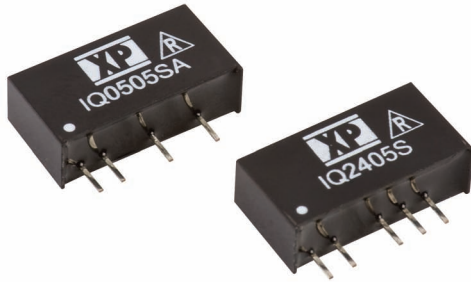




**THE DATASHEET OF
IQ4812SA**



1 Watt IQ Series



- Single & Dual Output
- SIP Package
- 1000 VDC Isolation
- Optional 3000 VDC Isolation
- -40 °C to +85 °C Operation
- Semi-regulated
- 3 Year Warranty

Specification

Input

- Input Voltage Range** • Nominal $\pm 10\%$
- Input Reflected Ripple Current** • 5 & 12 V: 20 mA, 15 V: 30 mA
24 V: 40 mA, 48 V: 50 mA pk-pk, 5 Hz to 20 MHz
- Input Reverse Voltage Protection** • None

Output

- Output Voltage** • See table
- Minimum Load** • None⁽¹⁾
- Line Regulation** • 1.2%/1% ΔV_{in}
- Load Regulation** • See table (10-100%)
- Setpoint Accuracy** • $\pm 3\%$
- Ripple & Noise** • 50 mV pk-pk max, 20 MHz bandwidth
- Temperature Coefficient** • 0.02%/°C
- Maximum Capacitive Load** • See table

General

- Efficiency** • See table
- Isolation Voltage** • 1000 VDC minimum, 3000 VDC option⁽²⁾
- Isolation Resistance** • $10^9 \Omega$
- Isolation Capacitance** • 60 pF typical
- Switching Frequency** • Variable, 55 kHz - 85 kHz
- MTBF** • >1.1 Mhrs to MIL-HDBK-217F at 25 °C, GB

Environmental

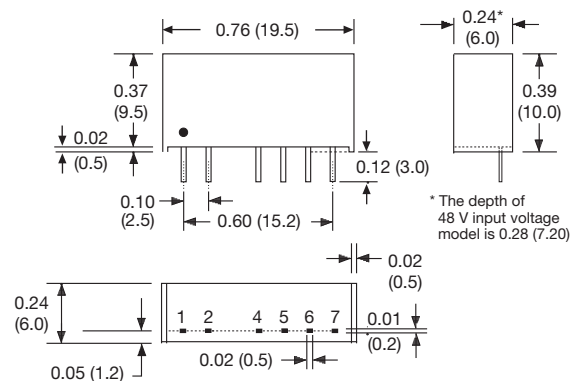
- Operating Temperature** • -40 °C to +85 °C
- Storage Temperature** • -40 °C to +125 °C
- Case Temperature** • 100 °C max
- Cooling** • Convection-cooled

Notes

1. Operation at no load will not damage unit but it may not meet all specifications.
2. For optional 3000 VDC isolation, add suffix '-H' to the model number.
3. For dual output delete suffix 'A' and split output current equally between rails.
4. All dimensions in inches (mm).
5. Pin pitch tolerance: ± 0.014 (± 0.35)
6. Case tolerance: ± 0.02 (± 0.5)
7. Weight: 0.06 lbs (2.8 g)

Input Voltage	Output Voltage	Output Current	No Load Input Current	Max Capacitive Load	Efficiency	Load Reg.	Model [®] Number
5 VDC	5.0 V	200 mA	20 mA	200 μ F	83%	6.0%	IQ0505SA
	9.0 V	111 mA	20 mA	200 μ F	86%	5.5%	IQ0509SA
	12.0 V	83 mA	20 mA	100 μ F	87%	5.5%	IQ0512SA
	15.0 V	67 mA	20 mA	100 μ F	87%	5.0%	IQ0515SA
12 VDC	5.0 V	200 mA	15 mA	200 μ F	84%	4.0%	IQ1205SA
	9.0 V	111 mA	15 mA	200 μ F	86%	3.5%	IQ1209SA
	12.0 V	83 mA	15 mA	100 μ F	88%	3.5%	IQ1212SA
	15.0 V	67 mA	15 mA	100 μ F	88%	3.0%	IQ1215SA
15 VDC	5.0 V	200 mA	10 mA	200 μ F	84%	4.0%	IQ1505SA
	9.0 V	111 mA	10 mA	200 μ F	86%	3.5%	IQ1509SA
	12.0 V	83 mA	10 mA	100 μ F	87%	3.5%	IQ1512SA
	15.0 V	67 mA	10 mA	100 μ F	89%	3.0%	IQ1515SA
24 VDC	5.0 V	200 mA	7 mA	200 μ F	81%	4.0%	IQ2405SA
	9.0 V	111 mA	7 mA	200 μ F	84%	3.5%	IQ2409SA
	12.0 V	83 mA	7 mA	100 μ F	85%	3.5%	IQ2412SA
	15.0 V	67 mA	7 mA	100 μ F	86%	2.5%	IQ2415SA
48 VDC	5.0 V	200 mA	5 mA	200 μ F	78%	4.0%	IQ4805SA
	9.0 V	111 mA	5 mA	200 μ F	80%	3.5%	IQ4809SA
	12.0 V	83 mA	5 mA	100 μ F	81%	3.0%	IQ4812SA
	15.0 V	67 mA	5 mA	100 μ F	81%	3.0%	IQ4815SA

Mechanical Details



Pin Connections				
Pin	Single	Dual	Single-H	Dual-H
1	+Vin	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin	-Vin
4	-Vout	-Vout	N.P	N.P
5	N.P	Common	-Vout	-Vout
6	+Vout	+Vout	N.P	Common
7	N.P	N.P	+Vout	+Vout






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-  Alternative Solution
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