Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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!

Contact us

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

ISU02 Series

DC-DC Converter

XP Power

2 Watt

- Regulated Single & Dual Output
- Wide 4:1 Input Range
- Compact SMD Package
- 1500 VDC Isolation
- Operating Temperature -40 °C to +95 °C
- ITE Safety Approvals
- Remote On/Off
- Tape & Reel Package Available
- Optional Water Washable Versions
- 3 Year Warranty

Dimensions:

ISU02:
0.75 x 0.67 x 0.34" (19.0 x 17.0 x 8.7 mm)

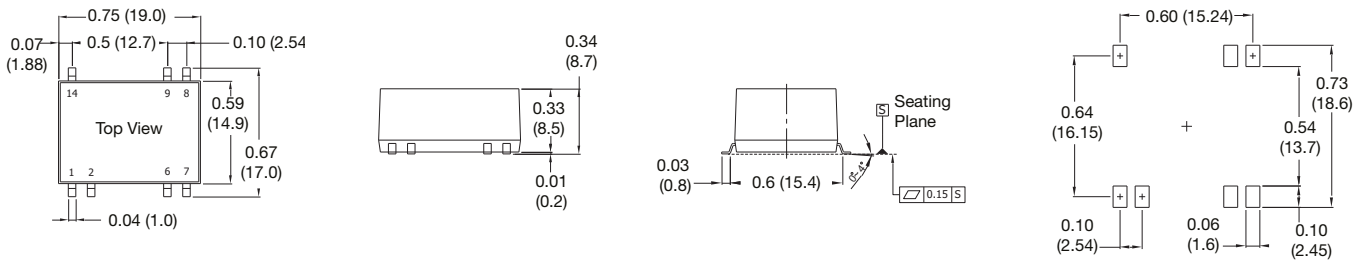
Models & Ratings

Input voltage	Output voltage	Output current	Input current[1,2]		Maximum capacitive load[3]	Efficiency	Model number[4]
			No load	Full load			
4.5-12V	5 V	400 mA	40 mA	505 mA	1680 µF	79%	ISU0205S05
	12 V	167 mA		500 mA	820 µF	80%	ISU0205S12
	15 V	134 mA		495 mA	680 µF	81%	ISU0205S15
	24 V	83 mA		490 mA	390 µF	81%	ISU0205S24
	±12 V	±83 mA		490 mA	±470 µF	81%	ISU0205D12
	±15 V	±67 mA		495 mA	±330 µF	81%	ISU0205D15
9-36V	5 V	400 mA	20 mA	105 mA	1680 µF	79%	ISU0224S05
	12 V	167 mA		105 mA	820 µF	80%	ISU0224S12
	15 V	134 mA		100 mA	680 µF	82%	ISU0224S15
	24 V	83 mA		105 mA	390 µF	80%	ISU0224S24
	±12 V	±83 mA		105 mA	±470 µF	80%	ISU0224D12
	±15 V	±67 mA		105 mA	±330 µF	81%	ISU0224D15
18-75V	5 V	400 mA	10 mA	53 mA	1680 µF	78%	ISU0248S05
	12 V	167 mA		52 mA	820 µF	81%	ISU0248S12
	15 V	134 mA		51 mA	680 µF	82%	ISU0248S15
	24 V	83 mA		51 mA	390 µF	81%	ISU0248S24
	±12 V	±83 mA		51 mA	±470 µF	81%	ISU0248D12
	±15 V	±67 mA		52 mA	±330 µF	81%	ISU0248D15

Notes

1. Input currents measured at nominal input voltage.
2. Input current is typically 2.5 mA at nominal input voltage when output is remotely turned off.
3. Maximum capacitive load is per output.
4. For optional water washable version, add suffix '-P' e.g. ISU0224S12-P.

Mechanical Details



Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage Range	4.5		12	VDC	5 V nominal
	9.0		36		24 V nominal
	18.0		75		48 V nominal
Input Filter	Internal Pi type filter				
Input Surge			15	VDC for 1 s	5 V nominal
			50		24 V models
			100		48 V models
Remote On/Off	ON: open circuit OFF: 2-4mA via 1kΩ resistor into pin 2 with respect to pin 1				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	5		30	VDC	See Models and Ratings table
Initial Set Accuracy			±1.0	%	At full load
Output Voltage Balance			±2.0	%	For dual output with balanced laods
Minimum Load					No minimum load required
Line Regulation			±0.5	%	From minimum to maximum input at full load
Load Regulation			±1.0	%	From 0 to full load
Cross Regulation			±5.0	%	On dual output models when one load is varied between 25% and 100% and other is fixed at 100%
Transient Response		3	5	% deviation	Recovery within 1% in less than 250 µs for a 25% load change.
Ripple & Noise			50	mV pk-pk	20 MHz bandwidth. Measured using 0.47 µF ceramic capacitor.
Short Circuit Protection					Continuous, with auto recovery
Maximum Capacitive Load					See Models and Ratings table
Temperature Coefficient			0.02	%/˚C	

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		81		%	See Models and Ratings table
Isolation: Input to Output	1500/1800			VDC	60 s/1 s
Isolation Resistance	10^9			Ω	At 500 VDC
Isolation Capacitance		500		pF	
Switching Frequency		100		kHz	
Power Density			11.7	W/in^3	
Mean Time Between Failure		6.4		MHrs	MIL-HDBK-217F, +25 °C GB
Weight		0.01 (4.5)		lb (g)	
Moisture Sensitivity Level	Level 2				IPC/JEDEC J-STD-020D.1

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-40		+95	°C	See Derating Curve.
Storage Temperature	-55		+125	°C	
Case Temperature			+95	°C	
Humidity			95	%RH	Non-condensing
Cooling					Natural convection
Case Flammability	UL 94V-0 Rated				Non conductive black plastic
Lead-Free Reflow Solder Process					IPC/JEDEC J-STD-020D.1

Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
CB	IEC62368-1	ITE
UL	UL/cUL62368-1	ITE

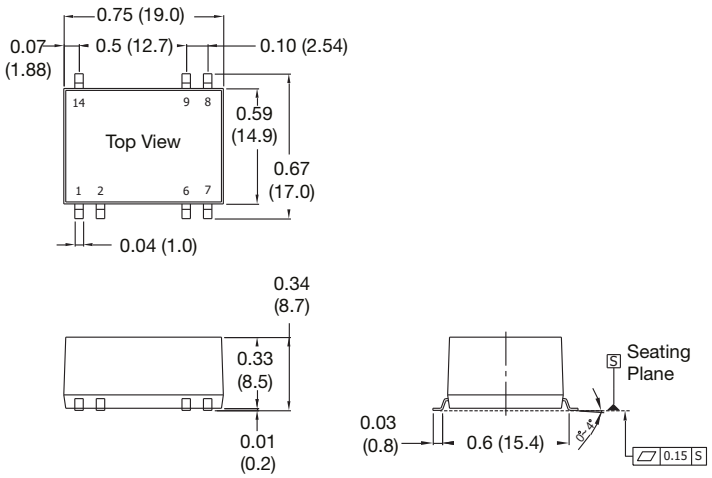
EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55032	Class A	

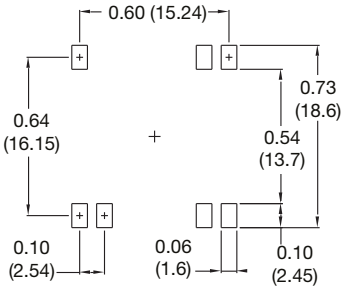
EMC: Immunity

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD	EN61000-4-2	±8 kV air discharge, ±6 kV contact	A	
Radiated	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	±2 kV	A	With external input capacitor, suggested part is CHEMI-CON KY 220µF/100V
Surge	EN61000-4-5	±1 kV	A	With external input capacitor, suggested part is CHEMI-CON KY 220µF/100V
Conducted	EN61000-4-6	10 V rms	A	

Mechanical Details



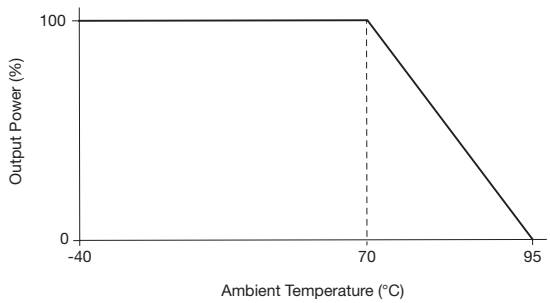
Connecting Pin Pattern



Pin Connections		
Pin	Single	Dual
1	-Vin	-Vin
2	Remote On/Off	Remote On/Off
6	No Connection	Common
7	No Connection	-Vout
8	+Vout	+Vout
9	-Vout	Common
14	+Vin	+Vin

Application Notes

Derating Curve



Notes

1. All dimensions are in inches (mm)
2. Weight: 0.01 lbs (4.5 g) approx.
3. Tolerance: X.XX±0.01 (X.X±0.25)
   X.XXX±0.005 (X.XX±0.13)
4. Pin Tolerance: ±0.002 (±0.05)