

Used to create configurable, high-efficiency DC-DC converter designs

Description

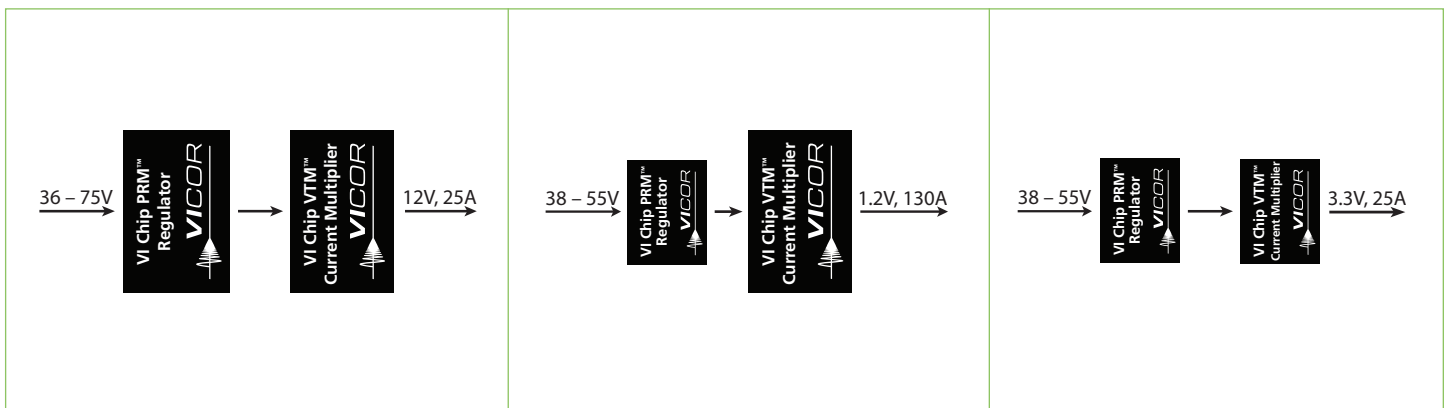
The PRM regulator is a very efficient non-isolated regulator capable of both boosting and bucking a wide-range input voltage and providing a regulated, adjustable output voltage or “Factorized Bus.” PRM regulators can be used stand-alone as non-isolated voltage regulators or combined with VTM current multipliers for a complete isolated, DC-DC solution with high efficiency and power density. The VTM module provides point-of-load, fixed-ratio voltage transformation with extremely fast transient response and isolation to 2,250V_{DC}.

Features & Benefits

- Sine Amplitude Converter (VTM)
- ZVS buck-boost regulator (PRM)
- Regulation 0.2% (Remote Sense)
- Small footprint: 1.1in² or 0.56in²
- High efficiency up to 97%
- Low profile 0.265in
- Power Density up to 2,040W/in³



Typical Applications



Family of PRM™ Products

Model Number ^[1]	Input Voltage		Output Voltage Range (V)	Output Power Max (W)	Output Current Max (A)	Package
	Nom (V)	Range (V)				
PRM48AH480T200A00	48	36 – 75	20 – 55	200	4.17	22 x 16.5 x 6.73mm - Half
PRM48AF480T400A00	48	36 – 75	20 – 55	400	8.33	32.5 x 22 x 6.73mm - Full
PRM48BH480T200B00	48	38 – 55	5 – 55	200	4.17	22 x 16.5 x 6.73mm - Half
PRM48DH480T250B03	48	38 – 60	5 – 55	200	4.17	22 x 16.5 x 6.73mm - Half
PRM48BH480T250A00	48	38 – 55	20 – 55	250	5.21	22 x 16.5 x 6.73mm - Half
PRM48JH480T250A00	48	45 – 55	20 – 55	250	5.21	22 x 16.5 x 6.73mm - Half
PRM48JH480T250A02	48	45 – 55	20 – 55	250	5.21	22 x 16.5 x 6.73mm - Half
PRM48BF480T400B00	48	38 – 55	5 – 55	400	8.33	32.5 x 22 x 6.73mm - Full
PRM48BF480T500A00	48	38 – 55	20 – 55	500	10.42	32.5 x 22 x 6.73mm - Full
PRM48JF480T500A00	48	45 – 55	20 – 55	500	10.42	32.5 x 22 x 6.73mm - Full
PRM48BF480T600A00	48	38 – 55	5 – 55	600	12.5	32.5 x 22 x 6.73mm - Full

Family of VTM™ Products

Model Number ^{[1] [2]}	Input Voltage Range (V)	Output Voltage Range (V)	Output Current Max (A)	Package
VTM48EF012T130A00	26 – 55	0.65 – 1.37	130	32.5 x 22 x 6.73mm - Full
VTM48EF015T115A00	26 – 55	0.81 – 1.71	115	32.5 x 22 x 6.73mm - Full
VTM48EH015T050A00	26 – 55	0.81 – 1.72	50	22 x 16.5 x 6.73mm - Half
VTM48EF020T080A00	26 – 55	1.08 – 2.29	80	32.5 x 22 x 6.73mm - Full
VTM48EF030T070A00	26 – 55	1.63 – 3.44	70	32.5 x 22 x 6.73mm - Full
VTM48EF040T050B00	26 – 55	2.17 – 4.58	50	32.5 x 22 x 6.73mm - Full
VTM48EF040T050B0R	26 – 55	2.17 – 4.58	50	32.5 x 22 x 6.73mm - Full
VTM48EH040T025B00	26 – 55	2.17 – 4.58	25	22 x 16.5 x 6.73mm - Half
VTM48EF060T040A00	26 – 55	3.25 – 6.88	40	32.5 x 22 x 6.73mm - Full
VTM48EF080T030A00	26 – 55	4.33 – 9.17	30	32.5 x 22 x 6.73mm - Full
VTM48EF096T025A00	32 – 55	6.40 – 11.00	25	32.5 x 22 x 6.73mm - Full
VTM48EF120T025A00	26 – 55	6.50 – 13.75	25	32.5 x 22 x 6.73mm - Full
VTM48EF120T025A0R	26 – 55	6.50 – 13.75	25	32.5 x 22 x 6.73mm - Full
VTM48EH120T010B00	26 – 55	6.50 – 13.75	10	22 x 16.5 x 6.73mm - Half
VTM48EF160T015A00	26 – 55	8.67 – 18.33	15	32.5 x 22 x 6.73mm - Full
VTM48EF240T012A00	26 – 53	14.00 – 26.50	12	32.5 x 22 x 6.73mm - Full
VTM48EF320T009A00	26 – 55	17.33 – 36.67	9	32.5 x 22 x 6.73mm - Full
VTM48EF480T006A00	26 – 55	26.00 – 55.00	6	32.5 x 22 x 6.73mm - Full

^[1] Full-chip models also available in through hole. All models available in M-grade.

^[2] "R" indicates reverse or bidirectional operation.