

1 Watt

ISF Series



- Single & Dual Output
- SMD Package
- Industry Standard Pinout
- 1000 VDC Isolation, 3000 VDC Optional
- Short Circuit Protection
- MTBF >3.5 MHrs
- 3 Year Warranty

Specification

Input

- Input Voltage Range • Nominal $\pm 10\%$
- Input Reverse Voltage Protection • None

Output

- Output Voltage • See table
- Minimum Load • 10%
- Line Regulation • 1.2%/1% ΔV_{in}
- Load Regulation • 7.5% 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
- Short Circuit Protection • 1 s max, recycle input to reset

General

- Efficiency • See table
- Isolation Voltage • 1000 VDC standard, 3000 VDC optional
- Isolation Resistance • $10^9 \Omega$
- Switching Frequency • 5/12 V input: 110 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

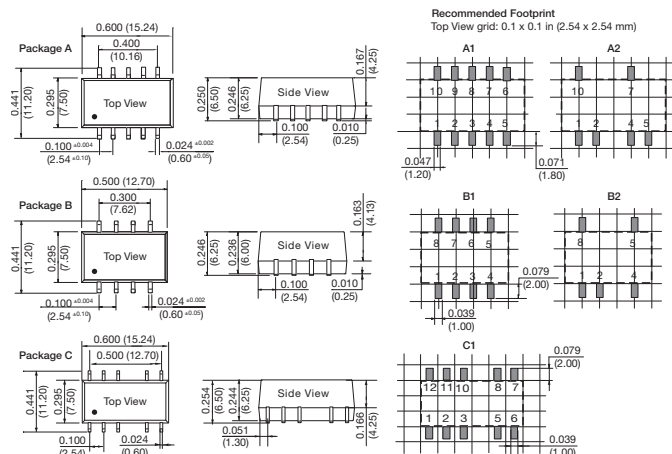
No. O/P	Isolation	Pinout	Package	+Vin	-Vin	-Vout	0 V	+Vout	N/C
1	1 kV	Standard	B1	2	1	N/A	4	5	3,6,7,8
1	1 kV	Optional '-X'	B2	2	1	N/A	4	5	8
1	3 kV	Optional '-H'	C1	2	1	N/A	4	5	8
2	1 kV	Standard	A1	2	1	5	4	7	3,6,8,9,10
2	1 kV	Optional '-X'	A2	2	1	5	4	7	10
2	3 kV	Optional '-H'	C1	2	1	5	6	8	N/A

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

1. For dual output models, delete suffix 'A' at the end of the part number and split current equally between two outputs.
2. For single output 3000 VDC isolation, add '-H' to the end of the part number.
3. For dual output 3000 VDC isolation, replace 'A' with '-H' in the part number.
4. For package type see connections table.
5. Single & dual output 1 kV models can have optional pinout, add suffix '-X' to part number

Mechanical Details

Weight: 0.004 lbs (1.7 g)



Notes

Dimensions in inches (mm)
Tolerance: ± 0.010 (± 0.25)

Pin tolerance: ± 0.004 (± 0.10 mm)