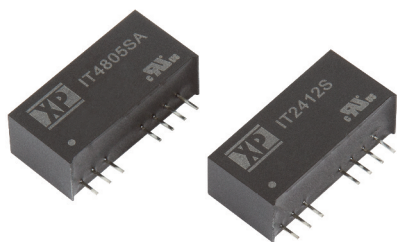




**THE DATASHEET OF
IT4812SA**



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 µH inductor and 47 µF 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⁽¹⁾
- Line Regulation • ±0.5% max
- Load Regulation • ±0.5% max from 10-100% load⁽¹⁾
- Setpoint Accuracy • ±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 • ±5% on dual output models⁽²⁾
- 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 • 10⁹Ω
- 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

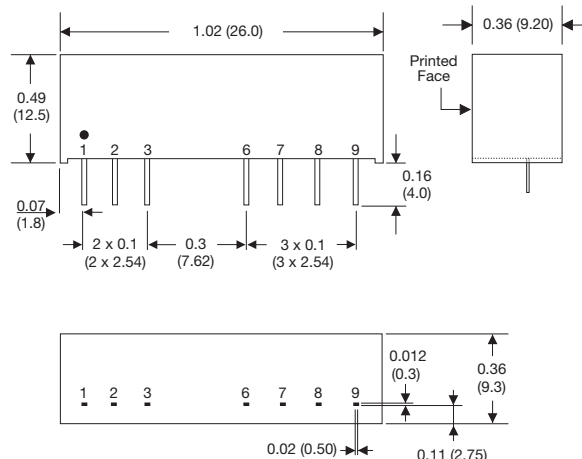
- Safety Approvals • UL60950-1, CAN/CSA C22.2 No.60950-1, UL62368-1

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 ±0.014 (±0.35)
4. Case tolerance ±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 µF | 77% | IT2403SA |
| | 5.0 V | 600 mA | 10 mA | 1000 µF | 82% | IT2405SA |
| | 12.0 V | 250 mA | 10 mA | 165 µF | 84% | IT2412SA |
| | 15.0 V | 200 mA | 10 mA | 100 µF | 85% | IT2415SA |
| | ±5.0 V | ±300 mA | 10 mA | ±470 µF | 81% | IT2405S |
| | ±12.0 V | ±125 mA | 10 mA | ±100 µF | 84% | IT2412S |
| 18.0-75.0 V | ±15.0 V | ±100 mA | 10 mA | ±47 µF | 84% | IT2415S |
| | 3.3 V | 700 mA | 5 mA | 2200 µF | 75% | IT4803SA |
| | 5.0 V | 600 mA | 8 mA | 1000 µF | 81% | IT4805SA |
| | 12.0 V | 250 mA | 5 mA | 165 µF | 84% | IT4812SA |
| | 15.0 V | 200 mA | 5 mA | 100 µF | 84% | IT4815SA |
| | ±5.0 V | ±300 mA | 5 mA | ±470 µF | 81% | IT4805S |
| | ±12.0 V | ±125 mA | 5 mA | ±100 µF | 84% | IT4812S |
| | ±15.0 V | ±100 mA | 5 mA | ±47 µF | 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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