

PRM™ Regulator and VTM™ Current Multiplier

Factorized Power – Flexible DC-DC Converter Solutions

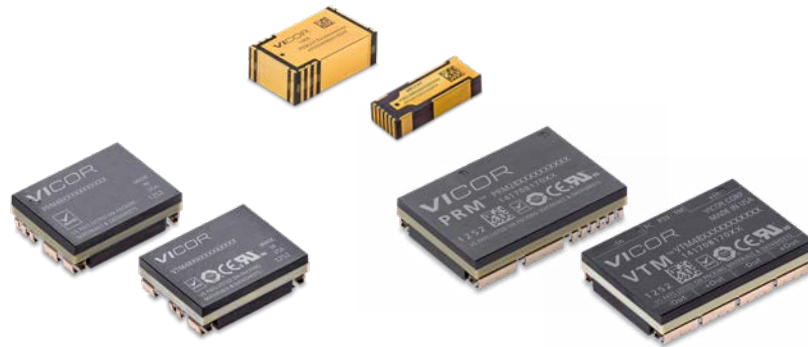
Used to create configurable, high-efficiency DC-DC converter designs

Description

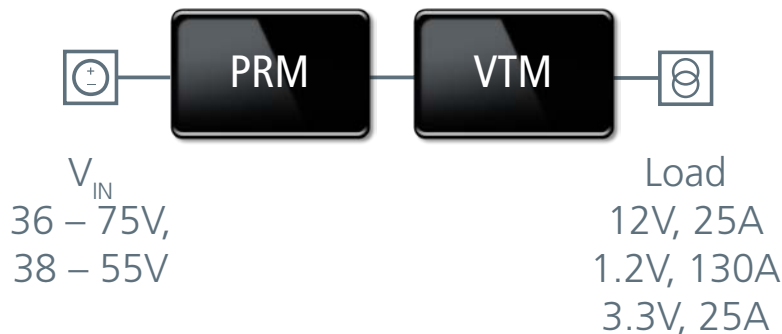
The PRM regulator is a high-efficiency non-isolated regulator capable of both boosting and bucking a wide-range input voltage and providing a regulated, adjustable output voltage or Factorized Bus. PRM regulators can be used standalone as non-isolated voltage regulators or combined with VTM current multipliers 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 Application



Family of PRM™ Products

Model Number ^[a]	Input Voltage		Output Voltage Range (V)	Output Power Max (W)	Output Current Max (A)	VTM Compatible	Package Dimensions	Package Type
	Nominal (V)	Range (V)						
PRM48AH480T200A00	48	36 – 75	20 – 55	200	4.17	Yes	22 x 16.5 x 6.73mm	Half VI Chip®
PRM48AF480T400A00	48	36 – 75	20 – 55	400	8.33	Yes	32.5 x 22 x 6.73mm	Full VI Chip
PRM48BH480T200B00	45	38 – 55	5 – 55	200	4.17	Yes	22 x 16.5 x 6.73mm	Half VI Chip
PRM48BH480T250A00	48	38 – 55	20 – 55	250	5.21	Yes	22 x 16.5 x 6.73mm	Half VI Chip
PRM48JH480T250A00	48	45 – 55	20 – 55	250	5.21	Yes	22 x 16.5 x 6.73mm	Half VI Chip
PRM48JH480T250A02	48	45 – 55	20 – 55	250	4.72	Yes	22 x 16.5 x 6.73mm	Half VI Chip
PRM48BF480T400B00	45	38 – 55	5 – 55	400	8.33	Yes	32.5 x 22 x 6.73mm	Full VI Chip
PRM48BF480T500A00	48	38 – 55	20 – 55	500	10.42	Yes	32.5 x 22 x 6.73mm	Full VI Chip
PRM48JF480T500A00	48	45 – 55	20 – 55	500	10.42	Yes	32.5 x 22 x 6.73mm	Full VI Chip
PRM48BF480T600A00	45	38 – 55	5 – 55	600	12.5	Yes	32.5 x 22 x 6.73mm	Full VI Chip
PRM2313S60E54H0T00	54	38 – 60	30 – 54	800	16.67	No	22.8 x 13.8 x 7.4mm	SM-ChiP™

Family of VTM™ Products

Model Number ^{[a] [b]}	Input Voltage Range (V)	Output Voltage Range (V)	Output Current Max (A)	Package Dimensions	Package Type
VTM48EF012T130C01	26 – 55	0.7 – 1.4	130	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF040T050B00	26 – 55	2.2 – 4.6	50	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF040T050BOR	26 – 55	2.2 – 4.6	50	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EH040T025B00	26 – 55	2.2 – 4.6	25	22 x 16.5 x 6.73mm	Half VI Chip
VTM48EF060T040A00	26 – 55	3.3 – 6.9	40	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF060T046A00	26 – 55	3.3 – 6.9	46	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EH060T020A00	26 – 55	3.3 – 6.9	20	22 x 16.5 x 6.73mm	Half VI Chip
VTM48EF080T030A00	26 – 55	4.3 – 9.2	30	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF096T025A00	26 – 55	5.2 – 11.0	25	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF120T025A00	26 – 55	6.5 – 13.8	25	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF120T025A0R	26 – 55	6.5 – 13.8	25	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EH120T010B00	26 – 55	6.5 – 13.8	10	22 x 16.5 x 6.73mm	Half VI Chip
VTM48EF160T015A00	26 – 55	8.7 – 18.3	15	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF240T012A00	26 – 55	13.0 – 27.5	12.5	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF320T009A00	26 – 55	17.3 – 36.7	9.4	32.5 x 22 x 6.73mm	Full VI Chip
VTM48EF480T006A00	26 – 55	26 – 55	6.3	32.5 x 22 x 6.73mm	Full VI Chip
VTM2308S60Z0825T00	0 – 60	0 – 7.5	25	22.8 x 8.5 x 4.9mm	SM-ChiP
VTM2308S60Z1513T00	0 – 60	0 – 15	12.5	22.8 x 8.5 x 4.9mm	SM-ChiP

^[a] Full-chip models also available in through-hole mounting style. All models except SM-ChiP available in M-Grade.

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