

# 2 Watts

## IM Series



- Regulated Single & Dual Output
- Wide 4:1 Input Range
- SIP Package
- 1500 VDC Isolation
- Remote On/Off
- Continuous Short Circuit Protection
- 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
- Short Circuit Protection** • Continuous with auto recovery (foldback)
- Cross Regulation** •  $\pm 5\%$  on dual output models<sup>(2)</sup>
- Remote On/Off** • Applying 2.7 to 15 VDC to pin 3 will turn output off
- Temperature Coefficient** • 0.02%/C

#### 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

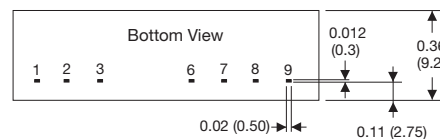
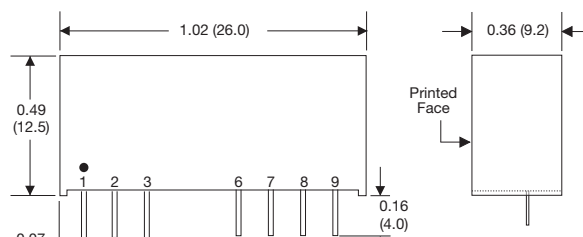
- Operating Temperature** • -40 °C to +100 °C, derate from 100% load at 75 °C to 0% load at 100 °C
- Storage Temperature** • -40 °C to +125 °C
- Case Temperature** • 100 °C max
- Cooling** • Convection-cooled

#### 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. Input current measured at nominal input voltage
4. Pin pitch tolerance:  $\pm 0.014$  ( $\pm 0.35$ )
5. Case tolerance:  $\pm 0.02$  ( $\pm 0.5$ )
6. Weight: 0.014 lbs (6.5 g)

Input Voltage	Output Voltage	Output Current	No Load Input Current <sup>(3)</sup>	Max Capacitive Load	Efficiency	Model Number
9.0-36.0 V	3.3 V	500 mA	10 mA	2200 $\mu$ F	75%	IM2403SA
	5.0 V	400 mA	10 mA	1000 $\mu$ F	81%	IM2405SA
	12.0 V	165 mA	10 mA	165 $\mu$ F	84%	IM2412SA
	15.0 V	135 mA	10 mA	100 $\mu$ F	85%	IM2415SA
	$\pm 5.0$ V	$\pm 200$ mA	10 mA	$\pm 470$ $\mu$ F	81%	IM2405S
	$\pm 12.0$ V	$\pm 85$ mA	10 mA	$\pm 100$ $\mu$ F	83%	IM2412S
	$\pm 15.0$ V	$\pm 65$ mA	10 mA	$\pm 47$ $\mu$ F	82%	IM2415S
18.0-75.0 V	3.3 V	500 mA	5 mA	2200 $\mu$ F	75%	IM4803SA
	5.0 V	400 mA	5 mA	1000 $\mu$ F	80%	IM4805SA
	12.0 V	165 mA	5 mA	165 $\mu$ F	84%	IM4812SA
	15.0 V	135 mA	5 mA	100 $\mu$ F	84%	IM4815SA
	$\pm 5.0$ V	$\pm 200$ mA	5 mA	$\pm 470$ $\mu$ F	80%	IM4805S
	$\pm 12.0$ V	$\pm 85$ mA	5 mA	$\pm 100$ $\mu$ F	81%	IM4812S
	$\pm 15.0$ V	$\pm 65$ mA	5 mA	$\pm 47$ $\mu$ F	84%	IM4815S

### 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			