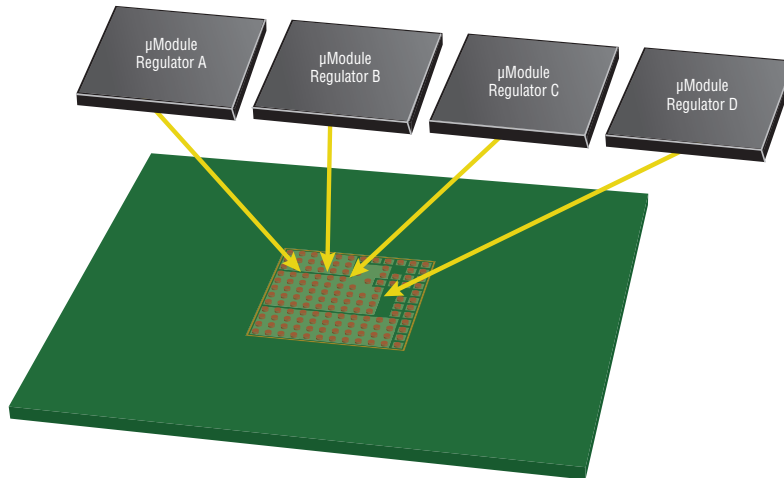


# Pin-Compatible $\mu$ Module Power Products



- Share Common Footprint for Different Power Level  $\mu$ Module<sup>®</sup> Regulators
- No Need to Redesign PCB to Increase or Decrease  $I_{OUT}$ ,  $V_{IN}$  and  $V_{OUT}$
- Select the Best Solution for the Application

## Dual Output Step-Down $\mu$ Module Regulators

Input Voltage (V)		Output Voltage (V)		Output Current (A)	Parallelable Outputs (Total $I_{OUT}$ )*	Package Dimensions (mm)	Part Number
Min	Max	Min	Max				
4.5	26.5	0.6	5.5	8 × 2	×2 (32A)	15 × 15 × 4.32 (LGA) 15 × 15 × 4.92 (BGA)	LTM4628
			1.8	10 × 2	×2 (40A)	16 × 16 × 1.91 (LGA)	LTM4631
	2.5		13 × 2	×4 (100A)	15 × 15 × 4.41 (LGA)	LTM4620	
	5.3				15 × 15 × 5.01 (BGA)	LTM4620A	
	15		1.8	18 × 2	×4 (144A)	16 × 16 × 4.41 (LGA) 16 × 16 × 5.01 (BGA)	LTM4630
				5.3		16 × 16 × 4.41 (LGA)	LTM4630A
			1.8	25 × 2	×6 (300A)	16 × 16 × 5.01 (BGA)	LTM4650

\*Number of devices in parallel tested and verified by Linear Technology.

## Dual Output with $\pm 3\%$ Transient Accuracy $\mu$ Module Regulators

Input Voltage (V)		Output Voltage (V)		Output Current (A)	Parallelable Outputs (Total $I_{OUT}$ )*	Package Dimensions (mm)	Part Number
Min	Max	Min	Max				
4.5	15	0.6	1.8	18 × 2	×4 (144A)	16 × 16 × 5.01(BGA)	LTM4630-1
				25 × 2	×6 (300A)		LTM4650-1

\*Number of devices in parallel tested and verified by Linear Technology.



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## Single Output Step-Down $\mu$ Module Regulators

Input Voltage (V)		Output Voltage (V)		Output Current (A)	Paralleable Outputs (Total $I_{OUT}$ )*	Package Dimensions (mm)	Part Number	Compatibility
Min	Max	Min	Max					
3.6	36	0.8	10	1	x2 (2A)	9 x 11.25 x 2.82 (LGA)	LTM8022	Pin Compatible
				2	x2 (4A)	9 x 11.25 x 2.82 (LGA) 9 x 11.25 x 3.42 (BGA)	LTM8023	
4**	20	0.6	5.5	3	x2 (6A)	6.25 x 6.25 x 1.82 (LGA) 6.25 x 6.25 x 2.42 (BGA)	LTM4623	Pin Compatible
				5	x2 (10A)	6.25 x 6.25 x 5.01 (BGA)	LTM4625	
4.5	20	0.6	5	6	-	15 x 15 x 2.82 (LGA)	LTM4602	Pin Compatible
	28			10			LTM4600	
							LTM4600HV	
4.5	20	0.6	5	6	x4 (24A)	15 x 15 x 2.82 (LGA)	LTM4603	Pin Compatible
				12	x4 (48A)	15 x 15 x 2.82 (LGA) 15 x 15 x 3.42 (BGA)	LTM4601	
			LTM4601-1					
	28						LTM4601HV	
2.375	5.5	0.6	5	10	x3 (30A)	9 x 15 x 4.92 (BGA)	LTM4648	Pin Compatible
4.5	16		3.3				LTM4649	
4.5	20	0.6	5	15	x4 (60A)	15 x 15 x 4.32 (LGA)	LTM4627	Pin Compatible
					5.5	20	x4 (80A)	

\*Number of devices in parallel tested and verified by Linear Technology.

\*\*Operate from 2.375V with external bias.

## Low EMI Single Output Step-Down $\mu$ Module Regulators

Input Voltage (V)		Output Voltage (V)		Output Current (A)	Paralleable Outputs (Total $I_{OUT}$ )*	Package Dimensions (mm)	Part Number	Compatibility
Min	Max	Min	Max					
3.6	36	0.8	10	1	x2 (2A)	9 x 15 x 2.82 (LGA)	LTM8031	Pin Compatible
				2	x2 (4A)	9 x 15 x 2.82 (LGA) 9 x 15 x 3.42 (BGA)	LTM8032	
5	36	3.3	15	5	x2 (10A)	15 x 15 x 2.82 (LGA)	LTM4612	Pin Compatible
4.5	28	0.6	5	6	x2 (12A)	15 x 15 x 2.82 (LGA) 15 x 15 x 3.42 (BGA)	LTM4606	

\*Number of devices in parallel tested and verified by Linear Technology.

## Dual Output with Power System Management $\mu$ Module Regulators

Input Voltage (V)		Output Voltage (V)		Output Current per Channel (A)	Read Back Accuracy		Turn-On Time (ms)	Package Dimensions (mm)	Part Number
Min	Max	Min	Max		Voltage	Current			
4.5	17	0.5	5.5	Dual: 9	0.5%	2.5%	70	11.9 x 16 x 3.51 (BGA)	LTM4675*
	26.5		5.4		1.0%		170		LTM4676
	17		5.5	Dual: 13	0.5%	70	16 x 16 x 5.01 (BGA)	LTM4676A	
	16		1.8					Dual: 18	LTM4677

\*Due to difference in package size, LTM4675 can be replaced by LTM4676 and LTM4677 but cannot replace LTM4676 and LTM4677 directly.

## Buck-Boost $\mu$ Module Regulators

Input Voltage (V)		Output Voltage (V)		Output Current (A)*	Inductor	Package Dimensions (mm)	Part Number	Compatibility
Min	Max	Min	Max					
5	58	1.2	48	5.4	Internal	15 x 15 x 4.92 (BGA)	LTM8056	Pin Compatible
	36		36	8.5			LTM8055	
4.5	36	0.8	24	10	External	15 x 15 x 2.82 (LGA)	LTM4607	Pin Compatible
			34			15 x 15 x 2.82 (LGA) 15 x 15 x 3.42 (BGA)	LTM4609	
			16			15 x 15 x 2.82 (LGA)	LTM4605	

\*Step-Down Mode. Output current varies depending on operation mode.