1 Watt
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	• 10^9 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

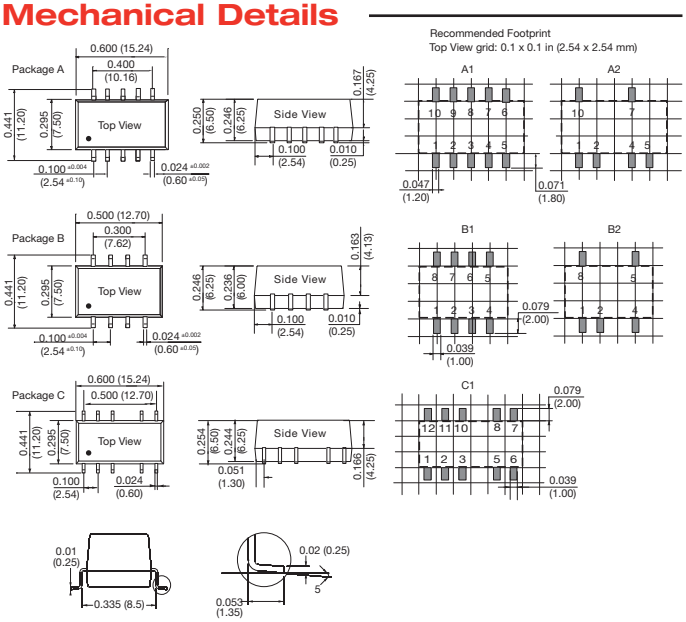
Operating Temperature	• -40 °C to +85 °C, full load
Storage Temperature	• -55 °C to +125 °C
Case Temperature	• 105 °C max
Cooling	• Convection-cooled
Lead Temperature	• 260 °C, 0.06 in (1.5 mm) from case, 10 s

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

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*
6. *Operation at no load will not damage device but may not meet all specifications.*

Mechanical Details



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

1. All dimensions in inches (mm)
2. Tolerance: ±0.010 (±0.25)
3. Weight: 0.004 lbs (1.7 g)
4. Pin tolerance: ±0.004 (±0.10 mm)