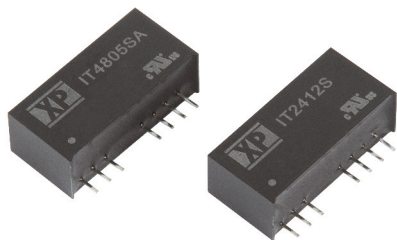




**THE DATASHEET OF  
IT4812SA**



# 3 Watts IT Series



- Regulated Single & Dual Output
- Wide 4:1 Input Range
- SIP Package
- 1500 VDC Isolation
- UL Approved
- -40 °C to 100 °C Operation
- Remote On/Off
- 3 Year Warranty

## Specification

### Input

- Input Voltage Range • See table
- Input Reflected Ripple Current • 20 mA pk-pk through 12  $\mu$ H inductor and 47  $\mu$ F capacitor, 5 Hz to 20 MHz
- Input Filter • Capacitor
- Input Surge • 24 V models: 50 VDC for 100 ms  
48 V models: 100 VDC for 100 ms

### Output

- Output Voltage • See table
- Minimum Load • None<sup>(1)</sup>
- Line Regulation •  $\pm 0.5\%$  max
- Load Regulation •  $\pm 0.5\%$  max from 10-100% load<sup>(1)</sup>
- Setpoint Accuracy •  $\pm 1\%$  max
- Ripple & Noise • 50 mV pk-pk max, 20 MHz bandwidth
- Temperature Coefficient • 0.02%/°C
- Short Circuit Protection • Continuous with auto recovery (hiccup)
- Cross Regulation •  $\pm 5\%$  on dual output models<sup>(2)</sup>
- Remote On/Off • Apply 2.7 to 15 VDC to pin 3 to turn output off

### General

- Efficiency • See table
- Isolation Voltage • 1500 VDC
- Isolation Resistance •  $10^9 \Omega$
- Isolation Capacitance • 500 pF, max
- Switching Frequency • 250 kHz typical
- MTBF • >1.2 Mhrs to MIL-HDBK-217F at 25 °C, GB

### Environmental

- Operating Temperature • -40 °C to +100 °C, derate from 100% load at 75 °C to 0% load at 100 °C
- Storage Temperature • -40 °C to +125 °C
- Case Temperature • 100 °C max
- Cooling • Convection cooled

### Safety

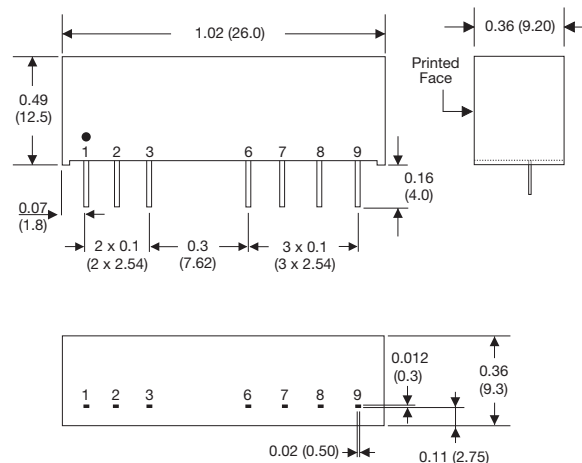
- Safety Approvals • UL60950-1, CAN/CSA C22.2 No.60950-1, UL62368-1

### Notes

1. Operation at no load will not damage the converter but may not meet all specifications.
2. When one output is set to 100% load and the other varies between 25%-100% load.
3. Pin pitch tolerance  $\pm 0.014$  ( $\pm 0.35$ )
4. Case tolerance  $\pm 0.02$  (0.5)
5. Weight: 0.014 lbs (6.5 g)
6. All dimensions in inches (mm)

Input Voltage	Output Voltage	Output Current	No Load Input Current	Max Capacitive Load	Efficiency	Model Number
9.0-36.0 V	3.3 V	700 mA	10 mA	2200 $\mu$ F	77%	IT2403SA
	5.0 V	600 mA	10 mA	1000 $\mu$ F	82%	IT2405SA
	12.0 V	250 mA	10 mA	165 $\mu$ F	84%	IT2412SA
	15.0 V	200 mA	10 mA	100 $\mu$ F	85%	IT2415SA
	$\pm 5.0$ V	$\pm 300$ mA	10 mA	$\pm 470$ $\mu$ F	81%	IT2405S
	$\pm 12.0$ V	$\pm 125$ mA	10 mA	$\pm 100$ $\mu$ F	84%	IT2412S
18.0-75.0 V	$\pm 15.0$ V	$\pm 100$ mA	10 mA	$\pm 47$ $\mu$ F	84%	IT2415S
	3.3 V	700 mA	5 mA	2200 $\mu$ F	75%	IT4803SA
	5.0 V	600 mA	8 mA	1000 $\mu$ F	81%	IT4805SA
	12.0 V	250 mA	5 mA	165 $\mu$ F	84%	IT4812SA
	15.0 V	200 mA	5 mA	100 $\mu$ F	84%	IT4815SA
	$\pm 5.0$ V	$\pm 300$ mA	5 mA	$\pm 470$ $\mu$ F	81%	IT4805S
	$\pm 12.0$ V	$\pm 125$ mA	5 mA	$\pm 100$ $\mu$ F	84%	IT4812S
	$\pm 15.0$ V	$\pm 100$ mA	5 mA	$\pm 47$ $\mu$ F	83%	IT4815S



## Mechanical Details









PIN CONNECTIONS					
Pin	Single	Dual	Pin	Single	Dual
1	-V Input	-V Input	7	N.C.	Common
2	+V Input	+V Input	8	N.C.	N.C.
3	Remote On/Off	Remote On/Off	9	-V Output	-V Output
6	+V Output	+V Output			

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