



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!



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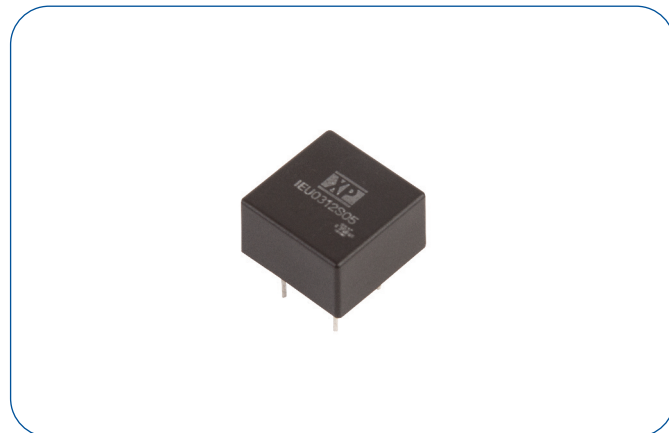
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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



3 Watt

- Regulated Single & Dual Output
- 2:1 Input Range
- Compact DIP8 Package
- 1500 VDC Isolation
- Operating Temperature -40 °C to +95 °C
- ITE Safety Approvals
- Full Load at 70 °C
- Class A Conducted & Radiated Emissions
- 3 Year Warranty



Dimensions:

IEU03:
0.55 x 0.55 x 0.31" (14.0 x 14.0 x 8.0 mm)

Models & Ratings

Input voltage	Output voltage	Output current	Input current ⁽¹⁾		Maximum capacitive load ⁽²⁾	Efficiency	Model number
			No load	Full load			
4.5-10V	3V3	600 mA	45 mA	500 mA	100 µF	79%	IEU0305S3V3
	5 V	600 mA		740 mA	100 µF	81%	IEU0305S05
	12V	250 mA		705 mA	100 µF	85%	IEU0305S12
	15V	200 mA		705 mA	100 µF	85%	IEU0305S15
	±5V	±300 mA		770 mA	±100 µF	82%	IEU0305D05
	±12V	±125 mA		715 mA	±100 µF	84%	IEU0305D12
	±15V	±100 mA		705 mA	±100 µF	85%	IEU0305D15
	9-18V	3V3		600 mA	27 mA	205 mA	100 µF
5 V		600 mA	300 mA	100 µF		83%	IEU0312S05
12V		250 mA	285 mA	100 µF		87%	IEU0312S12
15V		200 mA	285 mA	100 µF		87%	IEU0312S15
±5V		±300 mA	300 mA	±100 µF		84%	IEU0312D05
±12V		±125 mA	290 mA	±100 µF		86%	IEU0312D12
±15V		±100 mA	285 mA	±100 µF		87%	IEU0312D15
18-36V		3V3	600 mA	16 mA		105 mA	100 µF
	5 V	600 mA	150 mA		100 µF	83%	IEU0324S05
	12V	250 mA	145 mA		100 µF	87%	IEU0324S12
	15V	200 mA	145 mA		100 µF	87%	IEU0324S15
	±5V	±300 mA	150 mA		±100 µF	84%	IEU0324D05
	±12V	±125 mA	145 mA		±100 µF	86%	IEU0324D12
	±15V	±100 mA	145 mA		±100 µF	87%	IEU0324D15
	36-75V	3V3	600 mA		10 mA	52 mA	100 µF
5 V		600 mA	76 mA	100 µF		82%	IEU0348S05
12V		250 mA	73 mA	100 µF		86%	IEU0348S12
15V		200 mA	73 mA	100 µF		86%	IEU0348S15
±5V		±300 mA	76 mA	±100 µF		82%	IEU0348D05
±12V		±125 mA	74 mA	±100 µF		85%	IEU0348D12
±15V		±100 mA	74 mA	±100 µF		85%	IEU0348D15

Notes

1. Input currents measured at nominal input voltage.
2. Maximum capacitive load is per output.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage Range	4.5		10	VDC	5 V nominal
	9.0		18		12 V nominal
	18.0		36		24 V nominal
	36.0		75		48 V nominal
Input Filter	Internal Capacitor				
Input Surge			12	VDC for 1 s	5 V nominal
			25		12 V nominal
			50		24 V models
			100		48 V models

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	3.3		30	VDC	See Models and Ratings table
Initial Set Accuracy			±1.5	%	At full load
Output Voltage Balance			±2.0	%	For dual output with balanced loads
Minimum Load				A	No minimum load required
Line Regulation			±0.2	%	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			5	% deviation	Recovery within 1% in less than 500 µs for a 25% load change.
Ripple & Noise		70		mV pk-pk	20 MHz bandwidth. Measured using 0.47 µF ceramic capacitor.
Overload Protection		170		%	
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		84		%	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		100		pF	
Switching Frequency		100		kHz	
Power Density			32.0	W/in ³	
Mean Time Between Failure		3.4		MHrs	MIL-HDBK-217F, +25 °C GB
Weight		0.008 (3.9)		lb (g)	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-40		+95	°C	See Derating Curve.
Storage Temperature	-50		+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

EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55022	Class A	See application note
Radiated	EN55022	Class A	See application note

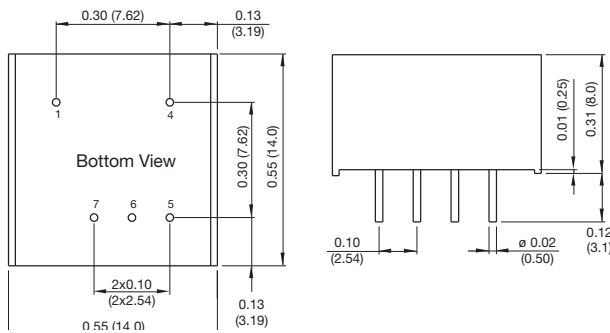
EMC: Immunity

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	3 V rms	A	
Magnetic Fields	EN61000-4-8	3 A/m	A	

Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
CB Report	IEC60950-1	Information Technology
UL	UL/cUL60950-1	Information Technology

Mechanical Details



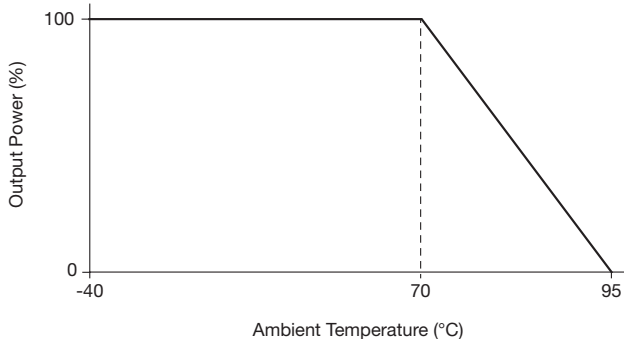
Pin Connections		
Pin	Single	Dual
1	-Vin	-Vin
4	+Vin	+Vin
5	+Vout	+Vout
6	No Pin	Common
7	-Vout	-Vout

Notes

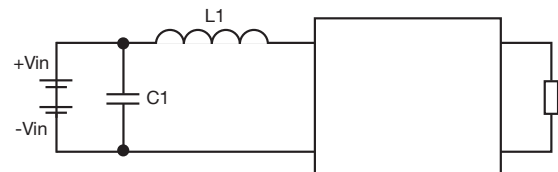
- All dimensions are in inches (mm)
- Weight: 0.008 lbs (3.9 g) approx.
- Tolerance: X.XX±0.01 (X.X±0.25)
X.XXX±0.005 (X.XX±0.13)
- Pin Tolerance: ±0.002 (±0.05)

Application Notes

Derating Curve



EMI Filter



Model	C1	L1
IEU0205	22 µF/16 V	3.3 µH
IEU0212	22 µF/25 V	18.0 µH
IEU0224	10 µF/50 V	39.0 µH
IEU0248	3.3 µF/100 V	68.0 µH

C1 = 5, 12 & 24 V: 1206 X5R MLCC, 48 V: 1206 X7S MLCC, L1 = SCD0504T series