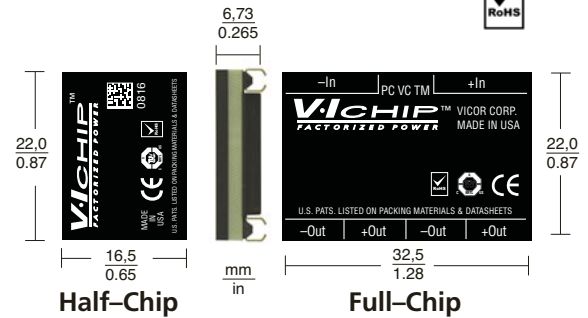


V-I Chip™ PRM™ Regulator and VTM™ Current Multiplier



- Sine Amplitude Converter (VTM)
- ZVS buck-boost regulator (PRM)
- Regulation 0.2% (Remote Sense)
- Small footprint: 1.1 in² or 0.56 in²
- High efficiency up to 97%
- Low profile 0.265"
- Power Density > 1300 W/in³



Product Description

The PRM regulator is a very efficient non-isolated regulator capable of both boosting and bucking a wide range input voltage and provides 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 higher efficiency and power density. The VTM module provides point-of-load, fixed ratio voltage transformation with extremely fast transient response and isolation to 2,250 Vdc.

PRM Model Number*	Input Voltage		Output Voltage Range (V)	Output Power Max. (W)	Output Current Max. (A)	Temp. Grade	Package
	Nom. (V)	Range (V)					
P024F048T12AL	24	18 - 36	26 - 55	120	2.5	T	Full
P036F048T12AL	36	18 - 60	26 - 55	120	2.5	T	Full
P045F048T17AL	45	38 - 55	26 - 55	170	3.5	T	Full
P045F048T32AL	45	38 - 55	26 - 55	320	6.67	T	Full
P048F048T12AL	48	36 - 75	26 - 55	120	2.5	T	Full
P048F048T24AL	48	36 - 75	26 - 55	240	5.0	T	Full
PRM48BF480T400A00	48	38 - 55	5 - 55	400	8.33	T	Full
PRM48BH480T200A00	48	38 - 55	5 - 55	200	4.17	T	Half

VTM Model Number*	Input Voltage Range (V)	Output Voltage Range (V)	Output Current Max. (A)	Temp. Grade	Package
VTM48EF012T130A00	26 – 55	0.65 – 1.37	130	T	Full
VTM48EF015T115A00	26 – 55	0.81 – 1.71	115	T	Full
VTM48EH015T050A00	26 – 55	0.81 – 1.72	50	T	Half
VTM48EF020T080A00	26 – 55	1.08 – 2.29	80	T	Full
VTM48EH020T040A00	26 – 55	1.08 – 2.29	40	T	Half
VTM48EF030T070A00	26 – 55	1.63 – 3.44	70	T	Full
VTM48EF040T050A00	26 – 55	2.17 – 4.58	50	T	Full
VTM48EH040T025A00	26 – 55	2.17 – 4.58	25	T	Half
V048F060T040	26 – 55	3.25 – 6.88	40	T	Full
VTM48FH060T020A00	26 – 48	3.25 – 6.00	20	T	Half
V048F080T030	26 – 55	4.33 – 9.17	30	T	Full
V048F096T025	32 – 55	6.40 – 11.00	25	T	Full
VTM48EF120T025A00	26 – 55	6.50 – 13.75	25	T	Full
VTM48EH120T010A00	26 – 55	6.50 – 13.75	10	T	Half
V048F160T015	26 – 55	8.67 – 18.33	15	T	Full
V048F240T012	26 – 53	14.00 – 26.50	12	T	Full
V048F320T009	26 – 55	17.33 – 36.67	9	T	Full
V048F480T006	26 – 55	26.00 – 55.00	6	T	Full

*Full-chip models also available in through hole and M grade.

Typical Applications

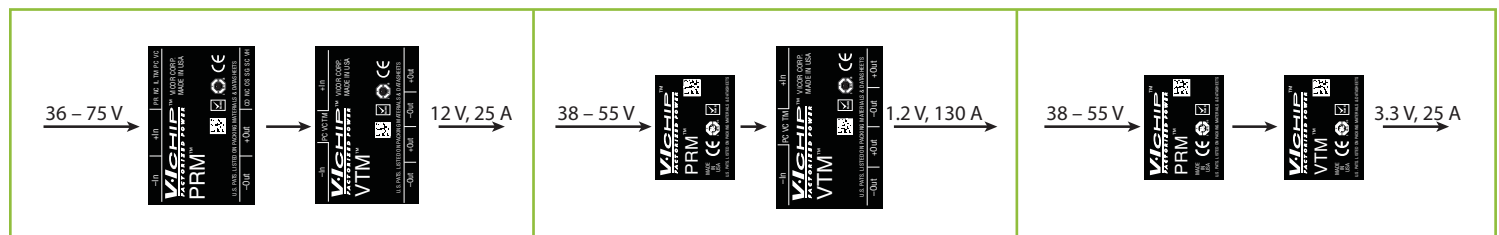
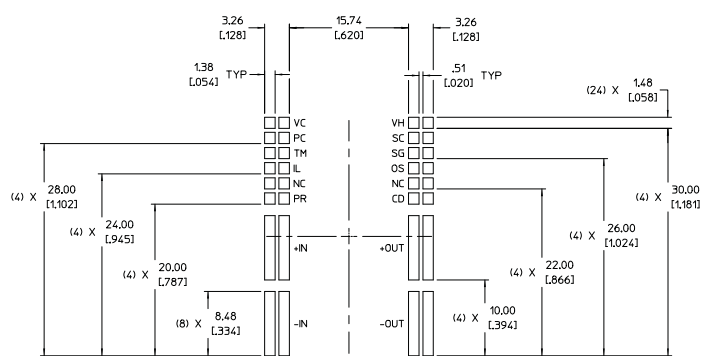
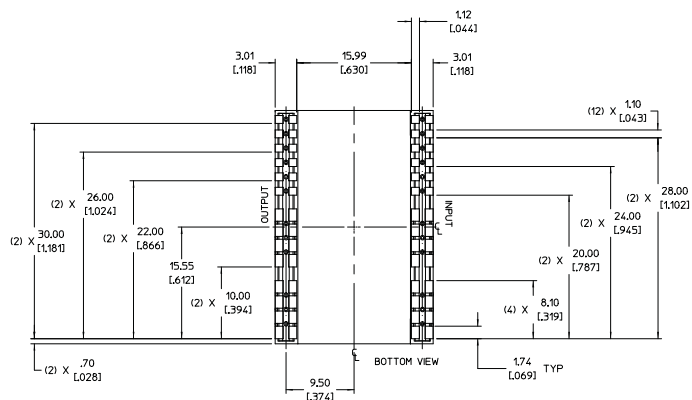


Figure 1 — Typical applications

Full-Chip PRM™ Module Mechanical Outline Drawing



RECOMMENDED LAND PATTERN
(COMPONENT SIDE SHOWN)



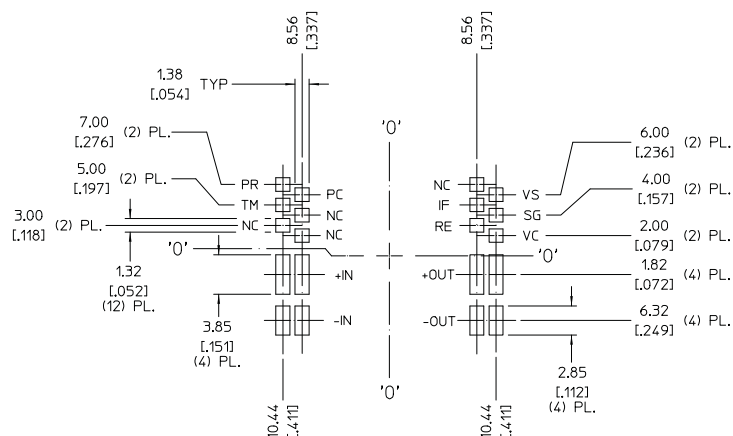
BOTTOM VIEW

NOTES:

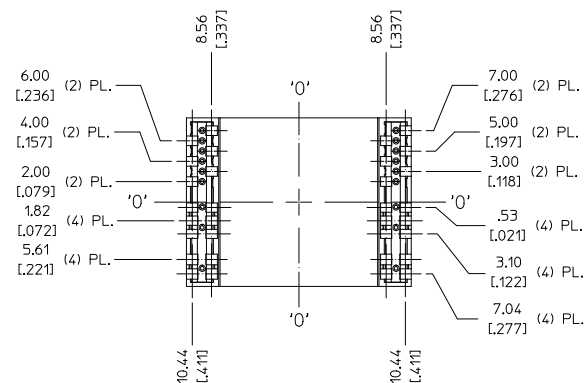
1. DIMENSIONS ARE $\frac{\text{mm}}{\text{inch}}$.
2. UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE:
.X / [.XX] = ± 0.25 / [.01]; .XX / [.XXX] = ± 0.13 / [.005]
3. PRODUCT MARKING ON TOP SURFACE

DXF and PDF files are available on vicorpower.com

Half-Chip PRM™ Module Mechanical Outline Drawing

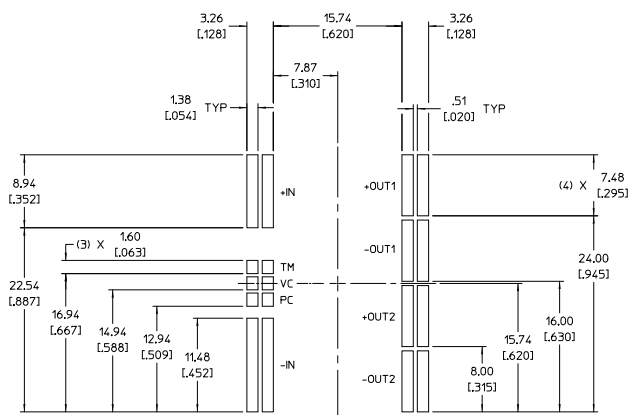


RECOMMENDED LAND PATTERN
(COMPONENT SIDE SHOWN)

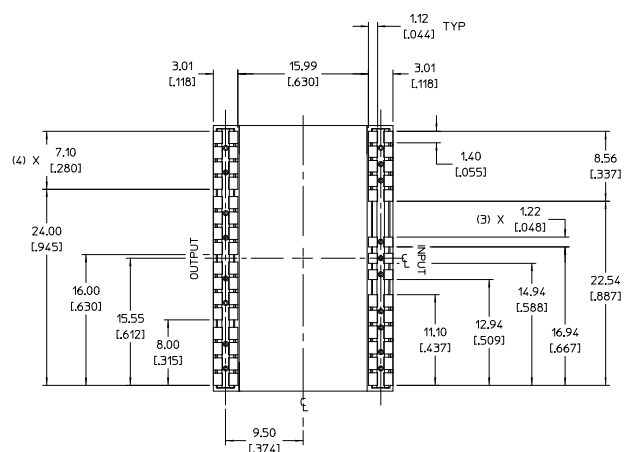


BOTTOM VIEW

Full-Chip VTM™ Module Mechanical Outline Drawing



RECOMMENDED LAND PATTERN
(COMPONENT SIDE SHOWN)

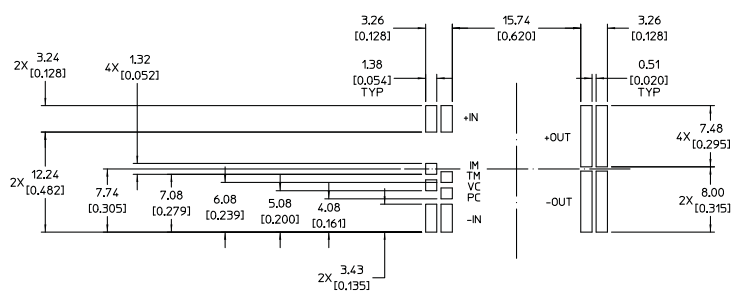


BOTTOM VIEW

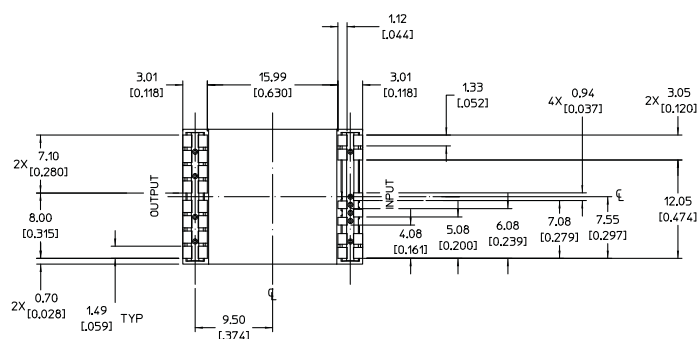
- NOTES:
1. DIMENSIONS ARE $\frac{\text{mm}}{\text{inch}}$.
 2. UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE:
X / [XX] = ± 0.25 / [01]; XX / [XXX] = ± 0.13 / [005]
 3. PRODUCT MARKING ON TOP SURFACE

DXF and PDF files are available on vicorpower.com

Half-Chip VTM™ Module Mechanical Outline Drawing



RECOMMENDED LAND PATTERN
(COMPONENT SIDE SHOWN)



BOTTOM VIEW

RECOMMENDED LAND PATTERN
(COMPONENT SIDE SHOWN)

BOTTOM VIEW

NOTE:
1. RoHS COMPLIANT PER CST-0001 LATEST REVISION.

	vicorpower.com	800-735-6200	Rev. 2.1	3/2011	
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