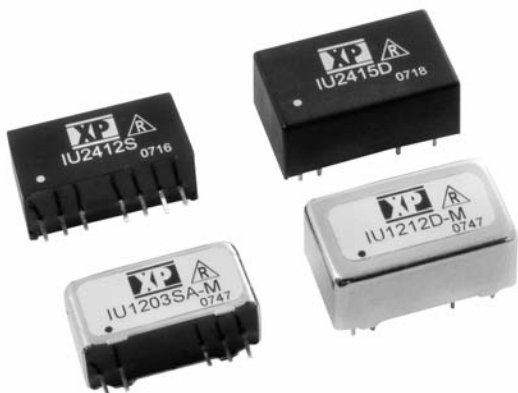


# IU SERIES

DC/DC Single & Dual Output: 2 Watts



## Features

- Regulated Single & Dual Output
- Wide 2:1 Input Range
- SIP or DIP Package
- 1000 VDC Isolation (Optional 3000 VDC)
- Optional Metal Case
- Continuous Short Circuit Protection

## Specification

### Input

- Input Voltage Range • See table  
 Input Reflected Ripple Current • 35 mA pk-pk through 12  $\mu$ H inductor, 5-20 MHz  
 Input Filter • Capacitor

### Output

- Output Voltage • See table  
 Minimum Load • None<sup>(6)</sup>  
 Line Regulation •  $\pm 0.5\%$   
 Load Regulation •  $\pm 1\%$  for a 25-100% load change<sup>(7)</sup>  
 Setpoint Accuracy •  $\pm 2\%$   
 Cross Regulation •  $\pm 5\%$  on dual output models  
 Ripple & Noise • 80 mV pk-pk max, 20 MHz bandwidth<sup>(8)</sup>  
 Short Circuit Protection • Continuous with auto recovery (foldback)  
 Max Capacitive Load • See table  
 Remote On/Off • Optional on SIP package model<sup>(9)</sup>  
 Temperature Coefficient • 0.02%/C

### General

- Efficiency • See table  
 Isolation Voltage • 1000 VDC, Optional 3000 VDC<sup>(2)</sup>  
 Isolation Resistance •  $10^9 \Omega$   
 Isolation Capacitance • 60 pF  
 Switching Frequency • 100-650 kHz  
 MTBF • >1.61 Mhrs to MIL-HDBK-217F, at 25 °C, GB

### Environmental

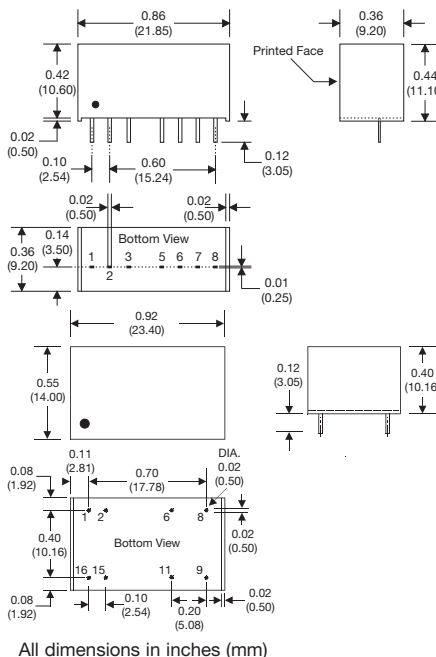
- Operating Temperature • -40 °C to +85 °C  
 Storage Temperature • -40 °C to +125 °C  
 Case Temperature • +100 °C max  
 Cooling • Convection cooled

### Notes

- For dual inline package replace 'S' in model number with 'D'.
- For optional 3 kV isolation add suffix '-H' to the model number.
- For dual output delete suffix 'A' & split output current equally between rails.
- For optional Remote On/Off on SIP models, add suffix '-R' to model number. Applying 5 V via 1 k  $\Omega$  current limiting resistor and diode turns output off.
- For optional metal case, add suffix '-M' to model number.
- Output capacitor of 100  $\mu$ F required to meet quoted ripple & noise.
- Minimum load of 25% required to meet load regulation & ripple & noise specifications.
- Operation at no load will not damage device but may not meet all specifications.
- Pin pitch tolerance:  $\pm 0.014$  ( $\pm 0.35$ ), Case tolerance:  $\pm 0.02$  ( $\pm 0.5$ )
- Weight: SIP 0.009 lbs (4.0 g), DIP 0.013 lbs (6.0 g), Metal case weight: SIP 0.014 lbs (6.5 g), DIP 0.017 lbs (8.0 g), consult sales for drawing

Input Voltage	No Load Input Current	Output Voltage <sup>(3)</sup>	Output Current	Max. Capacitive Load	Efficiency	Model Number (1-5)
4.5-9.0 V	15 mA	3.3 V	500 mA	3300 $\mu$ F	67%	IU0503SA <sup>†</sup> ^
	15 mA	5.0 V	400 mA	3300 $\mu$ F	70%	IU0505SA <sup>†</sup> ^
	30 mA	9.0 V	222 mA	470 $\mu$ F	72%	IU0509SA <sup>†</sup> ^
	30 mA	12.0 V	167 mA	470 $\mu$ F	72%	IU0512SA <sup>†</sup> ^
	30 mA	15.0 V	133 mA	470 $\mu$ F	73%	IU0515SA <sup>†</sup> ^
	60 mA	24.0 V	83 mA	220 $\mu$ F	75%	IU0524SA <sup>†</sup> ^
9.0-18.0 V	15 mA	3.3 V	500 mA	3300 $\mu$ F	67%	IU1203SA <sup>†</sup> ^
	15 mA	5.0 V	400 mA	3300 $\mu$ F	77%	IU1205SA <sup>†</sup> ^
	15 mA	9.0 V	222 mA	470 $\mu$ F	78%	IU1209SA <sup>†</sup> ^
	15 mA	12.0 V	167 mA	470 $\mu$ F	80%	IU1212SA <sup>†</sup> ^
	15 mA	15.0 V	133 mA	470 $\mu$ F	78%	IU1215SA <sup>†</sup> ^
	15 mA	24.0 V	83 mA	220 $\mu$ F	80%	IU1224SA <sup>†</sup> ^
18.0-36.0 V	8 mA	3.3 V	500 mA	3300 $\mu$ F	70%	IU2403SA <sup>†</sup> ^
	8 mA	5.0 V	400 mA	3300 $\mu$ F	77%	IU2405SA <sup>†</sup> ^
	8 mA	9.0 V	222 mA	470 $\mu$ F	80%	IU2409SA <sup>†</sup> ^
	8 mA	12.0 V	167 mA	470 $\mu$ F	80%	IU2412SA <sup>†</sup> ^
	8 mA	15.0 V	133 mA	470 $\mu$ F	80%	IU2415SA <sup>†</sup> ^
	8 mA	24.0 V	83 mA	220 $\mu$ F	80%	IU2424SA <sup>†</sup> ^
36.0-72.0 V	6 mA	3.3 V	500 mA	3300 $\mu$ F	71%	IU4803SA <sup>†</sup> ^
	6 mA	5.0 V	400 mA	3300 $\mu$ F	74%	IU4805SA <sup>†</sup> ^
	6 mA	9.0 V	222 mA	470 $\mu$ F	78%	IU4809SA <sup>†</sup> ^
	6 mA	12.0 V	167 mA	470 $\mu$ F	78%	IU4812SA <sup>†</sup> ^
	6 mA	15.0 V	133 mA	470 $\mu$ F	78%	IU4815SA <sup>†</sup> ^
	6 mA	24.0 V	83 mA	220 $\mu$ F	80%	IU4824SA <sup>†</sup> ^

## Mechanical Details



PIN CONNECTIONS		
Pin	Single	Dual
1	-V Input	-V Input
2	+V Input	+V Input
3	Opt. ROF*	Opt. ROF**
5	N.P. / N.C.	N.C.
6	+V Output	+V Output
7	-V Output	-V Output
8	NC	Common

\* When optional ROF is present pin 5 is No Connection.  
 When not present pin 3 & 5 are No Pin.

\*\* When optional ROF is present pin 5 is No Connection.  
 When not present pin 3 & 5 are No Connection.

PIN CONNECTIONS		
Pin	Single	Dual
1	-V Input	-V Input
2	-V Input	-V Input
6	NC	Common
8	NC	-V Output
9	+V Output	+V Output
11	-V Output	Common
15	+V Input	+V Input
16	+V Input	+V Input