

## IS Series



- Regulated Single Output
- SIP Package
- 1000 VDC Isolation
- Optional 3000 VDC Isolation
- Continuous Short Circuit Protection
- Non-conductive Black Plastic Case
- MTBF >1.1 MHrs

### Specification

#### Input

- Input Voltage Range • Nominal  $\pm 10\%$
- Input Current (no load) • See table
- Input Reflected Ripple • 20 mA pk-pk through 12  $\mu$ H inductor, 5 Hz to 20 MHz

#### Output

- Output Voltage • See table
- Minimum Load • No minimum load required
- Line Regulation •  $\pm 0.5\%$  max
- Load Regulation •  $\pm 0.5\%$  max (0% to full load)  $\pm 1.5\%$  for 3.3 V versions
- Setpoint Accuracy •  $\pm 2\%$  max
- Ripple & Noise • 75 mV pk-pk (20 MHz bandwidth)
- Temperature Coefficient •  $\pm 0.02\%/^{\circ}\text{C}$
- Short Circuit Protection • Continuous with auto recovery
- Maximum Capacitive Load • 470  $\mu$ F

#### General

- Efficiency • See table
- Isolation Voltage • 1000 VDC (3000 VDC -H option)
- Isolation Capacitance • 60 pF
- Switching Frequency • 50 kHz typical
- MTBF • >1.1 MHrs to MIL-STD 217F

#### Environmental

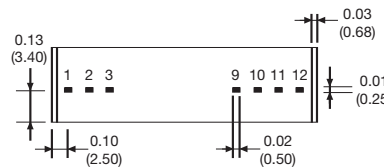
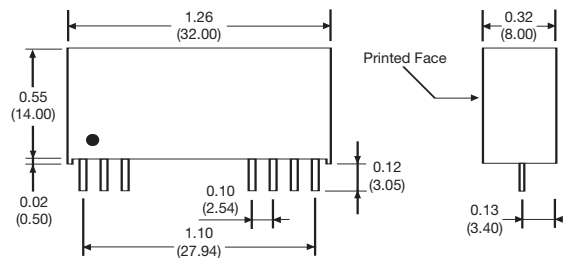
- Operating Temperature •  $-25^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$
- Storage Temperature •  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Case Temperature •  $+100^{\circ}\text{C}$  max
- Cooling • Convection-cooled
- Derating • Derate from 100% load at  $+70^{\circ}\text{C}$  to 0% load at  $+85^{\circ}\text{C}$
- Humidity • Up to 90%, non-condensing

#### Notes

1. Add suffix '-H' to model number for 3000 VDC isolation.
2. All dimensions in inches (mm).

| Input Voltage | No Load Input Current | Output Voltage | Output Current | Efficiency | Model Number <sup>(1)</sup> |
|---------------|-----------------------|----------------|----------------|------------|-----------------------------|
| 5 V           | 100 mA                | 3.3 V          | 600 mA         | 53%        | IS0503SA                    |
|               | 100 mA                | 5.0 V          | 600 mA         | 62%        | IS0505SA                    |
|               | 100 mA                | 9.0 V          | 333 mA         | 67%        | IS0509SA                    |
|               | 100 mA                | 12.0 V         | 250 mA         | 70%        | IS0512SA                    |
|               | 100 mA                | 15.0 V         | 200 mA         | 68%        | IS0515SA                    |
| 12 V          | 60 mA                 | 3.3 V          | 600 mA         | 55%        | IS1203SA                    |
|               | 60 mA                 | 5.0 V          | 600 mA         | 60%        | IS1205SA                    |
|               | 60 mA                 | 9.0 V          | 333 mA         | 67%        | IS1209SA                    |
|               | 60 mA                 | 12.0 V         | 250 mA         | 69%        | IS1212SA                    |
|               | 60 mA                 | 15.0 V         | 200 mA         | 70%        | IS1215SA                    |
| 24 V          | 60 mA                 | 24.0 V         | 125 mA         | 68%        | IS1224SA                    |
|               | 30 mA                 | 3.3 V          | 600 mA         | 54%        | IS2403SA                    |
|               | 30 mA                 | 5.0 V          | 600 mA         | 61%        | IS2405SA                    |
|               | 30 mA                 | 9.0 V          | 333 mA         | 65%        | IS2409SA                    |
|               | 30 mA                 | 12.0 V         | 250 mA         | 70%        | IS2412SA                    |
| 30 mA         | 15.0 V                | 200 mA         | 71%            | IS2415SA   |                             |
| 30 mA         | 24.0 V                | 125 mA         | 71%            | IS2424SA   |                             |

#### Mechanical Details



| Pin | Standard | 'H' Versions |
|-----|----------|--------------|
| 1   | +Vin     | +Vin         |
| 2   | N.C.     | -Vin         |
| 3   | N.C.     | N.C.         |
| 9   | N.C.     | N.C.         |
| 10  | -Vout    | -Vout        |
| 11  | +Vout    | +Vout        |
| 12  | -Vin     | N.C.         |