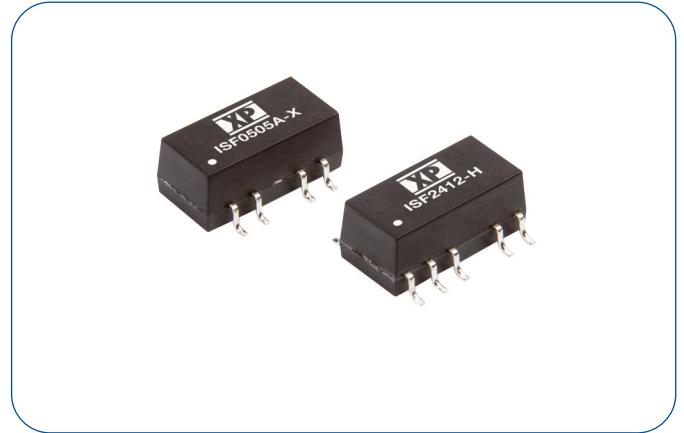


1 Watt

- 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 ⁹ | | | 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, lead-free solder reflow process IPC/IEDEC J-STP-020D.1 | | | | |

Models & Ratings: Single Output - Standard

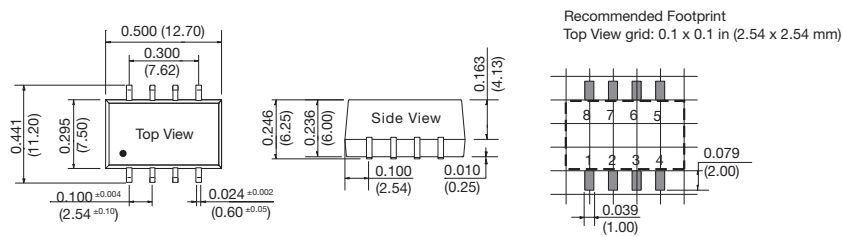
| Input Voltage | Output Voltage | Output Current | Isolation | Efficiency | Model Number |
|---------------|----------------|----------------|-----------|------------|--------------|
| 3.3V | 3.3V | 300 mA | 1 kV | 73% | ISF0303A |
| | 5.0V | 200 mA | 1 kV | 72% | ISF0305A |
| 5.0V | 5.0V | 200 mA |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

Models & Ratings: Single Output - Option 'X'

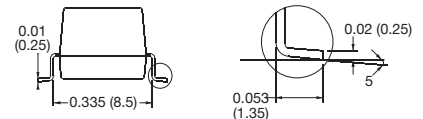
| Input Voltage | Output Voltage | Output Current | Isolation | Efficiency | Model Number |
|---------------|----------------|----------------|-----------|------------|--------------|
| 3.3V | 3.3V | 300 mA | 1 kV | 73% | ISF0303A-X |
| | 5.0V | 200 mA | 1 kV | 74% | ISF0305A-X |
| 5.0V | 3.3V | 300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

Mechanical Details

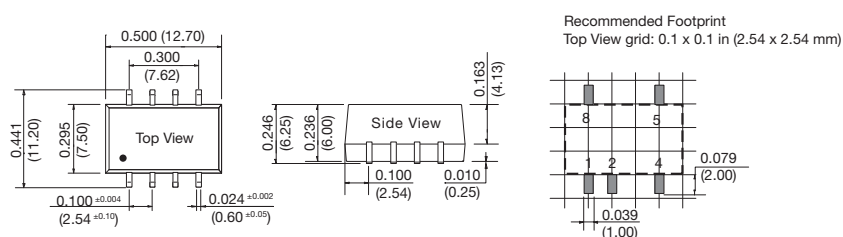
Single Output - Standard



| 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: ± 0.010 (± 0.25)

3. Weight: 0.004 lbs (1.7 g)
4. Pin tolerance: ± 0.004 (± 0.10 mm)

Models & Ratings: Dual Output - Standard

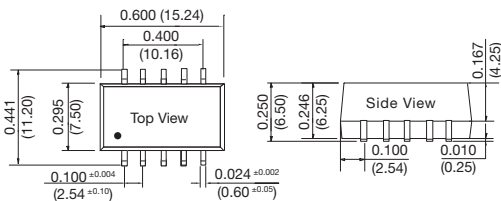
| Input Voltage | Output Voltage | Output Current | Isolation | Efficiency | Model Number |
|---------------|----------------|----------------|-----------|------------|--------------|
| 5.0V | ±9.0V | 55 mA | 1 kV | 76% | ISF0509 |
| | ±12.0V | 42 mA | 1 kV | 79% | ISF0512 |
| | ±15.0V | 33 mA | 1 kV | 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'

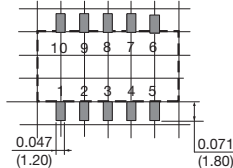
| Input Voltage | Output Voltage | Output Current | Isolation | Efficiency | Model Number |
|---------------|----------------|----------------|-----------|------------|--------------|
| 5.0V | ±15.0V | 33 mA | 1 kV | 78% | ISF0515-X |
| 24.0V | ±3.3V | 150 mA | 1 kV | 70% | ISF2403-X |
| | ±9.0V | 55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

Mechanical Details

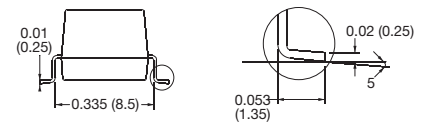
Dual Output - Standard



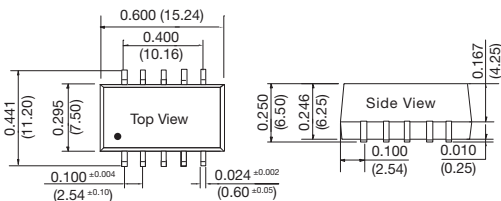
Recommended Footprint
Top View grid: 0.1 x 0.1 in (2.54 x 2.54 mm)



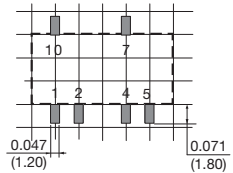
| PIN CONNECTIONS | | | | | |
|-----------------|------|-------|-----|-------|------------|
| +Vin | -Vin | -Vout | 0 V | +Vout | N/C |
| 2 | 1 | 5 | 4 | 7 | 3,6,8,9,10 |



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'

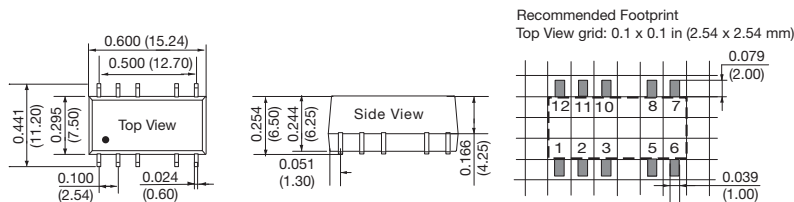
| Input Voltage | Output Voltage | Output Current | Isolation | Efficiency | Model Number |
|---------------|----------------|----------------|-----------|------------|--------------|
| 3.3 V | 3.3 V | 300 mA | 3 kV | 73% | ISF0303A-H |
| | 5.0 V | 200 mA | 3 kV | 74% | ISF0305A-H |
| 5.0 V | 3.3 V | 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'

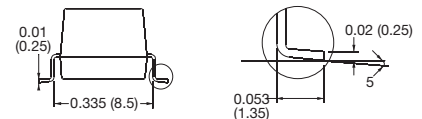
| Input Voltage | Output Voltage | Output Current | Isolation | Efficiency | Model Number |
|---------------|----------------|----------------|-----------|------------|--------------|
| 5.0 V | ±5.0 V | 100 mA | 3 kV | 76% | ISF0505-H |
| | ±9.0 V | 55 mA | 3 kV | 76% | ISF0509-H |
| | ±12.0 V | 42 mA | 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

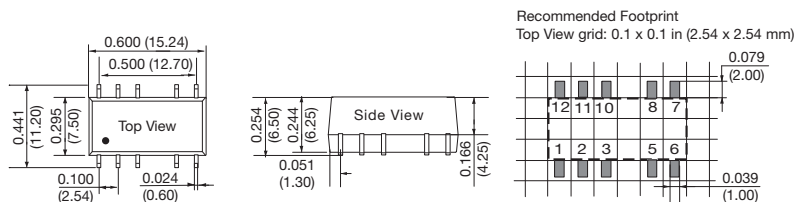
Single Output - Option '-H'



| 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)