

PRM™ Regulator and VTM™ Current Multiplier Modules

Features

- 100°C baseplate operation
- Sine Amplitude Converter (VTM)
- ZVS buck-boost regulator (PRM)



- Regulation 1% (Adaptive Loop)
- Small footprint: 1.64 and 2.08 in²
- High efficiency up to 97%
- Low profile 0.37" flanged model
- Power density: Up to 416 W/in³
- Flexible architecture
- Low noise
- Fast transient response
- Lead free wave solder compatible
- Agency approvals

Product Description

VI BRICK PRM and VTM modules provide the technical advantages of Factorized Power including high density and efficiency, low noise operation, architectural flexibility, extremely fast transient response, and elimination of bulk capacitance at the point-of-load (POL). Utilizing baseplate and integrated heat sink packaging, the platform also provides improved thermal management and through-hole mounting capability in a small, robust package.

PRM Model Number	Input Voltage (V)	Output Voltage (V)	Output Power (W)	Regulation (%)		Efficiency (%)		Output Ripple (mVpk-pk) 100% Load
				Line	Load	50% Load	100% Load	
PR024A480T012FP	18 - 36	26 - 55	120	0.10	0.10	92.5	95.0	228
PR036A480T012FP	18 - 60	26 - 55	120	0.10	0.10	92.5	95.0	202
PR048A480T012FP	36 - 75	26 - 55	120	0.10	0.10	92.5	95.1	274
PR048A480T024FP	36 - 75	26 - 55	240	0.17	0.50	95.0	96.0	360
PR045A480T017FP	38 - 55	26 - 55	170	0.10	0.10	95.3	97.0	372
PR045A480T032FP	38 - 55	26 - 55	320	0.30	0.50	96.2	97.0	655

VTM Model Number	Output Voltage (V)			Output Current (A)	Efficiency %		Output Ripple (mVpk-pk)	
	26 Vin	48 Vin	55 Vin		50% Load	100% Load	50% Load	100% Load
VT048A015T100FP	0.81	1.50	1.72	100	91.0	90.5	51	100
VT048A020T080FP	1.08	2.00	2.29	80	94.2	93.2	35	50
VT048A030T070FP	1.63	3.00	3.44	70	95.0	94.2	48	65
VT048A040T050FP	2.17	4.00	4.58	50	94.8	94.4	168	216
VT048A060T040FP	3.25	6.00	6.88	40	95.6	94.6	96	168
VT048A080T030FP	4.33	8.00	9.17	30	96.0	95.8	61	132
VT048A096T025FP	6.40 ^[a]	9.60	11.00	25	96.2	96.2	107	176
VT048A120T025FP	6.50	12.00	13.75	25	95.1	95.6	92	141
VT048A160T015FP	8.67	16.00	18.33	15	96.0	95.7	108	153
VT048A240T012FP	14.00 ^[b]	24.00	26.50 ^[c]	12	95.7	95.9	102	176
VT048A320T009FP	17.33	32.00	36.67	9	96.5	96.2	184	158
VT048A480T006FP	26.00	48.00	55.00	6	96.7	96.4	112	176

Note: See individual data sheets for additional model specifications and configurations.

[a] Vout = 6.4 Vdc @ 32 Vin; [b] Vout = 14.0 Vdc @ 28 Vin; [c] Vout = 26.5 Vdc @ 53 Vin

Typical Application

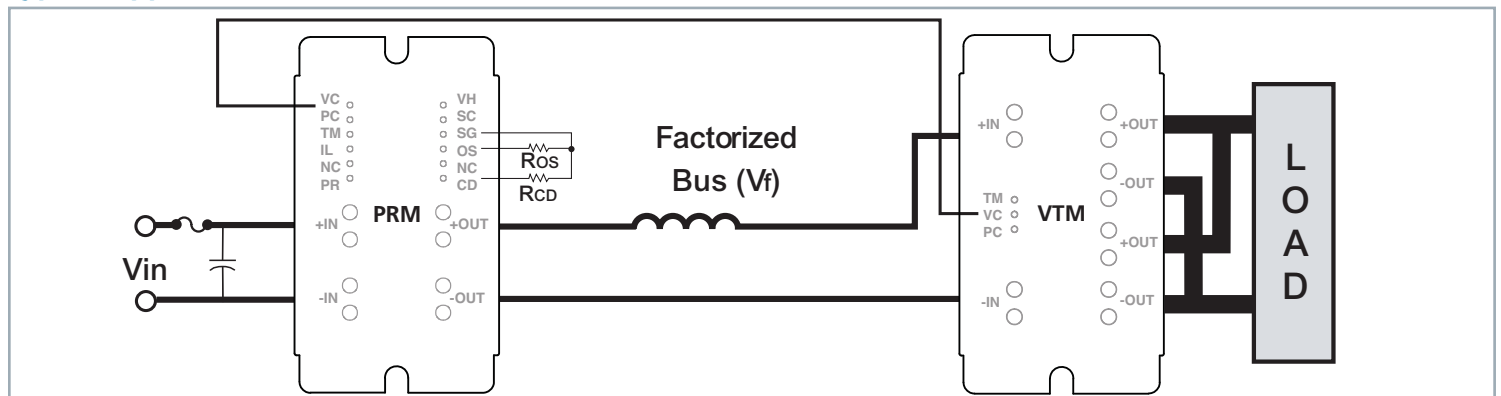
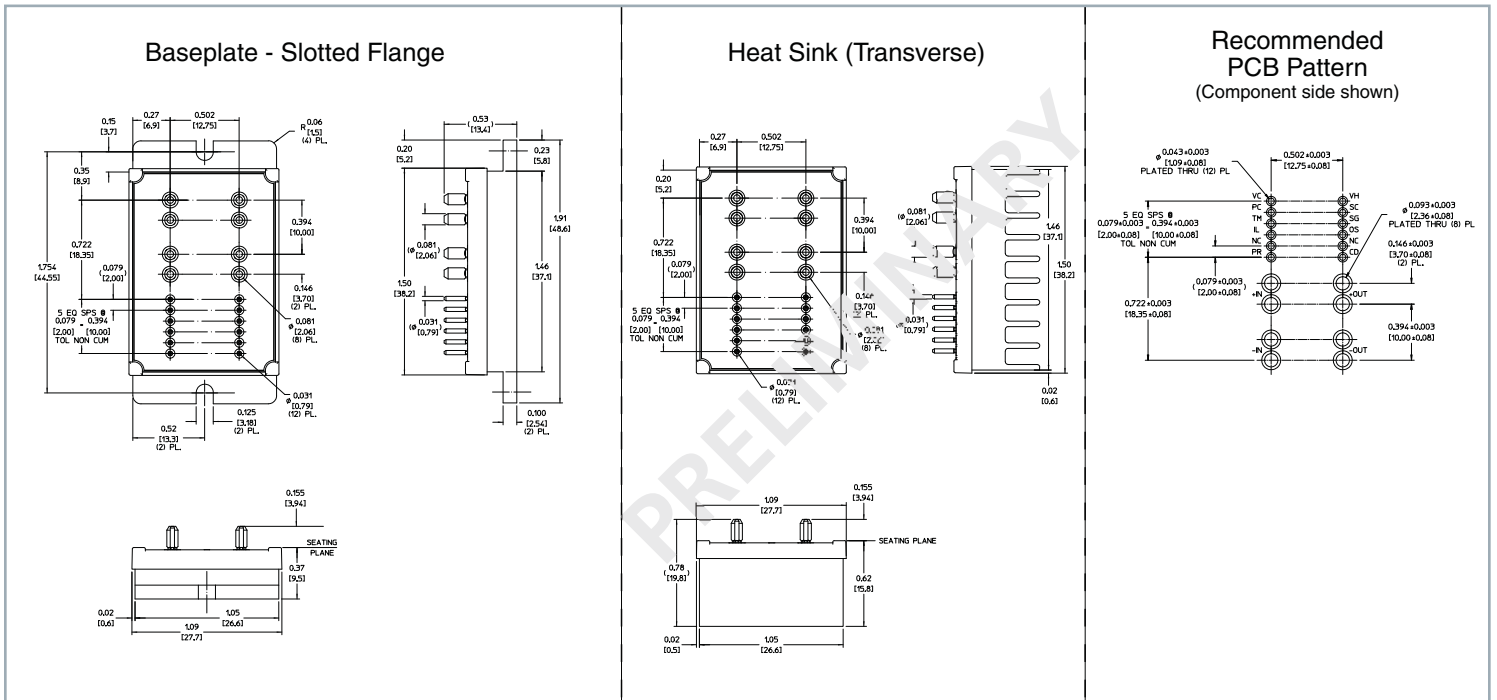
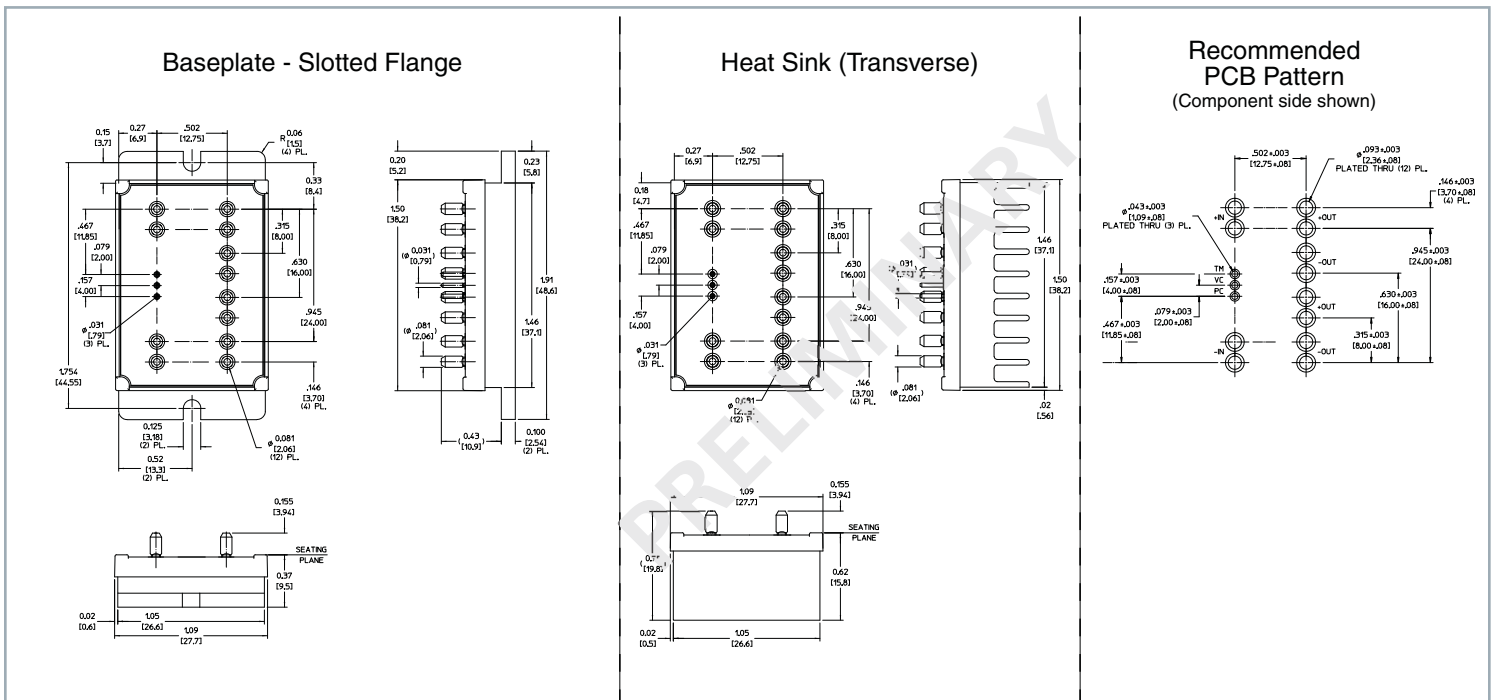


Figure 1 — Typical application with Adaptive Loop control, the output of the VTM is regulated over the load current range with only a single interconnect between the PRM and VTM and without the need for isolation in the feedback path.

VI BRICK PRM Mechanical Drawing



VI BRICK VTM Mechanical Drawing



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