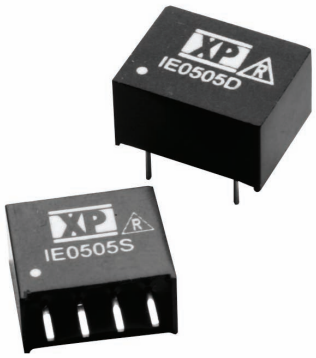
1 Watt
IE Series



- Single Output
- SIP or DIP Package
- 1000 VDC Isolation
- Optional 3000 VDC Isolation
- Small Package Sizes
- –40 °C to +85 °C Operation
- 3 Year Warranty

Specification

Input

Input Voltage Range	• Nominal ±10%
Input Reflected Ripple Current	• 20 mA pk-pk through 12 µH inductor 5Hz to 20 MHz
Input Reverse Voltage Protection	• None

Output

Output Voltage	• See table
Minimum Load	• None[5]
Line Regulation	• 1.2%/1% Δ Vin
Load Regulation	• 10% for a 20-100% load change[5] (3.3 V models ±20%)
Setpoint Accuracy	• ±3%
Ripple & Noise	• 100 mV pk-pk max, 20 MHz bandwidth
Temperature Coefficient	• 0.02%/°C
Maximum Capacitive Load	• 220 µF

General

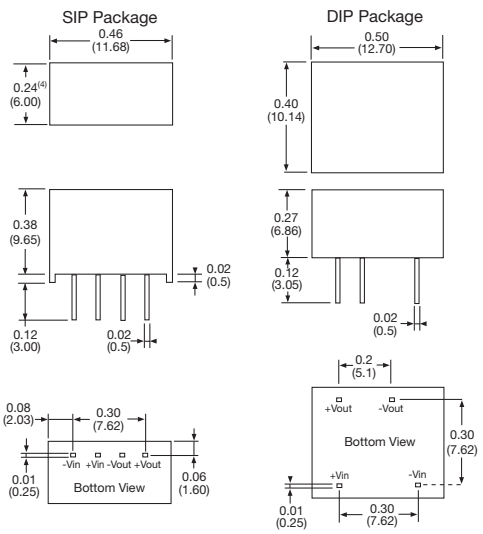
Efficiency	• See table
Isolation Voltage	• 1000 VDC minimum (3000 VDC -H option)
Isolation Resistance	• 10^9 Ω
Isolation Capacitance	• 60 pF typical
Switching Frequency	• 40-150 KHz variable
MTBF	• >1.1 MHrs to MIL-HDBK-217F at 25 °C, GB

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[3]	No Load Input Current	Output Voltage	Output Current	Efficiency	Model Number[1,2]
3.3 VDC	25 mA	3.3 V	300 mA	71%	IE0303S
	25 mA	5.0 V	200 mA	75%	IE0305S
	30 mA	9.0 V	111 mA	74%	IE0309S
	45 mA	12.0 V	84 mA	74%	IE0312S
	40 mA	15.0 V	66 mA	77%	IE0315S
	40 mA	24.0 V	42 mA	77%	IE0324S
5 VDC	25 mA	3.3 V	300 mA	72%	IE0503S
	25 mA	5.0 V	200 mA	75%	IE0505S
	25 mA	9.0 V	111 mA	77%	IE0509S
	25 mA	12.0 V	84 mA	78%	IE0512S
	25 mA	15.0 V	66 mA	78%	IE0515S
	25 mA	24.0 V	42 mA	80%	IE0524S
12 VDC	16 mA	3.3 V	300 mA	72%	IE1203S
	16 mA	5.0 V	200 mA	75%	IE1205S
	16 mA	9.0 V	111 mA	77%	IE1209S
	16 mA	12.0 V	84 mA	80%	IE1212S
	16 mA	15.0 V	66 mA	78%	IE1215S
	16 mA	24.0 V	42 mA	78%	IE1224S
24 VDC	10 mA	3.3 V	300 mA	72%	IE2403S
	10 mA	5.0 V	200 mA	75%	IE2405S
	10 mA	9.0 V	111 mA	77%	IE2409S
	10 mA	12.0 V	84 mA	80%	IE2412S
	10 mA	15.0 V	66 mA	78%	IE2415S
	10 mA	24.0 V	42 mA	80%	IE2424S

Mechanical Details



Notes

1. For DIP package, replace 'S' in model number with 'D'.
2. Add suffix '-H' to model number for 3000 VDC isolation.
3. For 48 VDC in, specify model number as IE48XXS (not available in DIP package).
4. 48 VDC input models dimension is 0.29 (7.5).
5. Operation at no load will not damage unit but it may not meet all specifications.
6. All dimensions in inches (mm).
7. Pin pitch tolerance: ±0.014 (±0.35)
8. Case tolerance: ±0.02 (±0.5)
9. Weight: SIP 0.003 lbs (1.4 g), DIP 0.004 lbs (1.8 g)