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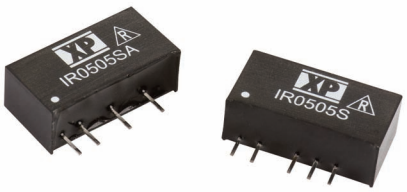
3 Watts
IR Series



- 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 ±10%
Input Reflected Ripple Current	• 20 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% Δ Vin
Load Regulation	• See table
Setpoint Accuracy	• +2%, -4%
Ripple & Noise	• 50 mV pk-pk max, 20 MHz bandwidth[2]
Temperature Coefficient	• 0.02%/°C
Maximum Capacitive Load	• See table

General

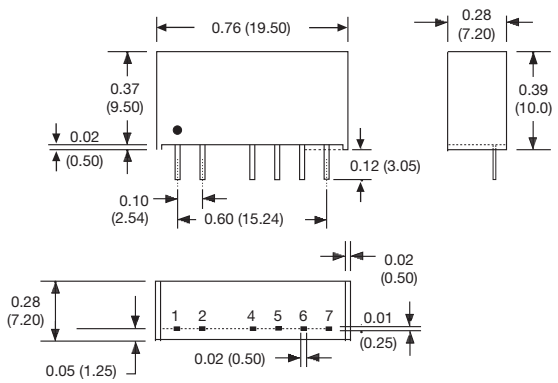
Efficiency	• See table
Isolation Voltage	• 1000 VDC minimum, 3000 VDC option[3]
Isolation Resistance	• $10^9\Omega$
Isolation Capacitance	• 60 pF typical
Switching Frequency	• Variable, 60 kHz - 85 kHz
MTBF	• >1.1 MHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

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

Input Voltage	No Load Input Current	Output Voltage	Output Current	Max Capacitive Load	Efficiency	Load Reg.	Model Number
5 VDC	80 mA	5.0 V	600 mA	220 µF	79%	8.0%	IR0505SA
	70 mA	9.0 V	333 mA	220 µF	84%	7.0%	IR0509SA
	70 mA	12.0 V	250 mA	100 µF	84%	6.0%	IR0512SA
	80 mA	15.0 V	200 mA	100 µF	84%	6.0%	IR0515SA
	80 mA	±5.0 V	±300 mA	±100 µF	82%	7.0%	IR0505S
	70 mA	±9.0 V	±167 mA	±100 µF	85%	6.0%	IR0509S
	70 mA	±12.0 V	±125 mA	±47 µF	85%	6.0%	IR0512S
	70 mA	±15.0 V	±100 mA	±47 µF	86%	5.0%	IR0515S
12 VDC	25 mA	5.0 V	600 mA	220 µF	84%	6.0%	IR1205SA
	25 mA	9.0 V	333 mA	220 µF	87%	4.0%	IR1209SA
	25 mA	12.0 V	250 mA	100 µF	88%	4.0%	IR1212SA
	20 mA	15.0 V	200 mA	100 µF	90%	3.0%	IR1215SA
	25 mA	±5.0 V	±300 mA	±100 µF	85%	5.0%	IR1205S
	25 mA	±9.0 V	±167 mA	±100 µF	88%	4.0%	IR1209S
	25 mA	±12.0 V	±125 mA	±47 µF	89%	3.0%	IR1212S
	20 mA	±15.0 V	±100 mA	±47 µF	90%	3.0%	IR1215S

Mechanical Details



Notes

1. Operation at no load will not damage unit but it may not meet all specifications.
2. Output capacitor of 1 µF required to meet quoted ripple and noise.
3. For optional 3 kV isolation, add suffix '-H' to the model number.
4. All dimensions in inches (mm).
5. Pin pitch tolerance: ±0.014 (±0.35)
6. Case tolerance: ±0.02 (±0.5)
7. Weight: 0.006 lbs (2.8 g)

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