Current (μA) OFF	Hysteresis Voltage (V)	"L" Output Current (mA) V_{DD}=1.2V	"L" Output Current (mA) V_{DD}=2.4V	RESET Active Timeout Period (ms)	Delay Time Precision (%)	Manual Reset PIN	Package	Automotive Grade AEC-Q100
BD48ExxG-M series	0.1V step 38 type	±1	2.3 to 6.0	0.95 to 10.00	0.1	Open Drain	0.60 (V_S=4.8V)	0.85 (V_S=4.8V)	V_S×0.05	1.0	4	–	–	NO	SSOP5	YES
BD49ExxG-M series	0.1V step 38 type		2.3 to 6.0	0.95 to 10.00	0.1	CMOS						–	–	NO	SSOP5	YES
BD45Exx5G-M series	0.1V step 26 type		2.3 to 4.8	0.95 to 10.00	0.1	Open Drain	0.80 (V_{DET}= 4.8V)	0.85 (V_{DET}= 4.8V)	V_{DET}×0.05	1.2	5	50	–	YES	SSOP5	YES
BD45Exx1G-M series	0.1V step 26 type		2.3 to 4.8	0.95 to 10.00	0.1							100	–	YES	SSOP5	YES
BD45Exx2G-M series	0.1V step 26 type		2.3 to 4.8	0.95 to 10.00	0.1							200	–	YES	SSOP5	YES
BD46Exx5G-M series	0.1V step 26 type		2.3 to 4.8	0.95 to 10.00	0.1	CMOS						50	–	YES	SSOP5	YES
BD46Exx1G-M series	0.1V step 26 type		2.3 to 4.8	0.95 to 10.00	0.1							100	–	YES	SSOP5	YES
BD46Exx2G-M series	0.1V step 26 type		2.3 to 4.8	0.95 to 10.00	0.1							200	–	YES	SSOP5	YES
Nano BD52xxG-2M series	0.1V step 42 type	±2.5 (All Temperature)	0.9 to 5.0	0.8 to 6.0	0.1	Open Drain	0.23	0.27	V_{DET}×0.05	1.0mA or more	2.0mA or more	Variable	±30% (All Temperature)	NO	SSOP5	YES
Nano BD53xxG-2M series	0.1V step 42 type		0.9 to 5.0	0.8 to 6.0	0.1	CMOS						Variable		NO	SSOP5	YES

125°C Corresponding

Part No.	Types	Voltage Detection Precision Within The All Temperature (%)	Voltage Detection (V)	RESET Active Voltage Range (V)	Detection step (V)	Output Type	Circuit current (μA) ON	Circuit current (μA) OFF	Hysteresis Voltage (V)	"L" Output current (mA) V_{DD}=1.2V	"L" Output current (mA) V_{DD}=2.4V	RESET Active Timeout Period (ms)	Delay Time Precision (%)	Manual Reset PIN	Package	Automotive Grade AEC-Q100
Nano BD52xxG-2C series	0.1V step 42 type	±3	0.9 to 5.0	0.8 to 6.0	0.1	Open Drain	0.23	0.27	V_{DET}×0.05	1.0mA or more	2.0mA or more	Variable	±50 (All Temperature)	NO	SSOP5	YES
Nano BD53xxG-2C series	0.1V step 42 type		0.9 to 5.0	0.8 to 6.0	0.1	CMOS						Variable		NO	SSOP5	YES
Nano BD52xxNVX-2C series	0.1V step 6 type	±2.5	2.6 to 3.1	0.8 to 6.0	0.1	Open Drain						Variable		NO	SSON004R1010	YES
Nano BD70HxxG-2C series	0.1V step 4 type	±1.4	3.46 to 3.76	0.8 to 6.0	0.1		0.27	0.3	–			–	–	NO	SSOP5	YES
Nano BD73HxxG-2C series	0.1V step 4 type		3.46 to 3.76	0.8 to 6.0	0.1	CMOS						–		NO	SSOP5	YES

◎The Nano mark is applicable to both Nano Energy technology and Nano Pulse Control® products.
Nano Pulse Control® is trademark of ROHM.
Detection voltage is applied in the "xx" of part No. Ex.: In case of 2.3V detection voltage in BD48ExxG-M series, Part No. is BD48E23G-M.

Power Supply Monitoring IC for Automotive

4ch System Power Good (Watchdog Timer+Reset)

Part No.	Supply Voltage (V)	RESET Detection Voltage (V)	Power good Detection Voltage (V)	Detection level (%)	Detection Precision (%)	Power good ch	Output type	WDT type	RESET Active Timeout Period	Selfe-diagnosis function	Package	Automotive Grade AEC-Q100
New BD39040MUF-C	2.7 to 5.5	Variable	Variable	±10	±3	4	Open Drain	window type	10ms	YES	VQFN16FV3030	YES

Others

Voltage Detectors with Watchdog Timer

Part No.	Voltage Detection Precision (%)	Voltage Detection (V)	RESET Active Voltage (V)	Output type	Circuit Current (μA) ON	Hysteresis Voltage (V)	"L" Output Current (mA) V_{DD}=1.2V	"L" Output Current (mA) V_{DS}=0.5V	RESET Active Timeout Period	Delay Circuit Resistance (MΩ)	WDT Active Voltage (V)	INH Mode (Active)	Package
BD37A19FVM	±1.5	1.9	1.0 to 10.0	Open Drain	5	V_{DET}×0.13	0.7		Variable	10	2.5 to 10.0	H	MSOP8
BD37A41FVM	±1.5	4.1	1.0 to 10.0			V_{DET}×0.035						H	MSOP8
BD87A28FVM	±1.5	2.8	1.0 to 10.0			V_{DET}×0.045						L	MSOP8
BD87A29FVM	±1.5	2.9	1.0 to 10.0			V_{DET}×0.05						L	MSOP8
BD87A34FVM	±1.5	3.4	1.0 to 10.0									L	MSOP8
BD87A41FVM	±1.5	4.1	1.0 to 10.0			V_{DET}×0.035						L	MSOP8
BD99A41F	±1.5	4.1	1.0 to 10.0									H	SOP8

Composite type Voltage Detector (2ch+Comparator)

Part No.	Voltage Detection Precision (%)	Voltage Detection (V)	Output type	Circuit Current (μA) V_{SB}=5V	Hysteresis Voltage (mV)	RESET Active Timeout Period	Input Voltage (V)	Package
BD3775AF	±1.5	1.23	Open Collector+Constant Current Pull Up	350	28	Variable	3.5 to 18.0	SOP8