

**SERIES:** PTK15-T**DESCRIPTION:** screw terminal dc-dc converter**Features**

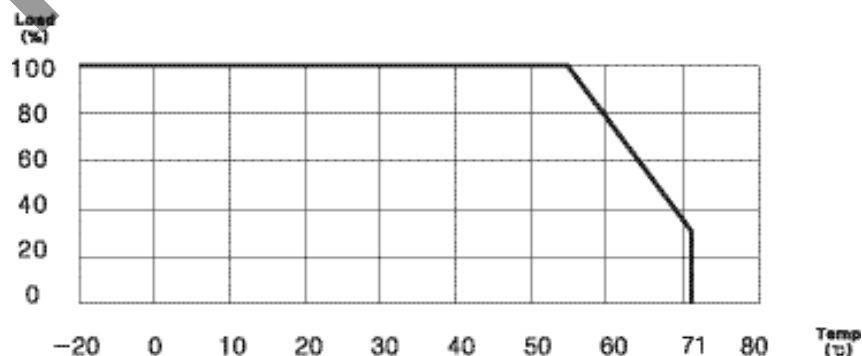
- U-frame with screw terminals
- Industry standard pin out
- Wide 4:1 input range
- Fully isolated
- Output voltage trimmable
- Output on/off control
- Over-current protection
- Over-voltage protection
- Six-sided EMI shielding
- Constant switching frequency
- High efficiency
- Compact size 2.25"x3.0"x0.67"
- 40°C~85°C Models available
- 3 year warranty



MODEL <sup>1</sup>	Output Power (max)	Input Voltage	Output Voltage	Output Current (max)	Ripple & Noise <sup>2</sup> mV P-P	Efficiency (Typ.)
PTK15-Q24-S3-T	13.2W	10-36VDC	3.3VDC	4.0A	75	80%
PTK15-Q24-S5-T	15.0W	10-36VDC	5VDC	3.0A	75	85%
PTK15-Q24-S12-T	15.0W	10-36VDC	12VDC	1.25A	120	86%
PTK15-Q24-S15-T	15.0W	10-36VDC	15VDC	1.0A	150	84%
PTK15-Q24-D5-T	15.0W	10-36VDC	±5VDC	1.5A	50/50	85%
PTK15-Q24-D12-T	15.0W	10-36VDC	±12VDC	0.625A	120/120	87%
PTK15-Q24-D15-T	15.0W	10-36VDC	±15VDC	0.5A	150/150	87%
PTK15-Q48-S3-T	13.2W	20-72VDC	3.3VDC	4.0A	75	80%
PTK15-Q48-S5-T	15.0W	20-72VDC	5VDC	3.0A	75	85%
PTK15-Q48-S12-T	15.0W	20-72VDC	12VDC	1.25A	120	87%
PTK15-Q48-S15-T	15.0W	20-72VDC	15VDC	1.0A	150	87%
PTK15-Q48-D5-T	15.0W	20-72VDC	±5VDC	1.5A	50/50	85%
PTK15-Q48-D12-T	15.0W	20-72VDC	±12VDC	0.625A	120/120	86%
PTK15-Q48-D15-T	15.0W	20-72VDC	±15VDC	0.5A	150/150	87%

**Note:** 1 All models are also available in an extended temperature range of -40°C~85°C. For these models, append "M" to the model number, e.g. PTK15-Q48-S5M.

2 Ripple & noise measured with a 20MHz bandwidth, off a 10 µF electrolytic and a 0.1 µF ceramic cap in parallel at output.

**Derating Curve**

**SERIES:** PTK15-T**DESCRIPTION:** screw terminal dc-dc converter**Input**

Parameter	Conditions/Description	Min	Nom	Max	Units
Input voltage range		10	24	36	VDC
		20	48	72	VDC
Remote on/off control	Output turn-on <sup>3</sup>	2.5V	(open)	5.5V	
	Output turn-off	0V	(short)	0.8V	
Switching frequency	Constant		250		KHz

**Note:** 3 Output defaults to "on" when there is no connection to the "CNT" pin.**OUTPUT**

Parameter	Conditions/Description	Min	Nom	Max	Units
Output trim range	With external trim resistors	-5%		+5%	
Set point accuracy	Single output	-2%		+2%	
	Dual output	-3%		+3%	
Line regulation (Low line to high line)	Single output models	-0.25%		+0.25%	
	Dual output models	-2.5%		+2.5%	
	Triple: main output (Vout) auxillary outputs (+Vaux / -Vaux)	-0.25%		+0.25%	
Load regulation <sup>2</sup>	Single output models - no load to full load	-0.25%		+0.25%	
	Dual output models - balanced loads	-2.5%		+2.5%	
	Triple: main output (Vout) auxillary outputs(+Vaux / -Vaux) - with 10% load on Vout and balanced loads on +Vaux and -Vaux	-0.25%		+0.25%	
		-5%		+5%	
Minimum load	Converters will not be damaged if loading conditions are less than minimum specified loads, but regulation specs may not be met <sup>4</sup>				
Ripple and noise					See chart

**Note:** 4 Single output: no min. load required, Dual output: 10%, Triple output: balanced load**PROTECTION**

Parameter	Conditions/Description	Min	Nom	Max	Units
Over-current	Continuous auto recovery <sup>5</sup>	105%		135%	
Over-voltage	Internally zener clamped <sup>5</sup>	110%		140%	

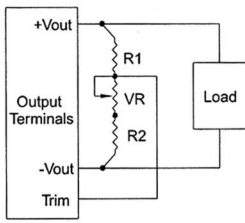
**Note:** 5 Continuous operation in a protected state may compromise long-term reliability.**GENERAL**

Parameter	Continuous/Description	Min	Nom	Max	Units
Efficiency	Typical at full load	78%		83%	
Dielectric withstand	Input/case, input/output, output/case	500			VAC
Insulation resistance	at 500 VDC	100M			Ohms
Agency standards	Approved to UL60950, CSA C22.2 No. 60950, TUV EN60950				
Case material			Zn		
Material flammability		94 V-0			
Weight			80 (2.82)		grams (ounces)
MTBF	MIL-HDBK-217F		470k		hours
Operating temperature	Regular models - see derating curve.	-20		+71	°C
	Extended temperature models	-40		+85	°C
Storage temperature		-40		+105	°C
Humidity	Operating(non-condensing)	5%		95%	RH

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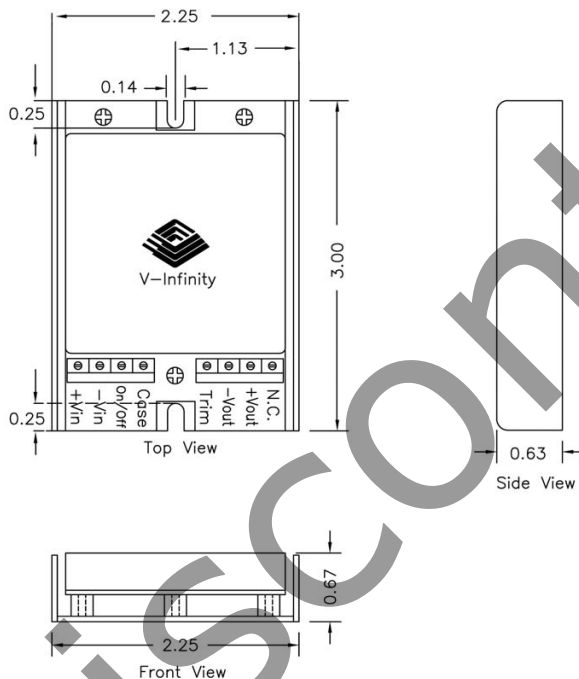
**Trim Method**



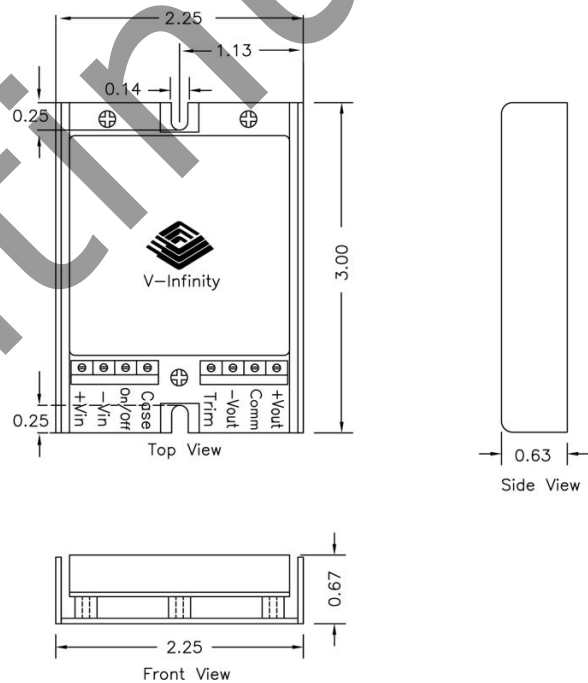
**External Trim Resistors**

Model	Output Voltage	VR	R1	R2
Single	5V	1K	1.0K	680Ω
Output	12V	1K	3.9K	680Ω
Models	15V	1K	5.6K	750Ω
Dual	±5V(10V)	1K	3.3K	680Ω
Output	±12V(24V)	5K	9.0K	820Ω
Models	+15V(30V)	5K	20.0K	910Ω

**Single Output**



**Dual Output**



\*DIN rail mounting kit available (part# STK-DIN)

**PIN Definitions**

- +Vin: Input positive terminal
- Vin: Input negative terminal
- CNT: Remote On/Off control of output voltage. Referenced to -Vin
- +Vout: Main output positive terminal
- Vout: Output negative terminal
- Com: Common node for dual- or triple-output models
- Trim: For trimming output voltage on single- or dual-output models
- Case: Connected to chassis

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