



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**SERIES:** PTK10 | **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



MODEL	input voltage range (Vdc)	output voltage (Vdc)	output current		output power max (W)	ripple <sup>1</sup> max (mVp-p)	noise <sup>1</sup> max (mVp-p)	efficiency typ (%)
			min (mA)	max (mA)				
PTK10-Q24-S3	10 ~ 36	3.3	0.24	2.4	7.92	75	75	79
PTK10-Q24-S5	10 ~ 36	5	0.2	2.0	10.0	75	75	82
PTK10-Q24-S12	10 ~ 36	12	0.09	0.9	10.8	120	120	83
PTK10-Q24-S15	10 ~ 36	15	0.07	0.7	10.5	150	150	84
PTK10-Q24-D5	10 ~ 36	±5	0.1/0.1	1.0/1.0	10.0	100	100	80
PTK10-Q24-D5A	10 ~ 36	±5	0.15/0.05	1.5/0.5	10.0	100	100	78
PTK10-Q24-D12	10 ~ 36	±12	0.045	0.45	10.8	120	120	83
PTK10-Q24-D15	10 ~ 36	±15	0.035	0.35	8.5	150	150	83
PTK10-Q48-S3	20 ~ 72	3.3	0.24	2.4	7.92	75	75	78
PTK10-Q48-S5	20 ~ 72	5	0.2	2.0	10.0	75	75	81
PTK10-Q48-S12	20 ~ 72	12	0.09	0.9	10.8	120	120	84
PTK10-Q48-S15	20 ~ 72	15	0.07	0.7	10.5	150	150	85
PTK10-Q48-D5	20 ~ 72	±5	0.1/0.1	1.0/1.0	10.0	100	100	81
PTK10-Q48-D5A	20 ~ 72	±5	0.15/0.05	1.5/0.5	10.0	100	100	81
PTK10-Q48-D12	20 ~ 72	±12	0.045	0.45	10.8	120	120	83
PTK10-Q48-D15	20 ~ 72	±15	0.035	0.35	10.5	150	150	83

Notes: 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 output.

## INPUT

parameter	conditions/description	min	typ	max	units
operating input voltage		10	24	36	Vdc
		20	48	72	Vdc

## OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation (low line to high line)	single output		± 0.5		%
	dual output		± 1.0		%
load regulation measured from 10% to full load	single output models - no load to full load		± 1.0		%
	dual output models - balanced loads		± 2.5		%
voltage accuracy	positive, refer to recommended circuit		± 1	± 3	%
	negative, refer to recommended circuit		± 3	± 5	%
switching frequency	constant		300		kHz
temperature coefficient				± 0.03	%/°C

## PROTECTIONS

parameter	conditions/description	min	typ	max	units
over-current	continuous, automatic recovery <sup>4</sup>	105		135	%
over-voltage	internal protection zener <sup>4</sup>	110		140	%

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

## SAFETY AND COMPLIANCE

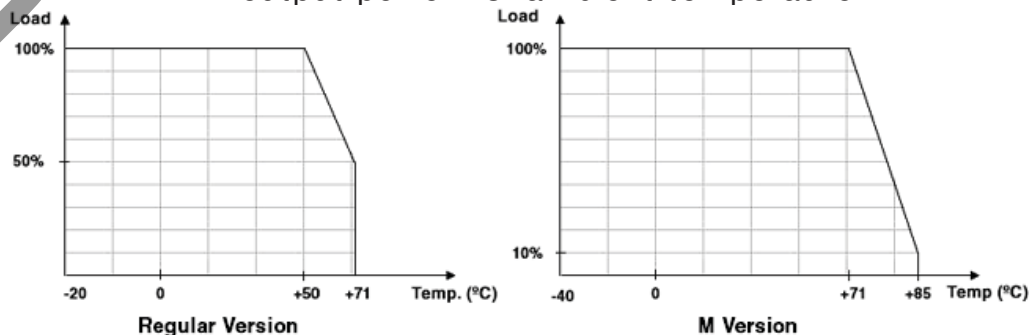
parameter	conditions/description	min	typ	max	units
efficiency	typical at full load	77		83	%
isolation voltage	input/case, input/output, output/case	500			Vac
insulation resistance	at 500 Vdc	100			MΩ
RoHS compliant	yes				
MTBF	MIL-HDBK-217F	580,000			hours

## ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
case operating temperature	regular models - see derating curve	-20		71	°C
	extended temperature models	-40		85	°C
storage temperature		-40		105	°C
storage humidity	non-condensing	5		95	%
temperature rise	100% load		40		°C
lead temperature	1.5 mm from the case for 10 seconds			300	°C

## DERATING CURVES

output power vs. ambient temperature



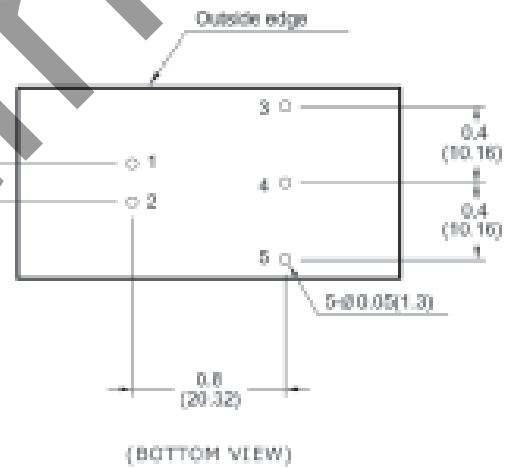
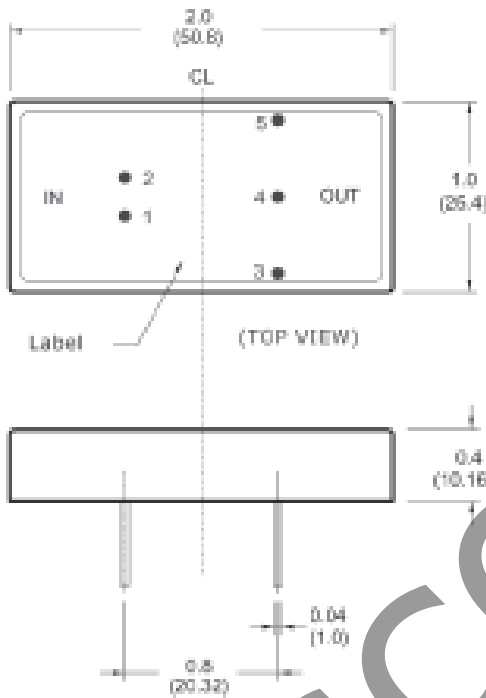
## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	2.0 x 1.0 x 0.4 inch (50.8 x 25.4 x 10.16 mm)				
case material	Zn				
weight			40		g

## MECHANICAL DRAWING

units: inches (mm)

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



## 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

## REVISION HISTORY

rev.	description	date
1.0	initial release	07/07/2011
1.01	updated mechanical drawing	03/27/2012
1.02	discontinued	09/28/2012

The revision history provided is for informational purposes only and is believed to be accurate.

Discontinued



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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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