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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 0.25 Watt

## IK Series



- Single Output
- SIP or DIP Package
- 1000 VDC Isolation
- Optional 3000 VDC Isolation
- Small Package Sizes
- -40 °C to +85 °C Operation
- 3 Year Warranty

### Specification

#### Input

- Input Voltage Range • Nominal  $\pm 10\%$
- Input Reflected Ripple Current • 20 mA pk-pk through 12  $\mu$ H inductor 5Hz to 20 MHz
- Input Reverse Voltage Protection • None

#### Output

- Output Voltage • See table
- Minimum Load • None<sup>(4)</sup>
- Line Regulation • 1.2%/1%  $\Delta$  Vin
- Load Regulation • 10% 20-100% load change (3.3 V models  $\pm 20\%$ )
- Setpoint Accuracy •  $\pm 3\%$
- Ripple & Noise • 100 mV pk-pk max, 20 MHz bandwidth
- Temperature Coefficient • 0.02%/°C
- Maximum Capacitive Load • 100  $\mu$ F

#### General

- Efficiency • See table
- Isolation Voltage • 1000 VDC minimum<sup>(2)</sup>
- Isolation Resistance •  $10^9 \Omega$
- Isolation Capacitance • 60 pF typical
- Switching Frequency • Variable, 80 KHz typical
- MTBF • >1.1 Mhrs to MIL-HDBK-217F at 25 °C, GB

#### Environmental

- Operating Temperature • -40 °C to +85 °C
- Storage Temperature • -40 °C to +125 °C
- Case Temperature • 100 °C max
- Cooling • Convection-cooled

#### Notes

1. For DIP package, replace 'S' in model number with 'D'.
2. Add suffix '-H' to model number for 3000 VDC isolation.
3. 48 V input not available with DIP package.
4. Operation at no load will not damage unit but it may not meet all specifications.
5. All dimensions in inches (mm).
6. Pin pitch tolerance:  $\pm 0.014$  ( $\pm 0.35$ )
7. Case tolerance:  $\pm 0.02$  ( $\pm 0.5$ )
8. Weight: SIP 0.003 lbs (1.4 g), DIP 0.004 lbs (1.8 g)

| Input Voltage         | No Load Input Current | Output Voltage | Output Current | Efficiency | Model Number <sup>(1,2)</sup> |
|-----------------------|-----------------------|----------------|----------------|------------|-------------------------------|
| 5 VDC                 | 20 mA                 | 3.3 V          | 75.70 mA       | 66%        | IK0503SA                      |
|                       | 20 mA                 | 5.0 V          | 50.00 mA       | 66%        | IK0505SA                      |
|                       | 20 mA                 | 7.2 V          | 34.72 mA       | 66%        | IK0507SA                      |
|                       | 20 mA                 | 9.0 V          | 27.77 mA       | 68%        | IK0509SA                      |
|                       | 20 mA                 | 12.0 V         | 20.83 mA       | 68%        | IK0512SA                      |
|                       | 20 mA                 | 15.0 V         | 16.67 mA       | 68%        | IK0515SA                      |
|                       | 20 mA                 | 18.0 V         | 13.88 mA       | 68%        | IK0518SA                      |
| 12 VDC                | 15 mA                 | 3.3 V          | 75.70 mA       | 70%        | IK0524SA                      |
|                       | 15 mA                 | 5.0 V          | 50.00 mA       | 65%        | IK1203SA                      |
|                       | 15 mA                 | 7.2 V          | 34.72 mA       | 65%        | IK1205SA                      |
|                       | 15 mA                 | 9.0 V          | 27.77 mA       | 68%        | IK1207SA                      |
|                       | 15 mA                 | 12.0 V         | 20.83 mA       | 64%        | IK1209SA                      |
|                       | 15 mA                 | 15.0 V         | 16.67 mA       | 62%        | IK1212SA                      |
|                       | 15 mA                 | 18.0 V         | 13.88 mA       | 67%        | IK1215SA                      |
| 24 VDC                | 15 mA                 | 24.0 V         | 10.41 mA       | 67%        | IK1218SA                      |
|                       | 15 mA                 | 24.0 V         | 10.41 mA       | 54%        | IK1224SA                      |
|                       | 8 mA                  | 3.3 V          | 75.70 mA       | 60%        | IK2403SA                      |
|                       | 8 mA                  | 5.0 V          | 50.00 mA       | 62%        | IK2405SA                      |
|                       | 8 mA                  | 7.2 V          | 34.72 mA       | 61%        | IK2407SA                      |
|                       | 8 mA                  | 9.0 V          | 27.77 mA       | 62%        | IK2409SA                      |
|                       | 8 mA                  | 12.0 V         | 20.83 mA       | 56%        | IK2412SA                      |
| 48 VDC <sup>(3)</sup> | 8 mA                  | 15.0 V         | 16.67 mA       | 56%        | IK2415SA                      |
|                       | 8 mA                  | 18.0 V         | 13.88 mA       | 55%        | IK2418SA                      |
|                       | 8 mA                  | 24.0 V         | 10.41 mA       | 59%        | IK2424SA                      |
|                       | 5 mA                  | 3.3 V          | 75.70 mA       | 55%        | IK4803SA                      |
|                       | 5 mA                  | 5.0 V          | 50.00 mA       | 57%        | IK4805SA                      |
|                       | 5 mA                  | 7.2 V          | 34.72 mA       | 57%        | IK4807SA                      |
|                       | 5 mA                  | 9.0 V          | 27.77 mA       | 57%        | IK4809SA                      |
| 48 VDC <sup>(3)</sup> | 5 mA                  | 12.0 V         | 20.83 mA       | 53%        | IK4812SA                      |
|                       | 5 mA                  | 15.0 V         | 16.67 mA       | 53%        | IK4815SA                      |
|                       | 5 mA                  | 18.0 V         | 13.88 mA       | 53%        | IK4818SA                      |
|                       | 5 mA                  | 24.0 V         | 10.41 mA       | 50%        | IK4824SA                      |
|                       | 5 mA                  | 24.0 V         | 10.41 mA       | 50%        | IK4824SA                      |

### Mechanical Details

