
DESCRIPTION: 2W 3KVDC Isolation Regulated Single Output DC/DC Converters

TPB Series are specially designed for 3KVDC isolation & regulated single output application, the input voltage range within $\pm 5\%$, regulated output with very low ripple noise.

FEATURES

SIP package	3000VDC isolation	Operating temperature:-40°C to 85°C
Regulated single output	Continuous short circuit protection	RoHS compliance

SELECTION GUIDE

Part Number	Input		Output			Efficiency (%)
	Voltage (VDC)		Voltage (VDC)	Current (mA)		
	Nominal	Range		Max	Min	
TPB0505S	5	4.75-5.25	5	400	40	70
TPB1205S	12	11.40-12.60	5	400	40	70
TPB1505S	15	14.25-15.75	5	400	40	71
TPB2405S	24	22.8-25.2	5	400	40	71
TPB2415S	24	22.8-25.2	15	133	13	74

All specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

COMMON SPECIFICATIONS

Parameter	Conditions	Min.	Typ.	Max.	Units
Storage humidity				95	%
Operating temperature		-40		85	°C
Storage temperature		-55		125	°C
Temp. rise at full load			40	58	°C
Lead temperature	1.5mm from case for 10 seconds			300	°C
Short circuit protection		Continuous			
Cooling		air convection			
Case material		Plastic(UL94-V0)			
MTBF		3500			K hours
Weight			2.8		g

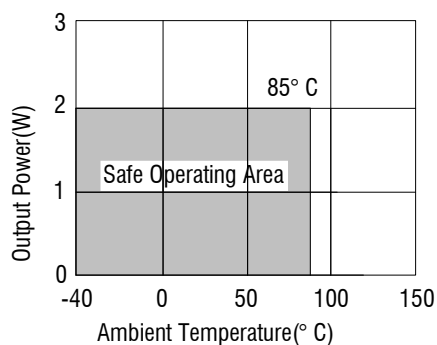
OUTPUT SPECIFICATIONS

Parameter	Conditions	Min.	Typ.	Max.	Units
Output power		0.2		2	W
Line regulation	For Vin change of 5%			± 0.5	%
Load regulation	For Vin change of 5%			± 1.5	%
Output voltage accuracy	100% full load			± 3	%
Temperature drift	100% full load			0.03	%/°C
Ripple	20MHz Bandwidth		20	30	mVp-p
Noise	20MHz Bandwidth		50	150	mVp-p

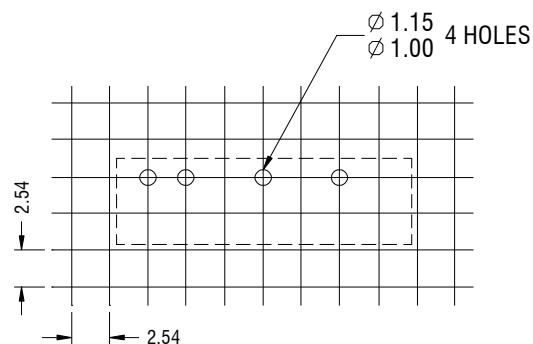
ISOLATION CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation voltage	Tested for 1 minute and 1mA max	3000			VDC
Isolation resistance	Test at 1000VDC	1			GΩ

TEMPERATURE DERATING GRAPHS

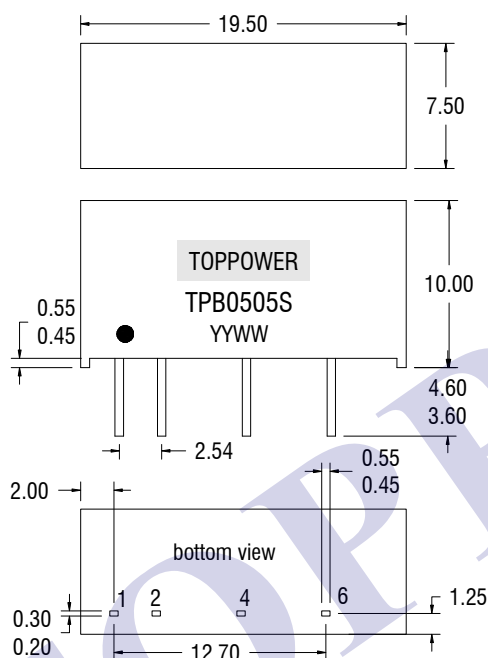


RECOMMENDED FOOTPRINT DETAILS



All dimensions in mm ± 0.25 . All pins on a 2.54mm pitch.

MECHANICAL DIMENSIONS



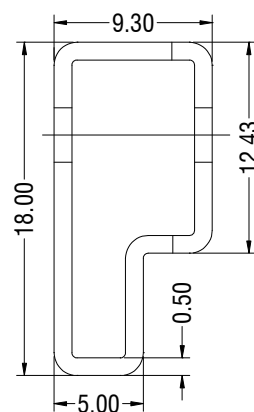
All dimensions in mm ± 0.025 . All pins on a 2.54mm pitch.

Weight: 2.8g

PIN CONNECTIONS-7PIN SIP

Pin	Function
1	+Vin
2	-Vin
4	-Vout
6	+Vout

TUBE OUTLINE DIMENSIONS



All dimensions in mm ± 0.25 mm Tube Quantity : 25

APPLICATION NOTE

Requirement on output load

To ensure this module can operate efficiently and reliably, During operation, the minimum output load could not be less than 10% of the full load. If the actual output power is very small, please connect a resistor with proper resistance at the output end in parallel to increase the load, or use our company' s products with a lower rated output power.