



DESCRIPTION: 2W 1.5KVDC Isolated Wide Input Single Output DC/DC Converters

TP2L24S03S-2W/LI are a range of isolated 2 Watt converters in a SIP package, 2:1 wide input range and tightly regulated output voltage qualifies these converters for many cost critical applications in industrial and consumer electronics. Operating temperature range from -40 °C to 85 °C .

FEATURES

RoHS compliant	2:1 wide range voltage input	Continuous short circuit protection
Operating temperature: -40°C to 85°C	Low regulation	1.5KVDC Isolation
Efficiency up to 80%	Power density 0.91W/cm ³	Input voltage: 24V
Output voltage: 3.3V	Low noise	External control

SELECTION GUIDE

Part Number	Input			Output			Efficiency (Typ.)
	Voltage(VDC)			Voltage	Current(mA)		
	Rated	Range values	Max*	VDC	Max.	Min.	%
TP2L24S03S-2W/LI	24 (2:1)	18-36	40	3.3	606	60	72

INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Input current	Less than 10% Load			13	mA

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			15		°C
Lead temperature	1.5mm from case for 10 seconds			300	°C
No-load power consumption			300		mW
Cooling		Free Air Convection			
Short circuit protection		Continuous. automatic recovery			
Case material		Plastic (UL94-V0)			
MTBF		1000			K hours
Weight			6		g

ISOLATION CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Tested for 1 minute and leakage current less than 1 mA	1500			VDC
Isolation Resistance	Test at 500VDC	1			G Ω
Isolation Capacitance	Input/Output,100KHz/1V		80		pF

OUTPUT SPECIFICATIONS

Parameter	Conditions	Min.	Typ.	Max.	Units
Output power	Refer to product program	0.3		3	W
Positive voltage accuracy	Refer to recommended circuit		±1	±3	%
Negative voltage accuracy	Refer to recommended circuit		±3	±5	%
Load regulation	10% to100% load		±0.5	±1.0	%
Line regulation	Input Voltage from low to high		±0.2	±0.5	%
Temperature drift (Vout)	Refer to recommended circuit			±0.03	%/°C
Ripple & Noise	20MHZ Bandwidth		50	100	mVp-p
Switching frequency	100% load ,input voltage range		300		KHZ

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

APPLICATION NOTES

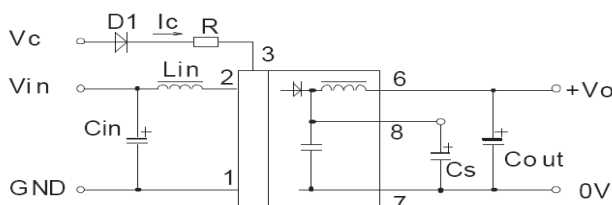
External capacitance

These converters will work without external capacitors, in order to guarantee the full parametric performance over the full line and load range we recommended you to use the value we listed at right side. All parts have been tested and characterized using the following values and test circuit.

External Capacitor Table			
Single Vout (VDC)	Cout (uF)	Dual Vout (VDC)	Cout (uF)
3.3	2200		

RECOMMENDED CIRCUIT

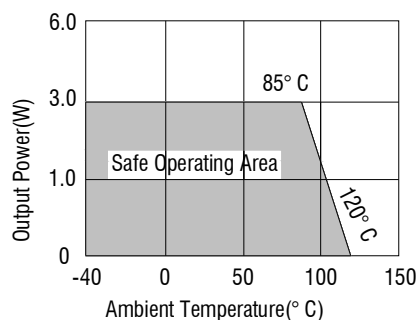
Single Output



SOLDERING INFORMATION

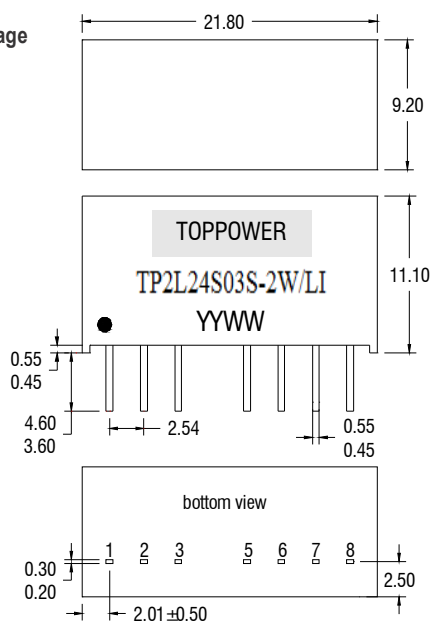
This series is compatible with RoHS soldering systems with a peak wave solder temperature of 300°C for 10 seconds. The series is backward compatible with Sn/Pb soldering systems.

TEMPERATURE DERATING GRAPHS



MECHANICAL DIMENSIONS

SIP Package

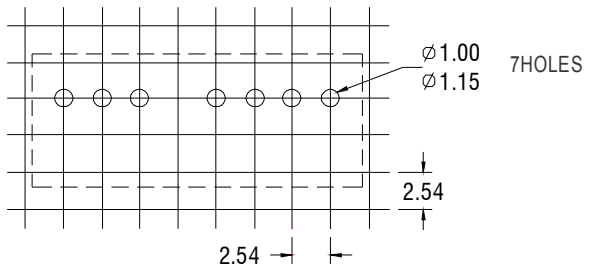
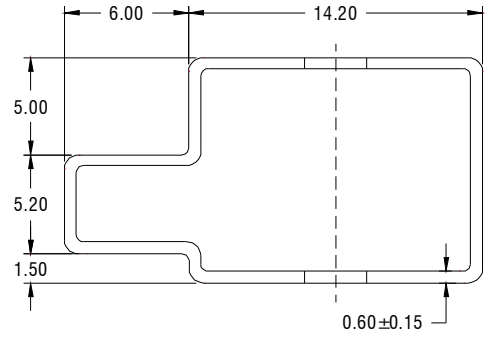


All dimensions in mm ±0.25mm .
All pins on a 2.54mm pitch and within ±0.25mm of true position.
Weight: 6.0g

PIN CONNECTIONS

8 PIN SIP	
Pin	Single
1	GND
2	Vin
3	CTRL
5 *	NC
6	+V0
7	0V
8	CS

*This pin must have no external connection.

RECOMMENDED FOOTPRINT DETAILS	TUBE OUTLINE DIMENSIONS
 <p>7HOLES $\varnothing 1.00$ $\varnothing 1.15$ 2.54 2.54</p> <p>Unless otherwise stated all dimensions in mm ± 0.5mm.</p>	 <p>6.00 14.20 5.00 5.20 1.50 0.60 ± 0.15</p> <p>All dimensions in mm ± 0.5mm. Tube length : 520mm ± 2mm . Tube Quantity: 23PCS</p>