DATASHEET

DC/DC-Converter
TPQ15-Serie
15Watt
1 x1 inch

- **1“x1“-Package**
- **2:1 Input Range**
- **Efficiency 90%**
- **Overcurrent Protection**
- **continuous short circuit Protection**
- **Remote ON/OFF**

Model Number	Input Voltage	Output Voltage	Output Current	Input Current No Load	Full Load	% Eff.
TPQ15-12S3.3	9-18 VDC	3.3 VDC	4000 mA	90 mA	1280 mA	85
TPQ15-12S05	9-18 VDC	5 VDC	3000 mA	85 mA	1453 mA	88
TPQ15-12S12	9-18 VDC	12 VDC	1250 mA	70 mA	1420 mA	88
TPQ15-12S15	9-18 VDC	15 VDC	1000 mA	70 mA	1420 mA	88
TPQ15-24S3.3	18-36 VDC	3.3 VDC	4000 mA	50 mA	640 mA	86
TPQ15-24S05	18-36 VDC	5 VDC	3000 mA	50 mA	718 mA	89
TPQ15-24S12	18-36 VDC	12 VDC	1250 mA	20 mA	695 mA	90
TPQ15-24S15	18-36 VDC	15 VDC	1000 mA	20 mA	695 mA	90
TPQ15-48S3.3	36-75 VDC	3.3 VDC	4000 mA	25 mA	320 mA	86
TPQ15-48S05	36-75 VDC	5 VDC	3000 mA	30 mA	359 mA	88
TPQ15-48S12	36-75 VDC	12 VDC	1250 mA	20 mA	347 mA	90
TPQ15-48S15	36-75 VDC	15 VDC	1000 mA	20 mA	351 mA	90

All Specifications are Typical at Nominal Line, Full load, and 25°C Unless Otherwise Noted /

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INPUT SPECIFICATIONS

INPUT UNDER VOLTAGE LOCK OUT	12Vin	power up	9V
	12Vin	power down	8V
	24Vin	power up	17V
	24Vin	power down	16V
	48Vin	power up	34V
	48Vin	power down	32V

INPUT FILTER..... PI Network

OUTPUT SPECIFICATIONS

VOLTAGE ACCURACY..... ±1.5% max
RIPPLE AND NOISE, 20MHz BW ..... max. 50mVpp.
LINE REGULATION[1] ..... ±0.2%.
LOAD REGULATION[2] ..... ±0.2%.
EXTERNAL TRIM ADJUSTABLE RANGE ..... ±10%
SHORT CIRCUIT PROTECTION ..... continuous
OVER VOLTAGE PROTECTION.....Zener or TVS clamp
Current Limit .....110% - 140% Nominal Output

GENERAL SPECIFICATIONS

ISOLATION VOLTAGE..... 1500VDC max.
ISOLATION RESISTANCE .....1000 MOhm
SWITCHING FREQUENCY..... 350KHz typ.
OPERATING TEMPERATURE RANGE..... -40°C TO +85°C
DERATING, ABOVE 71°C ..... LINEARY TO ZERO POWER AT 105 °C
COOLING.....Natural Convection, 20ft./min.(0.1m/s)
CASE TEMPERATURE ..... 105°Cmax.
STORAGE TEMPERATURE RANGE.....-55°C TO +125°C
CASE MATERIAL ..... Black Coated Copper with Non-Conductive Base
DIMENSIONS ..... 1,0×1,0×0.4 INCHES (25.4 × 25.4 × 10.2mm)

NOTE:

1. LINE REGULATION: Measured From High Line To Low Line
2. LOAD REGULATION: Measured From Full Load To 10% Load
3. Maximum Case Temperature Under Any Operating Condition Should Not Be Exceeded 105°C
4. Output ripple and noise is measured with 10µF tantalum and 1µF Ceramic capacitor across output

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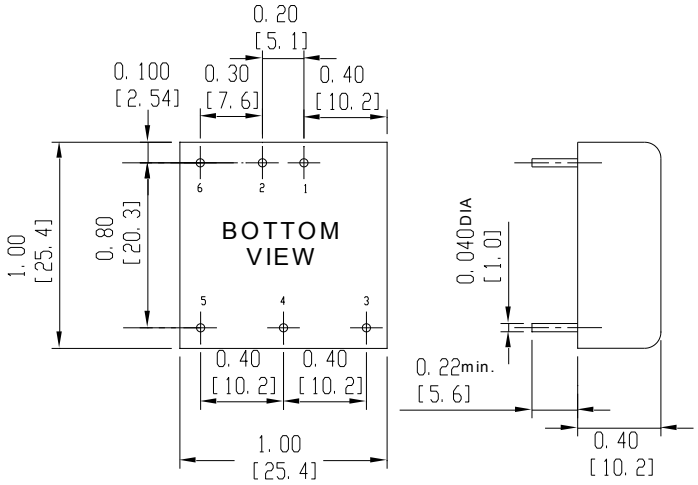
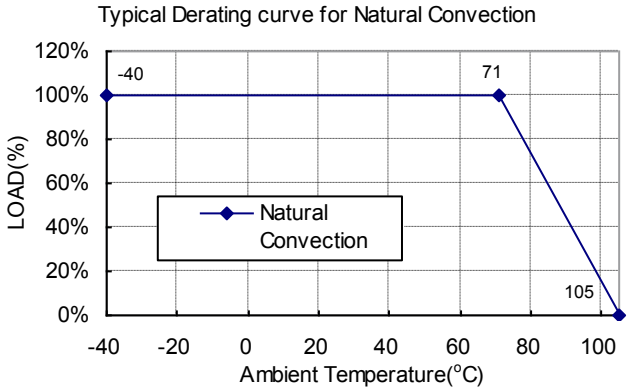
MECHANICAL SPECIFICATIONS

Tolerances Inches: X.XX= ¡ Ó.04 , X.XXX= ¡ Ó.010
Millimeters: X.X= ¡ Ó.0 , X.XX=¡ Ó.25

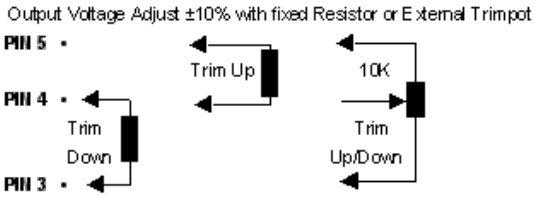


PIN CONNECTION	
Pin	DIP Function
1	+Input
2	-Input
3	+V Output
4	Trim
5	-V Output
6	Remote

Power Derating



EXT.OUTPUT TRIM



REMOTE ON/OFF

Logic Compatibility	Open collector TTL, refer to -Vin
Modul ON	> 5.5V or Open Circuit
Module OFF	<1.2 Vdc

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