

ISF Series



- Single & Dual Output
- SMD Package
- Industry Standard Pinouts
- 1000 VDC Isolation, 3000 VDC Optional
- MTBF >3.5 MHrs
- -40 °C to +85 °C Operation
- 3 Year Warranty

Specification

Input

- Input Voltage Range • Nominal ±10%
 Input Reverse Voltage Protection • None

Output

- Output Voltage • See table
 Minimum Load • 10%⁽⁶⁾
 Line Regulation • 1.2%/1% Δ Vin
 Load Regulation • 7.5% max for a 10-100% load change
 Setpoint Accuracy • 100-110% of nominal at 10% load
 Ripple & Noise • Single output: 100 mV pk-pk, Dual output: 75 mV pk-pk, 20 MHz bandwidth
 Temperature Coefficient • 0.03%/°C

General

- Efficiency • See table
 Isolation Voltage • 1000 VDC standard, 3000 VDC optional
 Isolation Resistance • 10⁹ Ω
 Switching Frequency • 5/12 V input: 100 kHz, 24 V input: 500 kHz typical at nominal input, full load
 MTBF • >3.5 MHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

- Operating Temperature • -40 °C to +85 °C, full load
 Storage Temperature • -55 °C to +125 °C
 Case Temperature • 105 °C max
 Cooling • Convection-cooled
 Lead Temperature • 260 °C, 0.06 in (1.5 mm) from case, 10 s

Connections

No. O/P	Isolation	Pinout	Package	+Vin	-Vin	-Vout	0 V	+Vout	N/C
1	1 kV	Standard	B1	2	1	N/A	4	5	3,6,7,8
1	1 kV	Optional '-X'	B2	2	1	N/A	4	5	8
1	3 kV	Optional '-H'	C1	2	1	N/A	5	8	3,6,7,10,11,12
2	1 kV	Standard	A1	2	1	5	4	7	3,6,8,9,10
2	1 kV	Optional '-X'	A2	2	1	5	4	7	10
2	3 kV	Optional '-H'	C1	2	1	6	5	8	3,7,10,11,12

Notes

- All dimensions in inches (mm)
- Tolerance: ±0.010 (±0.25)
- Weight: 0.004 lbs (1.7 g)
- Pin tolerance: ±0.004 (±0.10 mm)

Input Voltage	Output Voltage	Output Current	Efficiency (typ)	Model Number ^(4,5)
3.3 VDC	3.3 V	300 mA	73%	ISF0303A ^(1,2,3)
	5.0 V	200 mA	74%	ISF0305A ^(1,2,3)
5 VDC	3.3 V	300 mA	72%	ISF0503A ⁽²⁾
	5.0 V	200 mA	77%	ISF0505A ^(1,2,3)
	9.0 V	110 mA	76%	ISF0509A ^(1,2,3)
	12.0 V	84 mA	79%	ISF0512A ^(1,2,3)
	15.0 V	67 mA	78%	ISF0515A ^(1,2,3)
12 VDC	5.0 V	200 mA	69%	ISF1205A ^(1,2,3)
	9.0 V	110 mA	73%	ISF1209A ^(1,2,3)
	12.0 V	84 mA	73%	ISF1212A ^(1,2,3)
	15.0 V	67 mA	74%	ISF1215A ^(1,2,3)
24 VDC	3.3 V	300 mA	69%	ISF2403A
	5.0 V	200 mA	70%	ISF2405A ⁽¹⁾
	9.0 V	110 mA	72%	ISF2409A ⁽¹⁾
	12.0 V	84 mA	75%	ISF2412A ⁽¹⁾
	15.0 V	67 mA	76%	ISF2415A ⁽¹⁾
	24.0 V	42 mA	77%	ISF2424A

Notes

- For dual output models, delete suffix 'A' at the end of the part number and split current equally between two outputs.
- For single output 3000 VDC isolation, add '-H' to the end of the part number.
- For dual output 3000 VDC isolation, replace 'A' with '-H' in the part number.
- For package type see connections table.
- Single & dual output 1 kV models can have optional pinout, add suffix '-X' to part number
- Operation at no load will not damage device but may not meet all specifications.

Mechanical Details

