



DC-DC μModule[®] Regulator Family



Resembling a surface mount IC, Linear Technology's line of μModule (LTM) regulators are complete power solutions containing the controller, power MOSFETs, compensation and inductors in a compact thermally efficient surface mount LGA package. Built with the highest quality standards in the industry and rigorously tested, the μModule regulator family dramatically reduces the amount of time and effort needed to successfully design DC/DC power solutions. **Temperature Grade:** E-grade devices are tested to meet performance specifications over the 0°C to Tmax listed with performance down to -40°C guaranteed by design, characterization and statistical process controls. I-grade devices are tested to meet performance specifications over the -40°C to Tmax listed. MP-grade devices are 100% tested at -55°C and +125°C and must pass 100% post-test visual screening.

Land Grid Array (LGA) Package — Dimensions in mm					
Package A 	Package B 	Package C 	Package D 	Package F 	Package G

V _{in}		V _{out}		Output Current (A)	Remote V _{out} Sense Amp	V _{out} Tracking	Temperature Grade	Package Size (Height) - mm	Digi-Key Part No.	Price Each		
Min.	Max.	Min.	Max.							1	25	100
Single Output Step-Down Regulator for Low Voltage Input Supply												
1.5	5.5	0.8	5	15	Yes	Yes	E (125°C)	G (4.3mm)	LTM4611EV#PBF-ND	34.14	22.96	19.52
				15	Yes	Yes	I (125°C)	G (4.3mm)	LTM4611IV#PBF-ND	37.57	25.26	21.48
2.375	5.5	0.8	5	4	No	Yes	E (125°C)	D (2.3)	LTM4604AEV#PBF-ND	14.94	10.03	8.53
				4	No	Yes	I (125°C)	D (2.3)	LTM4604AIV#PBF-ND	16.42	11.04	9.38
				4	No	Yes	E (85°C)	D (2.3)	LTM4604EV#PBF-ND	14.94	10.65	8.79
				4	No	Yes	I (125°C)	D (2.3)	LTM4604IV#PBF-ND	19.85	13.34	11.34
2.7	5.5	0.6	5	8	No	Yes	E (125°C)	D (2.8)	LTM4608AEV#PBF-ND	21.83	14.68	12.47
				8	No	Yes	I (125°C)	D (2.8)	LTM4608AIV#PBF-ND	39.06	26.27	22.33
				8	No	Yes	E (85°C)	D (2.8)	LTM4608EV#PBF-ND	21.83	15.59	12.83
				8	No	Yes	I (85°C)	D (2.8)	LTM4608IV#PBF-ND			
Multiple Output Step-Down Regulator for Low Voltage Input Supply												
2.375	5.5	0.8	5	Dual 4	No	Yes	E (125°C)	G (2.8)	LTM4614EV#PBF-ND	27.22	18.29	15.55
				Dual 4	No	Yes	I (125°C)	G (2.8)	LTM4614IV#PBF-ND	29.93	20.13	17.11
2.375	5.5	0.6	5	Dual 8	No	Yes	E (125°C)	G (2.8)	LTM4616EV#PBF-ND	34.14	22.96	19.52
				Dual 8	No	Yes	I (125°C)	G (2.8)	LTM4616IV#PBF-ND	37.57	25.26	21.48
2.7	5.5	0.8	5	Triple: Dual 4 + LDO	No	Yes	E (125°C)	G (2.8)	LTM4615EV#PBF-ND	30.19	20.30	17.26
				Triple: Dual 4 + LDO	No	Yes	I (125°C)	G (2.8)	LTM4615IV#PBF-ND	33.21	22.33	18.98
Single Output Step-Down Regulator for Mid-Voltage Input Supply												
4.5	20	0.6	5	6	No	No	E (85°C)	G (2.8)	LTM4602EV#PBF-ND	20.98	14.99	12.35
				6	No	No	I (85°C)	G (2.8)	LTM4602IV#PBF-ND	23.09	16.49	13.59
				6	Yes	Yes	E (85°C)	G (2.8)	LTM4603EV#PBF-ND	23.71	16.93	13.95
				6	No	Yes	E (85°C)	G (2.8)	LTM4603EV-1#PBF-ND	22.74	16.25	13.38
				6	Yes	Yes	I (85°C)	G (2.8)	LTM4603IV#PBF-ND	26.06	18.63	15.34
				6	No	Yes	I (85°C)	G (2.8)	LTM4603IV-1#PBF-ND	25.01	17.87	14.72
				10	No	No	E (85°C)	G (2.8)	LTM4600EV#PBF-ND	25.82	18.44	15.19
				10	No	No	I (85°C)	G (2.8)	LTM4600IV#PBF-ND	28.44	20.32	16.73
				12	Yes	Yes	E (85°C)	G (2.8)	LTM4601AEV#PBF-ND	29.57	19.89	16.91
				12	Yes	Yes	I (85°C)	G (2.8)	LTM4601AIV#PBF-ND	32.55	21.89	18.60
				12	Yes	Yes	E (85°C)	G (2.8)	LTM4601EV#PBF-ND	29.02	20.70	17.05
				12	No	Yes	E (85°C)	G (2.8)	LTM4601EV-1#PBF-ND	28.00	20.00	16.48
4.5	26.5	0.8	5	12	Yes	Yes	I (85°C)	G (2.8)	LTM4601IV#PBF-ND	31.87	22.76	18.75
				12	No	Yes	I (85°C)	G (2.8)	LTM4601IV-1#PBF-ND	30.81	22.01	18.13
4.5	28	0.6	5	6	No	Yes	E (125°C)	D (4.3)	LTM4618EV#PBF-ND	19.85	13.34	11.34
				6	No	Yes	I (125°C)	D (4.3)	LTM4618IV#PBF-ND	21.83	14.68	12.47
				6	No	No	E (85°C)	G (2.8)	LTM4602HVEV#PBF-ND	25.59	18.29	15.06
				6	No	No	I (85°C)	G (2.8)	LTM4602HIV#PBF-ND	28.17	20.13	16.58
				6	Yes	Yes	E (85°C)	G (2.8)	LTM4603HVEV#PBF-ND	28.91	20.65	17.01
				6	Yes	Yes	I (85°C)	G (2.8)	LTM4603HIV#PBF-ND	30.51	21.80	17.96
				6	No	Yes	E (125°C)	G (2.8)	LTM4606EV#PBF-ND	28.98	19.48	16.56
				6	No	Yes	I (125°C)	G (2.8)	LTM4606IV#PBF-ND	31.87	21.43	18.21
				6	No	Yes	MP (125°C)	G (2.8)	LTM4606MPV#PBF-ND	65.14	43.79	37.22
				10	No	No	E (85°C)	G (2.8)	LTM4600HVEV#PBF-ND	31.60	22.57	18.59
				10	No	No	I (85°C)	G (2.8)	LTM4600HIV#PBF-ND	34.76	24.83	20.45
				10	No	No	MP (125°C)	G (2.8)	LTM4600HMPV#PBF-ND	64.87	43.05	32.44
3.6	36	0.8	10	1	No	No	E (85°C)	C (2.8)	LTM8022EV#PBF-ND	8.67	5.85	4.81
				1	No	No	I (85°C)	C (2.8)	LTM8022IV#PBF-ND	13.42	9.03	7.68
				1	No	No	MP (125°C)	C (2.8)	LTM8022MPV#PBF-ND	24.99	16.80	14.28
				2	No	No	E (85°C)	C (2.8)	LTM8023EV#PBF-ND	13.96	9.39	7.73
				2	No	No	I (85°C)	C (2.8)	LTM8023IV#PBF-ND	15.35	10.33	8.79
				2	No	No	MP (125°C)	C (2.8)	LTM8023MPV#PBF-ND	28.57	19.22	16.34
				3	No	No	E (125°C)	D (4.3)	LTM8025EV#PBF-ND	15.72	10.57	8.98
				3	No	No	I (125°C)	D (4.3)	LTM8025IV#PBF-ND	17.29	11.63	9.89
3.6	36	0.8	24	3	No	No	MP (125°C)	D (4.3)	LTM8025MPV#PBF-ND	29.76	20.01	17.01
				5	No	Yes	E (125°C)	G (2.8)	LTM4612EV#PBF-ND	34.93	23.48	19.96
				5	No	Yes	I (125°C)	G (2.8)	LTM4612IV#PBF-ND	38.41	25.83	21.95
				5	No	Yes	MP (125°C)	G (2.8)	LTM4612MPV#PBF-ND	71.00	47.75	40.58
EN5022 Class B Certified Single Output Step-Down Regulator for Mid-Voltage Input Supply												
4.0	36	1.25	5	0.2	No	No	E (85°C)	A (2.3)	LTM8020EV#PBF-ND	8.67	5.85	4.81
				0.2	No	No	I (85°C)	A (2.3)	LTM8020IV#PBF-ND	9.57	6.44	5.47
				0.2	No	No	MP (125°C)	A (2.3)	LTM8020MPV#PBF-ND	17.80	11.97	10.17
3.0	36	0.8	5	0.5	No	No	E (125°C)	B (2.8)	LTM8021EV#PBF-ND	10.27	6.91	5.69
				0.5	No	No	I (125°C)	B (2.8)	LTM8021IV#PBF-ND	11.30	7.60	6.47
3.6	36	0.8	10	1	No	No	E (125°C)	D (2.8)	LTM8031EV#PBF-ND	17.46	11.75	9.98
				1	No	No	I (125°C)	D (2.8)	LTM8031IV#PBF-ND	19.40	13.05	11.09
				1	No	No	MP (125°C)	D (2.8)	LTM8031MPV#PBF-ND	39.32	26.44	22.56
				2	No	No	MP (125°C)	D (2.8)	LTM8032MPV#PBF-ND	41.08	27.62	23.47
3.6	36	0.8	24	2	No	No	E (125°C)	D (2.8)	LTM8032EV#PBF-ND	19.21	12.93	10.99
				3	No	No	E (125°C)	F (4.3)	LTM8033EV#PBF-ND	20.97	14.11	11.99
				3	No	No	I (125°C)	F (4.3)	LTM8033IV#PBF-ND	22.91	15.40	13.10
				3	No	No	MP (125°C)	F (4.3)	LTM8033MPV#PBF-ND	42.83	28.80	24.48
Dual Output Step-Down Regulated Voltage for Mid-Voltage Input Supply												
4.5	26.5	0.8	5	Dual 4	No	Yes	E (125°C)	G (2.8)	LTM4619EV#PBF-ND	29.41	19.77	16.81
				Dual 4	No	Yes	I (125°C)	G (2.8)	LTM4619IV#PBF-ND	32.37	21.76	18.49
Single Output Step-Down Regulator for High Voltage Input Supply												
4.5	60	2.5	24	4	No	No	E (125°C)	G (4.3)	LTM8027EV#PBF-ND	28.98	19.48	16.56
				4	No	No	I (125°C)	G (4.3)	LTM8027IV#PBF-ND	31.87	21.43	18.21
				4	No	No	MP (125°C)	G (4.3)	LTM8027MPV#PBF-ND	59.69	40.13	34.11
Single Output Buck-Boost Regulator for Mid-Voltage Input Supply												
4.5	36	0.8	34	4	No	No	E (85°C)	G (2.8)	LTM4609EV#PBF-ND	39.59	26.62	22.62
				4	No	No	MP (125°C)	G (2.8)	LTM4609MPV#PBF-ND	65.30	43.90	37.32
4.5	20	0.8	16	5	No	No	E (85°C)	G (2.8)	LTM4605EV#PBF-ND	33.09	22.19	18.28
				5	No	No	I (85°C)	G (2.8)	LTM4605IV#PBF-ND	36.39	24.42	20.10
4.5	36	0.8	24	5	No	No	E (85°C)	G (2.8)	LTM4607EV#PBF-ND	37.84	25.44	20.95
				5	No	No	I (85°C)	G (2.8)	LTM4607IV#PBF-ND	41.62	27.98	23.04
Single Output Regulated Current/LED Driver for Mid-Voltage Input Supply												
4.0	36	2.5	13	1	No	No	E (125°C)	D (4.3)	LTM8040EV#PBF-ND	13.08	9.35	7.70



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