DATASHEET

DC/DC-Converter
TPQ15W-Series
15Watt
1 x1 inch

- **4:1 Input Range**
- **Efficiency to 88%**
- **Single/ Dual Output**
- **Overcurrent Protection**
- **Overvoltage-Protection**
- **continuous short circuit Protection**
- **Remote ON/OFF**
- **Without Tantal Capacitors inside**

Model Number	Input Voltage	Output Voltage	Output Current	Input No Load	Current Full Load	% Eff.
TPQ15W-24S33	9 -36 V	3.3 VDC	4000 mA	60 mA	632 mA	87
TPQ15W-24S05	9 -36 V	5 VDC	3000 mA	70 mA	718 mA	87
TPQ15W-24S12	9 -36 V	12 VDC	1250 mA	30 mA	718 mA	87
TPQ15W-24S15	9 -36 V	15 VDC	1000 mA	30 mA	710 mA	88
TPQ15W-24D05	9 -36 V	±5 VDC	±1500mA	30 mA	735 mA	85
TPQ15W-24D12	9 -36 V	±12 VDC	±625mA	30 mA	718 mA	87
TPQ15W-24D15	9 -36 V	±15 VDC	±500mA	30 mA	710 mA	88
TPQ15W-48S33	18 -75 V	3.3 VDC	4000 mA	40 mA	313 mA	88
TPQ15W-48S05	18 -75 V	5 VDC	3000 mA	40 mA	355 mA	88
TPQ15W-48S12	18 -75 V	12 VDC	1250 mA	20 mA	359 mA	87
TPQ15W-48S15	18 -75 V	15 VDC	1000 mA	20 mA	359 mA	87
TPQ15W-48D05	18 -75 V	±5 VDC	±1500mA	20 mA	368 mA	85
TPQ15W-48D12	18 -75 V	±12 VDC	±625mA	20 mA	359 mA	87
TPQ15W-48D15	18 -75 V	±15 VDC	±500mA	20 mA	359 mA	87

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

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INPUT SPECIFICATIONS

INPUT UNDER-VOLTAGE LOCKOUT	24Vin power down	8.0V typ
	24Vin power up	8.8V typ
	48Vin power down	16V typ
	48Vin power up	17V typ

POSITIVE LOGIC REMOTE ON/OFF CONTROL

Logic Compatibility	CMOS or Open Collector TTL, ref. to –Vin
Module ON	>+3.5 to 75VDC or Open Circuit
Module OFF	<1.2 Vdc

INPUT FILTER ..... LC Type

OUTPUT SPECIFICATIONS

Voltage Accuracy		±1.5% max
Voltage Balance (Dual)		±2.0% max
RIPPLE AND NOISE, 20MHz BW	Vo = 3,3V & 5V	max. 75mVpp.
	Vo = 12V & 15V	max. 100mVpp.
Temperature Coefficient		±0.03%/C max
LINE REGULATION	single	±0.2%.
	Dual	±0.5%.
LOAD REGULATION	single	±0.2%.
	Dual	±1.0%.
Cross Regulation (Dual) Load Cross Variation 10%/100%		±5.0%.
EXTERNAL TRIM ADJUSTABLE RANGE …(single output only)		±10%
SHORT CIRCUIT PROTECTION		continuous
OVER VOLTAGE PROTECTION		Zener
Current Limit		110% - 160% Nominal Input

GENERAL SPECIFICATIONS

ISOLATION VOLTAGE		1500VDC max.
SWITCHING FREQUENCY		400KHz typ.
OPERATING TEMPERATURE RANGE		-40°C TO +85°C
DERATING, ABOVE 68°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	DIP	1,0×1,0×0.4 INCHES (25.4 × 25.4 × 10.2mm)
	SMD	1,0×1,0×0.47 INCHES (25.4 × 25.4 × 11.94mm)

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
5. Suffix “S” to the Model Number for SMD-Package

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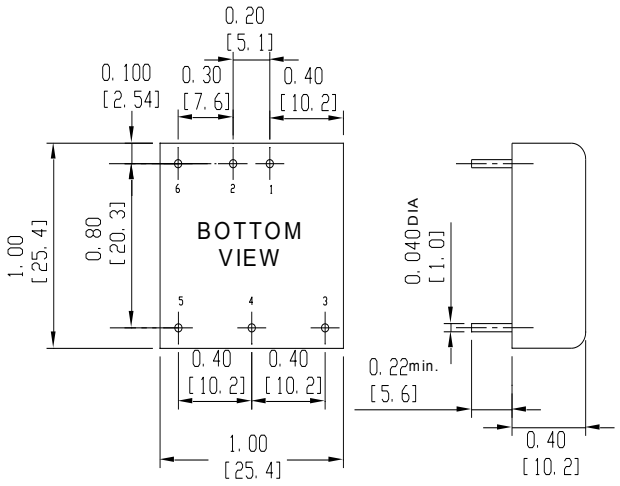
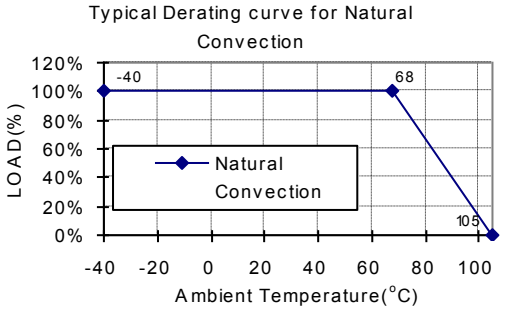
MECHANICAL SPECIFICATIONS

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



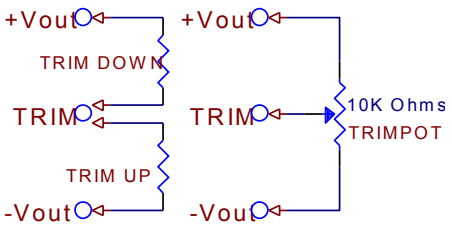
PIN CONNECTION	
Pin	DIP Function
1	+Input
2	-Input
3	+V Output
4	Trim
5	-V Output
6	Remote

Power Derating



Maximum total power from all outputs is limited to 15Watt but no output should be allowed to exceed its maximum current.

External Output TRIM



REMOTE ON/OFF CONTROL

Logic Compatibility	CMOS or Open collector TTL
Modul ON	>+3.5 to 75VDC or Open Circuit
Module OFF	<1.2 Vdc
Control common	reference to -Vin

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