PART NUMBER: PTK10 series **DESCRIPTION:** dc-dc converter

features
- **industry standard pin out**
- **wide 4:1 input range**
- **fully isolated**
- **over-current protection**
- **over-voltage protection**
- **six-sided EMI shielding**
- **constant switching frequency**
- **high efficiency**
- **compact size 2.0”x1.0”x0.4”**
- **3 year warranty**

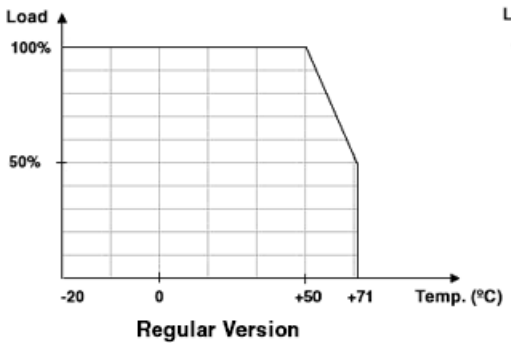
RoHS

model [1] number	output power (max)	input voltage	output voltage	output current (max)	ripple & noise [2] mV P-P	efficiency (typ.)
PTK10-Q24-S3	7.92W	10-36VDC	3.3VDC	2.4A	75	79%
PTK10-Q24-S5	10.0W	10-36VDC	5VDC	2.0A	75	82%
PTK10-Q24-S12	10.8W	10-36VDC	12VDC	0.9A	120	83%
PTK10-Q24-S15	10.5W	10-36VDC	15VDC	0.7A	150	84%
PTK10-Q24-D5	10.0W	10-36VDC	±5VDC	1.0A/1.0A	100/100	80%
PTK10-Q24-D5A	10.0W	10-36VDC	±5VDC	1.5A/0.5A	100/100	78%
PTK10-Q24-D12	10.8W	10-36VDC	±12VDC	0.45A	120/120	83%
PTK10-Q24-D15	10.5W	10-36VDC	±15VDC	0.35A	150/150	83%
PTK10-Q48-S3	7.92W	20-72VDC	3.3VDC	2.4A	75	78%
PTK10-Q48-S5	10.0W	20-72VDC	5VDC	2.0A	75	81%
PTK10-Q48-S12	10.8W	20-72VDC	12VDC	0.9A	120	84%
PTK10-Q48-S15	10.5W	20-72VDC	15VDC	0.7A	150	85%
PTK10-Q48-D5	10.0W	20-72VDC	±5VDC	1.0A/1.0A	100/100	81%
PTK10-Q48-D5A	10.0W	20-72VDC	±5VDC	1.5A/0.5A	100/100	81%
PTK10-Q48-D12	10.8W	20-72VDC	±12VDC	0.45A	120/120	83%
PTK10-Q48-D15	10.5W	20-72VDC	±15VDC	0.35A	150/150	83%

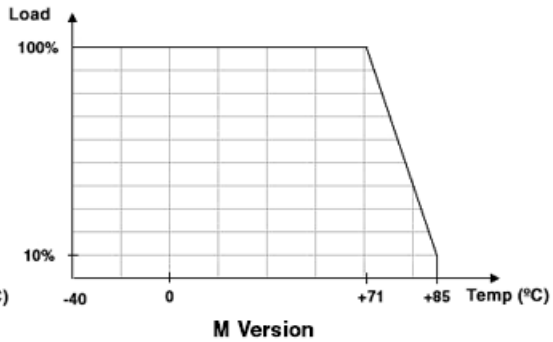
NOTE: 1. All models are also available in an extended temperature range of -40°C~85°C. For these models, append “M” to the model number, e.g. PTK10-Q48-S5M.

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

DERATING CURVES



Regular Version



M Version

PART NUMBER: PTK10 series **DESCRIPTION:** dc-dc converter

INPUT

parameter	conditions/description	min	nom	max	units
input voltage range		10	24	36	VDC
		20	48	72	VDC
switching frequency	constant		300		KHz

OUTPUT

parameter	conditions/description	min	nom	max	units
set point accuracy	single output	-2%		+2%	
	dual output	-3%		+3%	
line regulation	single output models	-0.5%		+0.5%	
(low line to high line)	dual output models	-1.0%		+1.0%	
load regulation	single output models - no load to full load	-1.0%		+1.0%	
	dual output models - balanced loads (10% min. load)	-2.5%		+2.5%	
minimum load	converters will not be damaged if loading conditions are less than minimum specified loads, but regulation specs may not be met[3]				
ripple and noise	see chart				

NOTE: 3 single output: no min. load required, dual: 10%

PROTECTION

parameter	conditions/description	min	nom	max	units
over-current	continuous auto recovery [4]	105%		135%	
over-voltage	internally zener clamped [4]	110%		140%	

NOTE: 4 continuous operation in a protected state may compromise long-term reliability.

GENERAL

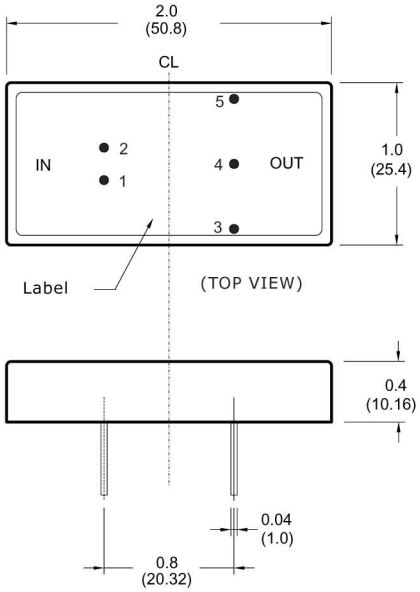
parameter	conditions/description	min	nom	max	units
efficiency	typical at full load	77%		83%	
isolation voltage	input/case, input/output, output/case	500			VAC
insulation resistance	at 500 VDC	100M			Ohms
agency standards	approved to UL60950(E222889), CSA C22.2 No. 60950, TUV EN60950; (single output only)				
case material			Zn		
material flammability		94 V-0			
weight			40 (1.41)		grams (ounces)
MTBF	MIL-HDBK-217F		580k		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
washability	not intended for aqueous wash				

PART NUMBER: PTK10 series **DESCRIPTION:** dc-dc converter

DIMENSIONS (mm)

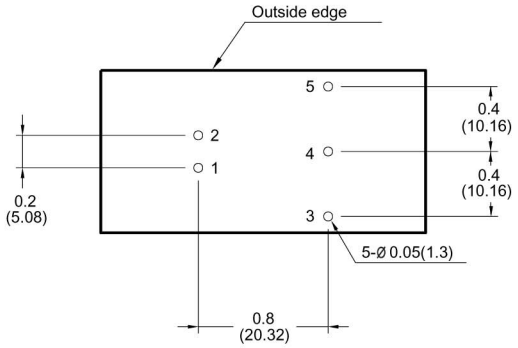
Dimensions

All dimensions are in inches and (mm).



Pin assignments

Single Output	Dual Output
1. +Vin	1. +Vin
2. -Vin	2. -Vin
3. +Vout	3. +Vout
4. No pin	4. Com
5. -Vout	5. -Vout



PCB Layout

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
+Vaux:	Positive auxiliary output
-Vaux:	Negative auxiliary output
Com:	Common node for dual- or triple-output models
Trim:	For trimming output voltage on single- or dual-output models