


DESCRIPTION : 0.25W 3KVDC Isolated Single Output DC/DC Converters

The TPV-W25 series are miniature, isolated low power and high efficiency DC/DC converters in a SIP and DIP package. They offer the ideal solution in many space critical applications for board level power distribution. The Internal SMD construction makes it possible to offer a product with high performance at low cost, The series offers smaller size, improved efficiency, lower output ripple noise and 3KVDC isolation. Operating temperature range from -40 °C to 85 °C.

FEATURES

RoHS compliant, CE certification	Single output rail	3KVDC isolation
High efficiency for low power applications	SIP & DIP package styles	Power density 0.36W/cm ³
UL 94V-0 package material	Footprint from 0.69cm ²	Input voltage: 5V , 12V
Output voltage: 5V, 9V, 12V ,15V	Custom solutions available	Operating temperature:-40°Cto 85°C

SELECTION GUIDE

Part Number	Nominal Input Voltage	Output Voltage	Output Current (Max./Min)	Efficiency	Package Style
	V	V	mA	%	
TPV0505SA-W25	5	5	50/5	70	SIP
TPV0509SA-W25	5	9	28/2.8	75	SIP
TPV0512SA-W25	5	12	21/2.1	75	SIP
TPV0515SA-W25	5	15	16/1.6	75	SIP
TPV1205SA-W25	12	5	50/5	71	SIP
TPV1209SA-W25	12	9	28/2.8	75	SIP
TPV1212SA-W25	12	12	21/2.1	75	SIP
TPV1215SA-W25	12	15	16/1.6	75	SIP

Add suffix "P" for continuous short circuit protection, for example TPV0505SAP-W25.

INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Voltage range	5V input types	4.5	5.0	5.5	V
Voltage range	12V input types	11	12	13.3	V

OUTPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Rated Power	TA=-40°C to 85°C			0.25	W
Voltage Set Point Accuracy	See tolerance envelope				
Line regulation	High Vin to low Vin		1	1.2	%/%
Load Regulation(10% load to rated load)	5V output types			16	%
Load Regulation(10% load to rated load)	all other types			11	%

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

ABSOLUTE MAXIMUM RATINGS

Short-circuit protection	1 second
Lead temperature 1.5mm from case for 10 seconds	300°C
Input voltage Vin, TPE05	7V
Input voltage Vin, TPE12	15V

ISOLATION CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation test voltage	Tested for 1 second	3000			VDC
Resistance	Viso= 1000VDC	1			GΩ

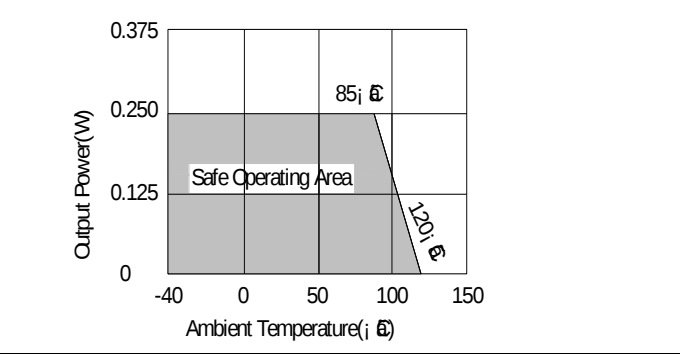
GENERAL CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
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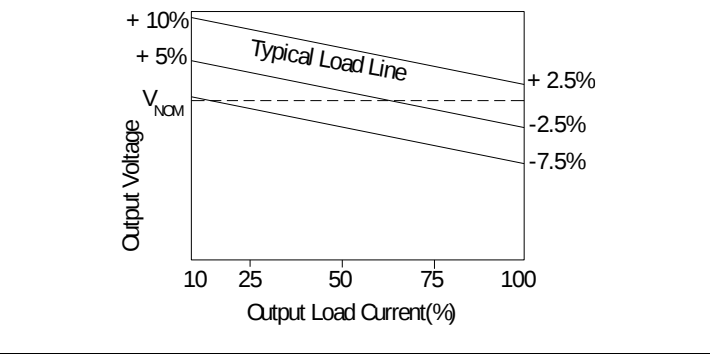
TEMPERATURE CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Specification	All output types	-40		85	°C
Storage		-55		130	°C
Cooling	Free air convection				

TEMPERATURE DERATING GRAPHS

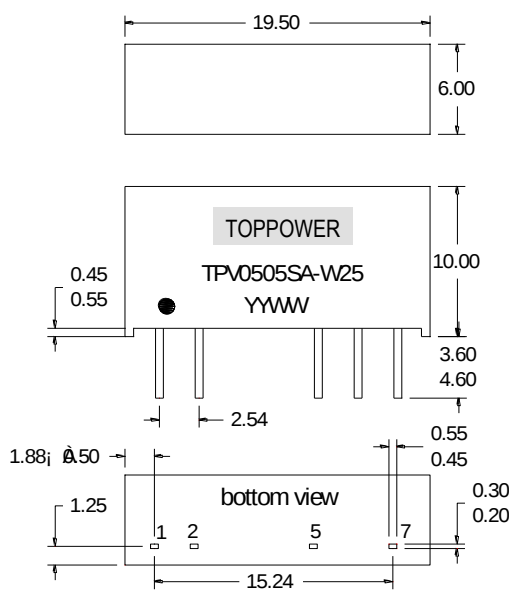


TOLERANCE ENVELOPES



MECHANICAL DIMENSIONS

SIP Package



All dimensions in mm±0.25mm. All pins on a 0.54mm pitch and within±0.25mm of true position.
Weight: 2.10 g (SIP)

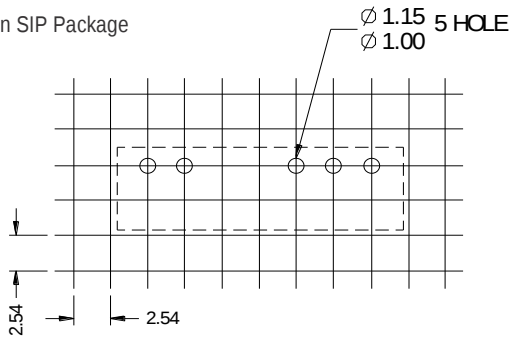
PIN CONNECTIONS

7 PIN SIP	
Pin	Function
1	+Vin
2	-Vin
5	-Vout
7	+Vout

RECOMMENDED FOOTPRINT DETAILS

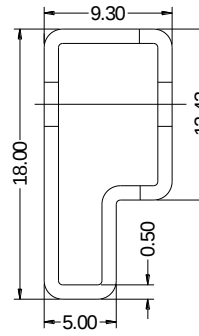
TUBE OUTLINE DIMENSIONS

7Pin SIP Package



Unless otherwise stated all dimensions in mm ± 0.5 mm.
 Tube length (7 Pin SIP) : 520mm ± 2 mm.

7Pin SIPTube



Tube Quantity : 25PCS