

3 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:

ISU03:

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	600 mA	40 mA	740 mA	1680 µF	81%	ISU0305S05
	12 V	250 mA		730 mA	820 µF	82%	ISU0305S12
	15 V	200 mA		730 mA	680 µF	82%	ISU0305S15
	24 V	125 mA		730 mA	390 µF	82%	ISU0305S24
	±12 V	±125 mA		730 mA	±470 µF	82%	ISU0305D12
	±15 V	±100 mA		740 mA	±330 µF	81%	ISU0305D15
9-36V	5 V	600 mA	20 mA	156 mA	1680 µF	80%	ISU0324S05
	12 V	250 mA		150 mA	820 µF	82%	ISU0324S12
	15 V	200 mA		150 mA	680 µF	82%	ISU0324S15
	24 V	125 mA		150 mA	390 µF	82%	ISU0324S24
	±12 V	±125 mA		150 mA	±470 µF	82%	ISU0324D12
	±15 V	±100 mA		154 mA	±330 µF	81%	ISU0324D15
18-75V	5 V	600 mA	13 mA	78 mA	1680 µF	80%	ISU0348S05
	12 V	250 mA		75 mA	820 µF	83%	ISU0348S12
	15 V	200 mA		76 mA	680 µF	82%	ISU0348S15
	24 V	125 mA		76 mA	390 µF	82%	ISU0348S24
	±12 V	±125 mA		76 mA	±470 µF	82%	ISU0348D12
	±15 V	±100 mA		77 mA	±330 µF	81%	ISU0348D15

Notes

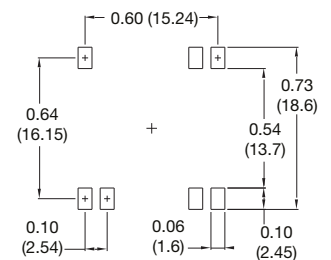
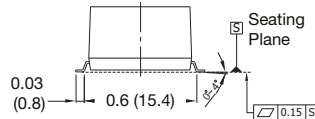
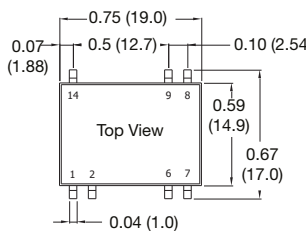
1. Input currents measured at nominal input voltage.

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. ISU0324S12-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	%	
Output Voltage Balance			±2.0	%	For dual output with balanced loads
Minimum Load					No minimum load required
Line Regulation			±0.5	%	
Load Regulation			±1.0	%	
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		82		%	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			17.5	W/in ³	
Mean Time Between Failure		5		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	IEC60950-1	ITE
UL	UL/cUL60950-1	ITE

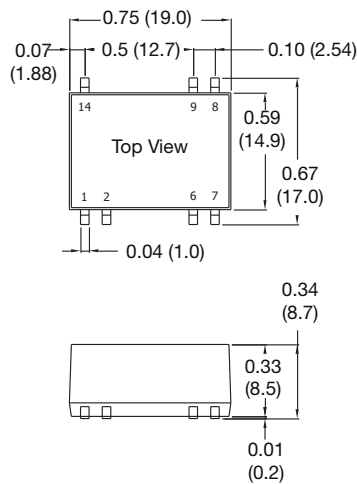
EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55022	Class A	

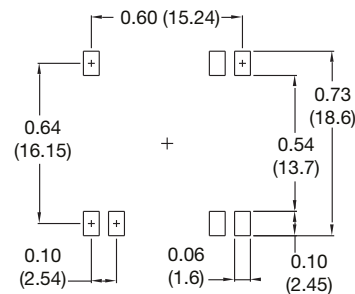
EMC: Immunity

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



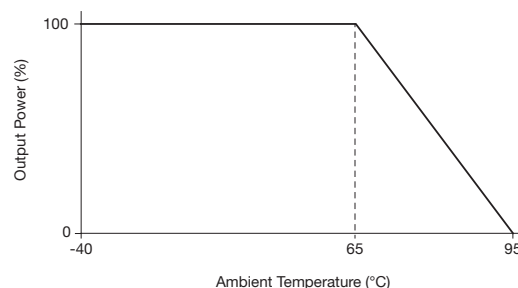
Connecting Pin Pattern



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

- All dimensions are in inches (mm)
- Weight: 0.01 lbs (4.5 g) approx.

- Tolerance: X.XX±0.01 (X.X±0.25)
X.XXX±0.005 (X.XX±0.13)
- Pin Tolerance: ±0.002 (±0.05)