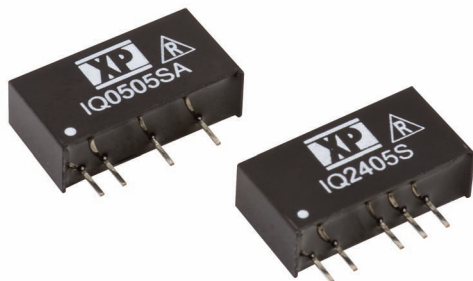


# 1 Watt

## 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 • 5 & 12 V: 20 mA, 15 V: 30 mA
- Ripple Current • 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<sup>(1)</sup>
- Line Regulation • 1.2%/1%  $\Delta V_{in}$
- 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<sup>(2)</sup>
- 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

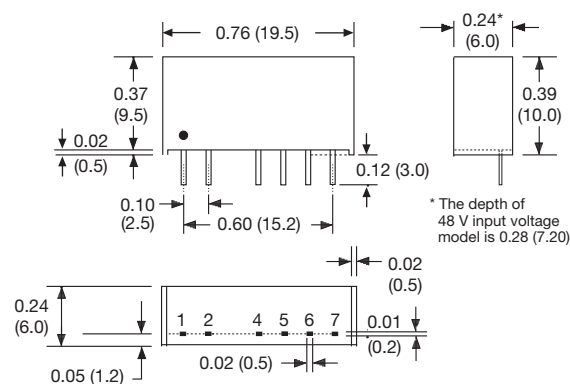
- Operating Temperature • -40 °C to +85 °C
- Storage Temperature • -40 °C to +125 °C
- Case Temperature • 100 °C max
- Cooling • Convection-cooled

#### 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:  $\pm 0.014$  ( $\pm 0.35$ )
6. Case tolerance:  $\pm 0.02$  ( $\pm 0.5$ )
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 <sup>®</sup> Number |
|---------------|----------------|----------------|-----------------------|---------------------|------------|-----------|---------------------------|
| 5 VDC         | 5.0 V          | 200 mA         | 20 mA                 | 200 $\mu$ F         | 83%        | 6.0%      | IQ0505SA                  |
|               | 9.0 V          | 111 mA         | 20 mA                 | 200 $\mu$ F         | 86%        | 5.5%      | IQ0509SA                  |
|               | 12.0 V         | 83 mA          | 20 mA                 | 100 $\mu$ F         | 87%        | 5.5%      | IQ0512SA                  |
|               | 15.0 V         | 67 mA          | 20 mA                 | 100 $\mu$ F         | 87%        | 5.0%      | IQ0515SA                  |
| 12 VDC        | 5.0 V          | 200 mA         | 15 mA                 | 200 $\mu$ F         | 84%        | 4.0%      | IQ1205SA                  |
|               | 9.0 V          | 111 mA         | 15 mA                 | 200 $\mu$ F         | 86%        | 3.5%      | IQ1209SA                  |
|               | 12.0 V         | 83 mA          | 15 mA                 | 100 $\mu$ F         | 88%        | 3.5%      | IQ1212SA                  |
|               | 15.0 V         | 67 mA          | 15 mA                 | 100 $\mu$ F         | 88%        | 3.0%      | IQ1215SA                  |
| 15 VDC        | 5.0 V          | 200 mA         | 10 mA                 | 200 $\mu$ F         | 84%        | 4.0%      | IQ1505SA                  |
|               | 9.0 V          | 111 mA         | 10 mA                 | 200 $\mu$ F         | 86%        | 3.5%      | IQ1509SA                  |
|               | 12.0 V         | 83 mA          | 10 mA                 | 100 $\mu$ F         | 87%        | 3.5%      | IQ1512SA                  |
|               | 15.0 V         | 67 mA          | 10 mA                 | 100 $\mu$ F         | 89%        | 3.0%      | IQ1515SA                  |
| 24 VDC        | 5.0 V          | 200 mA         | 7 mA                  | 200 $\mu$ F         | 81%        | 4.0%      | IQ2405SA                  |
|               | 9.0 V          | 111 mA         | 7 mA                  | 200 $\mu$ F         | 84%        | 3.5%      | IQ2409SA                  |
|               | 12.0 V         | 83 mA          | 7 mA                  | 100 $\mu$ F         | 85%        | 3.5%      | IQ2412SA                  |
|               | 15.0 V         | 67 mA          | 7 mA                  | 100 $\mu$ F         | 86%        | 2.5%      | IQ2415SA                  |
| 48 VDC        | 5.0 V          | 200 mA         | 5 mA                  | 200 $\mu$ F         | 78%        | 4.0%      | IQ4805SA                  |
|               | 9.0 V          | 111 mA         | 5 mA                  | 200 $\mu$ F         | 80%        | 3.5%      | IQ4809SA                  |
|               | 12.0 V         | 83 mA          | 5 mA                  | 100 $\mu$ F         | 81%        | 3.0%      | IQ4812SA                  |
|               | 15.0 V         | 67 mA          | 5 mA                  | 100 $\mu$ 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  |