DATASHEET

DC/DC-Converter
TPQ30W-Serie
30Watt
1 x1 inch

- **1“x1“-Package**
- **4:1 Input Range**
- **Efficiency up to 90%**
- **Overvoltage Protection**
- **Low Power Consumption at no Load**
- **continuous short circuit Protection**
- **Safety meets EN60950-1**
- **Remote ON/OFF**

RoHS compliant

Model Number	Input Voltage	Output Voltage	Output Current	Input Current		% Eff.
				No Load	Full Load	
TPQ30W-24S3.3	9-36 VDC	3.3 VDC	7500 mA	10 mA	1172 mA	88
TPQ30W-24S05	9-36 VDC	5 VDC	6000 mA	10 mA	1389 mA	90
TPQ30W-24S12	9-36 VDC	12 VDC	2500 mA	10 mA	1404 mA	89
TPQ30W-24S15	9-36 VDC	15 VDC	2000 mA	10 mA	1404 mA	89
TPQ30W-24D12	9-36 VDC	± 12 VDC	±1250mA	10 mA	1404 mA	89
TPQ30W-24D15	9-36 VDC	± 15 VDC	±1000mA	10 mA	1404 mA	89
TPQ30W-48S3.3	18-75 VDC	3.3 VDC	7500 mA	8 mA	586 mA	88
TPQ30W-48S05	18-75 VDC	5 VDC	6000 mA	8 mA	694 mA	90
TPQ30W-48S12	18-75 VDC	12 VDC	2500 mA	8 mA	694 mA	90
TPQ30W-48S15	18-75 VDC	15 VDC	2000 mA	8 mA	702 mA	89
TPQ30W-48D12	18-75 VDC	± 12 VDC	±1250mA	8 mA	710 mA	88
TPQ30W-48D15	18-75 VDC	± 15 VDC	±1000mA	8 mA	702 mA	89

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	24Vin	power up	8.8V
	24Vin	power down	8V
	48Vin	power up	17V
	48Vin	power down	16V
INPUT SURGE VOLTAGE (100ms max)	24V		50VDC max
	48V		100VDC max
INPUT FILTER			PI-Type

OUTPUT SPECIFICATIONS

VOLTAGE ACCURACY		±1.5% max
VOLTAGE BALANCE (DUAL)		±1.5% max
RIPPLE AND NOISE, 20MHz BW	3.3V & 5V	max. 75mVpp.
	12V & 15V	max. 100mVpp.
TEMPERATUR COEFFICIENT		±0.03%/C max
LINE REGULATION[1]	Single	±0.2% max
	Dual	±0.5% max
LOAD REGULATION[2]	Single	±0.2% max
	Dual	±1.0% max
EXTERNAL TRIM ADJUSTABLE RANGE		±10%
SHORT CIRCUIT PROTECTION		continuous
OVER VOLTAGE PROTECTION		Zener or TVS clamp
CURREN LIMIT		110% - 170% Nominal Output
START UP TIME		20ms max.

GENERAL SPECIFICATIONS

ISOLATION VOLTAGE	1500VDC max.
ISOLATION RESISTANCE	1000 MOhm
SWITCHING FREQUENCY	300KHz typ.
OPERATING TEMPERATURE RANGE	-40°C TO +85°C
DERATING, ABOVE 55°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)
WEIGHT	18g

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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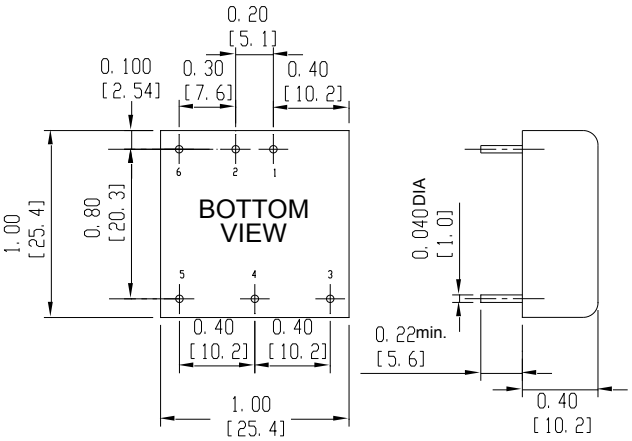
MECHANICAL SPECIFICATIONS

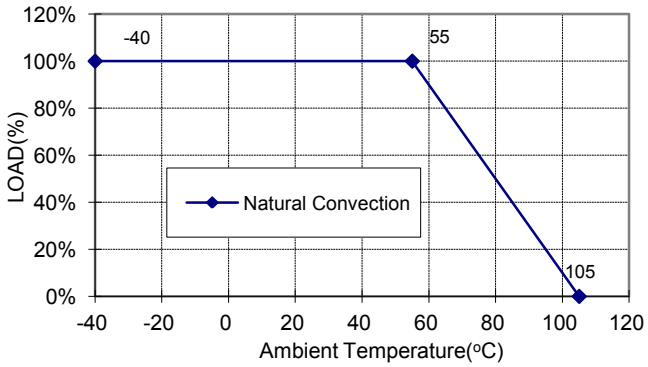
Tolerances: Inches x.xx = ± 0.04; x.xxx = ± 0.01
(mm) x.x = ± 1.0; x.xx = ± 0.25



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

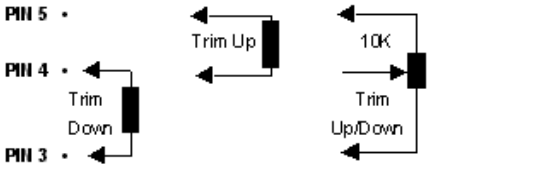
POWER DERATING

Typical Derating curve for Natural Convection



EXT.OUTPUT TRIM

Output Voltage Adjust ±10% with fixed Resistor or External Trimpot



REMOTE ON/OFF

Logic Compatibility	Open collector TTL, refer to -Vin
Modul ON	> 3.5V or Open Circuit
Module OFF	<1.2 Vdc

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