

# PRM™ Regulator and VTM™ Current Multiplier

Factorized Power – Flexible DC-DC Converter Solutions

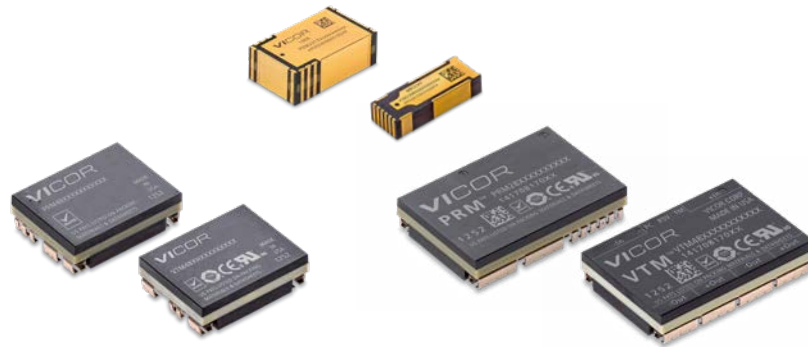
Used to create configurable, high-efficiency DC-DC converter designs

## Description

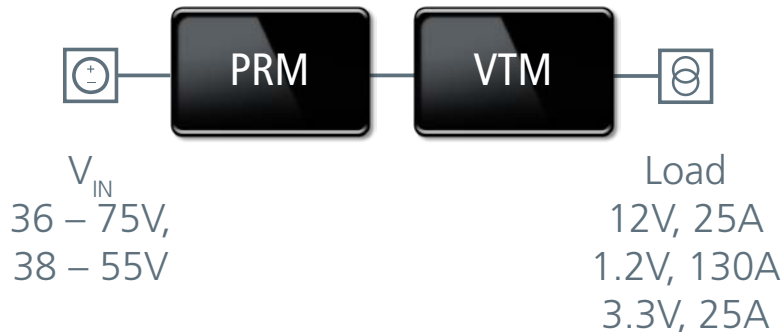
The PRM regulator is a high-efficiency non-isolated regulator capable of both boosting and bucking a wide-range input voltage and providing a regulated, adjustable output voltage or Factorized Bus. PRM regulators can be used standalone as non-isolated voltage regulators or combined with VTM current multipliers 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: 1.1in<sup>2</sup> or 0.56in<sup>2</sup>
- High efficiency up to 97%
- Low profile: 0.265in
- Power density up to 2,040W/in<sup>3</sup>



## Typical Application



## Family of PRM™ Products

Model Number <sup>[a]</sup>	Input Voltage		Output Voltage Range (V)	Output Power Max (W)	Output Current Max (A)	Package Type	Package Dimensions
	Nominal (V)	Range (V)					
PRM48AH480T200A00	48	36 – 75	20 – 55	200	4.17	Half VI Chip	22 x 16.5 x 6.73mm
PRM48AF480T400A00	48	36 – 75	20 – 55	400	8.33	Full VI Chip	32.5 x 22 x 6.73mm
PRM48BH480T200B00	48	38 – 55	5 – 55	200	4.17	Half VI Chip	22 x 16.5 x 6.73mm
PRM48BH480T250A00	48	38 – 55	20 – 55	250	5.21	Half VI Chip	22 x 16.5 x 6.73mm
PRM48JH480T250A00	48	45 – 55	20 – 55	250	5.21	Half VI Chip	22 x 16.5 x 6.73mm
PRM48JH480T250A02	48	45 – 55	20 – 55	250	5.21	Half VI Chip	22 x 16.5 x 6.73mm
PRM48BF480T400B00	48	38 – 55	5 – 55	400	8.33	Full VI Chip	32.5 x 22 x 6.73mm
PRM48BF480T500A00	48	38 – 55	20 – 55	500	10.42	Full VI Chip	32.5 x 22 x 6.73mm
PRM48JF480T500A00	48	45 – 55	20 – 55	500	10.42	Full VI Chip	32.5 x 22 x 6.73mm
PRM48BF480T600A00	48	38 – 55	5 – 55	600	12.5	Full VI Chip	32.5 x 22 x 6.73mm
PRM2313S60E54H0T00	54	38 – 60	30 – 54	800	16.67	SM-ChiP™	22.8 x 13.8 x 7.4mm

## Family of VTM™ Products

Model Number <sup>[a] [b]</sup>	Input Voltage Range (V)	Output Voltage Range (V)	Output Current Max (A)	Package Type	Package Dimensions
VTM48EF012T130C01	26 – 55	0.7 – 1.4	130	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF030T070A00	26 – 55	1.63 – 3.44	70	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF040T050B00	26 – 55	2.17 – 4.58	50	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF040T050B0R	26 – 55	2.17 – 4.58	50	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EH040T025B00	26 – 55	2.17 – 4.58	25	Half VI Chip	22 x 16.5 x 6.73mm
VTM48EF060T040A00	26 – 55	3.25 – 6.88	40	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF080T030A00	26 – 55	4.33 – 9.17	30	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF096T025A00	32 – 55	6.40 – 11.00	25	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF120T025A00	26 – 55	6.50 – 13.75	25	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF120T025A0R	26 – 55	6.50 – 13.75	25	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EH120T010B00	26 – 55	6.50 – 13.75	10	Half VI Chip	22 x 16.5 x 6.73mm
VTM48EF160T015A00	26 – 55	8.67 – 18.33	15	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF240T012A00	26 – 53	14.00 – 26.50	12	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF320T009A00	26 – 55	17.33 – 36.67	9	Full VI Chip	32.5 x 22 x 6.73mm
VTM48EF480T006A00	26 – 55	26.00 – 55.00	6	Full VI Chip	32.5 x 22 x 6.73mm
VTM2308S60Z0825TZ0	0 – 60	0 – 7.5	25	SM-ChiP	22.8 x 8.5 x 4.9mm
VTM2308S60Z1513TZ0	0 – 60	0 – 15	12.5	SM-ChiP	22.8 x 8.5 x 4.9mm

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

<sup>[b]</sup> "R" indicates reverse or bidirectional operation.