

### 1 Watt

- 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



#### Dimensions:

**ISF:**  
1.50 x 0.295 x 0.246" (12.7 x 7.5 x 6.25 mm)

#### Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage Range	±10			%	% of nominal input
Input Reverse Voltage Protection					None

#### Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	3.3		24	V	See Models and Ratings table
Minimum Load	10			%	Operation at no load will not damage device but may not meet all specifications
Line Regulation		1.2 / 1		%	Δ Vin
Load Regulation			7.5	%	For a 10-100% load change
Setpoint Accuracy	100		110	%	of nominal at 10% load
Ripple & Noise			100	mV pk-pk	Single output: 20 MHz bandwidth
			75		Dual output: 20 MHz bandwidth
Temperature Coefficient			0.03	%/°C	

#### General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		75		%	See Models and Ratings table
Isolation	1000			VDC	Standard
	3000				-H version
Isolation Resistance	10 <sup>9</sup>			Ω	
Switching Frequency		100		kHz	5/12V input at nominal input, full load
		500			24V input at nominal input, full load
Mean Time Between Failure		>3.5		MHrs	MIL-HDBK-217F, +25 °C GB
Weight		0.004 (1.7)		lb (g)	

#### Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-40		+85	°C	Full load
Storage Temperature	-55		+125	°C	
Case Temperature			+105	°C	
Cooling					Convection-cooled
Lead Temperature	260 °C, 0.06 in (1.5 mm) from case, 10 s				

### Models & Ratings: Single Output - Standard

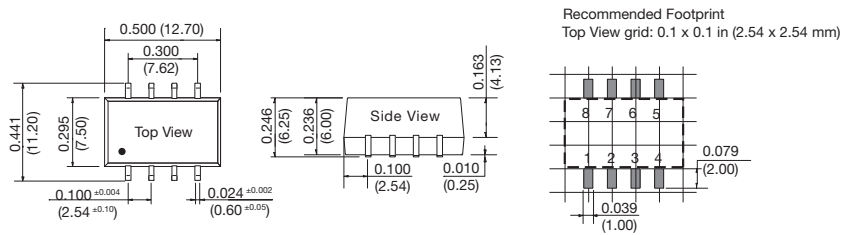
Input Voltage	Output Voltage	Output Current	Isolation	Efficiency	Model Number
3.3 V	3.3 V	300 mA	1 kV	73%	ISF0303A
	5.0 V	200 mA	1 kV	72%	ISF0305A
5.0 V	5.0 V	200 mA	1 kV	79%	ISF0505A
	9.0 V	110 mA	1 kV	76%	ISF0509A
	12.0 V	84 mA	1 kV	79%	ISF0512A
	15.0 V	67 mA	1 kV	78%	ISF0515A
12.0 V	5.0 V	200 mA	1 kV	69%	ISF1205A
	9.0 V	110 mA	1 kV	76%	ISF1209A
	12.0 V	84 mA	1 kV	73%	ISF1212A
	15.0 V	67 mA	1 kV	74%	ISF1215A
24.0 V	5.0 V	200 mA	1 kV	72%	ISF2405A
	12.0 V	84 mA	1 kV	73%	ISF2412A
	24.0 V	42 mA	1 kV	77%	ISF1224A

### Models & Ratings: Single Output - Option 'X'

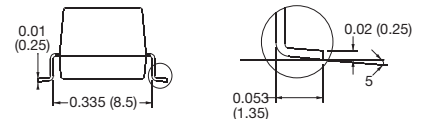
Input Voltage	Output Voltage	Output Current	Isolation	Efficiency	Model Number
3.3 V	3.3 V	300 mA	1 kV	73%	ISF0303A-X
	5.0 V	200 mA	1 kV	74%	ISF0305A-X
5.0 V	3.3 V	300 mA	1 kV	74%	ISF0503A-X
	5.0 V	200 mA	1 kV	77%	ISF0505A-X
	15.0 V	67 mA	1 kV	78%	ISF0515A-X

## Mechanical Details

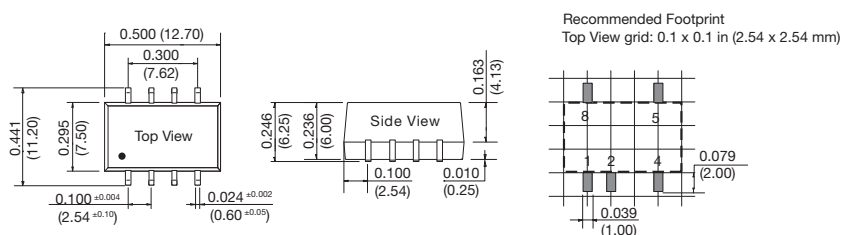
### Single Output - Standard



PIN CONNECTIONS					
+Vin	-Vin	-Vout	0 V	+Vout	N/C
2	1	N/A	4	5	3,6,7,8



### Single Output - Option '-X'



PIN CONNECTIONS					
+Vin	-Vin	-Vout	0 V	+Vout	N/C
2	1	N/A	4	5	8

### Notes

1. All dimensions in inches (mm)
2. Tolerance:  $\pm 0.010$  ( $\pm 0.25$ )

3. Weight: 0.004 lbs (1.7 g)
4. Pin tolerance:  $\pm 0.004$  ( $\pm 0.10$  mm)

### Models & Ratings: Dual Output - Standard

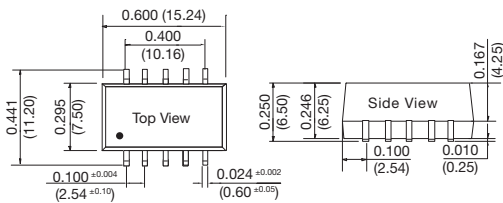
Input Voltage	Output Voltage	Output Current	Isolation	Efficiency	Model Number
5.0V	±9.0V	55 mA	1 kV	76%	ISF0509
	±12.0V	42 mA	1 kV	79%	ISF0512
	±15.0V	33 mA	1 kV	78%	ISF0515
12.0V	±15.0V	33 mA	1 kV	74%	ISF1215
24.0V	±3.3V	150 mA	1 kV	70%	ISF2403
	±15.0V	33 mA	1 kV	74%	ISF2415

### Models & Ratings: Dual Output - Option 'X'

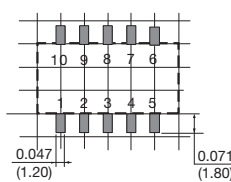
Input Voltage	Output Voltage	Output Current	Isolation	Efficiency	Model Number
5.0V	±15.0V	33 mA	1 kV	78%	ISF0515-X
24.0V	±3.3V	150 mA	1 kV	70%	ISF2403-X
	±9.0V	55 mA	1 kV	76%	ISF2409-X

### Mechanical Details

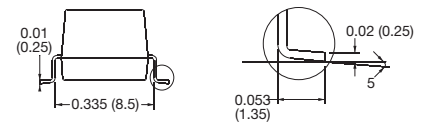
#### Dual Output - Standard



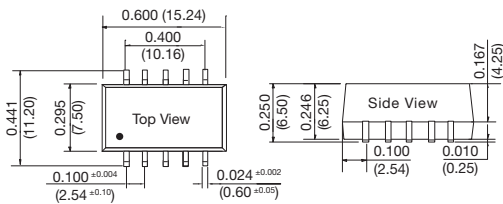
Recommended Footprint  
Top View grid: 0.1 x 0.1 in (2.54 x 2.54 mm)



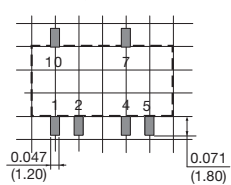
PIN CONNECTIONS					
+Vin	-Vin	-Vout	0 V	+Vout	N/C
2	1	5	4	7	3,6,8,9,10



#### Dual Output - Option '-X'



Recommended Footprint  
Top View grid: 0.1 x 0.1 in (2.54 x 2.54 mm)



PIN CONNECTIONS					
+Vin	-Vin	-Vout	0 V	+Vout	N/C
2	1	5	4	7	10

### 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)

### Models & Ratings: Single Output - Option '-H'

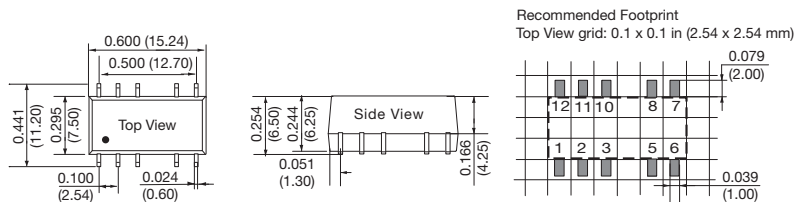
Input Voltage	Output Voltage	Output Current	Isolation	Efficiency	Model Number
3.3 V	3.3 V	300 mA	3 kV	73%	ISF0303A-H
	5.0 V	200 mA	3 kV	74%	ISF0305A-H
5.0 V	3.3 V	300 mA	3 kV	73%	ISF0503A-H
	5.0 V	200 mA	3 kV	77%	ISF0505A-H
	9.0 V	110 mA	3 kV	76%	ISF0509A-H
	12.0 V	84 mA	3 kV	79%	ISF0512A-H
	15.0 V	67 mA	3 kV	78%	ISF0515A-H
12.0 V	5.0 V	200 mA	3 kV	69%	ISF1205A-H
	9.0 V	110 mA	3 kV	76%	ISF1209A-H
	12.0 V	84 mA	3 kV	73%	ISF1212A-H
	15.0 V	67 mA	3 kV	74%	ISF1215A-H
24.0 V	5.0 V	200 mA	3 kV	72%	ISF1224A-H

### Models & Ratings: Dual Output - Option '-H'

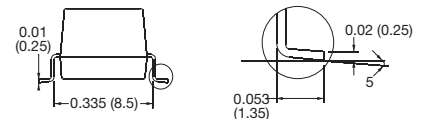
Input Voltage	Output Voltage	Output Current	Isolation	Efficiency	Model Number
5.0 V	±5.0 V	100 mA	3 kV	76%	ISF0505-H
	±9.0 V	55 mA	3 kV	76%	ISF0509-H
	±12.0 V	42 mA	3 kV	79%	ISF0512-H
	±15.0 V	33 mA	3 kV	78%	ISF0515-H
12.0 V	±5.0 V	100 mA	3 kV	77%	ISF1205-H
	±9.0 V	55 mA	3 kV	76%	ISF1209-H
	±12.0 V	42 mA	3 kV	79%	ISF1212-H
	±15.0 V	33 mA	3 kV	78%	ISF1215-H

### Mechanical Details

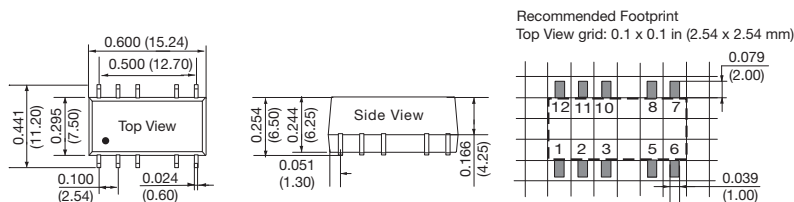
#### Single Output - Option '-H'



PIN CONNECTIONS					
+Vin	-Vin	-Vout	0 V	+Vout	N/C
2	1	N/A	5	8	3,6,7,10,11,12



#### Dual Output - Option '-H'



PIN CONNECTIONS					
+Vin	-Vin	-Vout	0 V	+Vout	N/C
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)