



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



2 Watts

- World Wide Medical Approvals
- Single and Dual Outputs
- SIP8 Package
- -20 °C to +100 °C Operation
- Full Load at 60 °C Ambient
- 1500 VAC Isolation, 1 MOPP
- MTBF 1 MHrs
- 3 Year Warranty



Dimensions:

IMM02:

0.86 x 0.36 x 0.44" (21.85 x 9.2 x 11.1 mm)

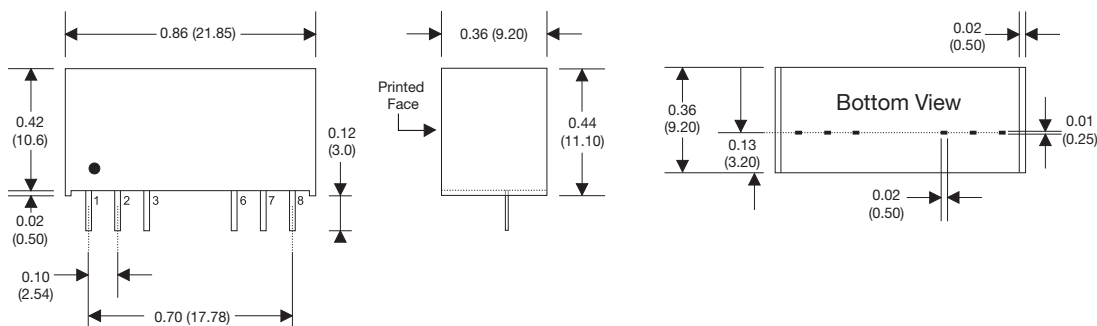
Models & Ratings

Input Voltage	Output Voltage	Output Current	Input current		Maximum capacitive load	Model Number
			No Load	Full Load		
4.5-9.0 V	3V3	606 mA	75 mA	694 mA	2200 µF	IMM0205S3V3
	5 V	400 mA	75 mA	626 mA	2200 µF	IMM0205S05
	12 V	167 mA	75 mA	617 mA	470 µF	IMM0205S12
	15 V	133 mA	75 mA	617 mA	470 µF	IMM0205S15
	±3.3 V	±303 mA	55 mA	684 mA	±1000 µF	IMM0205D03
	±5 V	±200 mA	55 mA	654 mA	±1000 µF	IMM0205D05
	±12 V	±83 mA	75 mA	601 mA	±220 µF	IMM0205D12
	±15 V	±66 mA	75 mA	601 mA	±220 µF	IMM0205D15
9.0-18.0 V	3V3	606 mA	25 mA	317 mA	2200 µF	IMM0212S3V3
	5 V	400 mA	25 mA	289 mA	2200 µF	IMM0212S05
	12 V	167 mA	25 mA	285 mA	470 µF	IMM0212S12
	15 V	133 mA	25 mA	289 mA	470 µF	IMM0212S15
	±3.3 V	±303 mA	55 mA	317 mA	±1000 µF	IMM0212D03
	±5 V	±200 mA	55 mA	292 mA	±1000 µF	IMM0212D05
	±12 V	±83 mA	30 mA	285 mA	±220 µF	IMM0212D12
	±15 V	±66 mA	30 mA	281 mA	±220 µF	IMM0212D15

Notes

Input currents measured at low input voltage.

Mechanical Details



Pin Connections

Pin	Single	Dual
1	-Vin	-Vin
2	+Vin	+Vin
3	Remote On/Off	Remote On/Off
6	+Vout	+Vout
7	-Vout	Common
8	No Pin	-Vout

Notes

1. All dimensions are in inches (mm)
2. Weight: 0.009 lbs (4.2 g) approx.
3. Pin diameter: 0.02±0.002 (0.5±0.05)
4. Pin pitch tolerance: ±0.014 (±0.35)
5. Case tolerance: ±0.02 (±0.5)

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage Range	4.5		9	VDC	5 V nominal
	9		18	VDC	12 V nominal
Inrush Current			0.05	A ² s	
Input Reflected Ripple Current		30		mA pk-pk	Through 12 µH inductor and 47 µF capacitor
Input Surge			16	VDC for 100 ms	5 V models
			25	VDC for 100 ms	12 V models

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	3.3		15	VDC	See Models and Ratings table
Initial Set Accuracy			±2	%	
Minimum Load	0			%	
Line Regulation			±0.5	%	
Load Regulation			2.0	%	From 0% to full load
Cross Regulation			±5	%	On dual output models, when one output is at 25% load and other is varied from 10% load to full load
Ripple & Noise			1	% pk-pk	20 MHz bandwidth. Measured using 0.1 µF ceramic capacitor
Short Circuit Protection					Continuous fold-back mode, with auto recovery
Maximum Capacitive Load					See Models and Ratings table
Temperature Coefficient			0.03	%/°C	
Overload Protection	135	165	210	%	Of nominal output current at nominal input voltage
Remote On/Off	Output is on if remote on/off (pin 3) is open Output turns off if 2-4 mA is applied to remote on/off (pin 3)				

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	64	78	79	%	Typical value is for IMM0212S12
Isolation: Input to Output	1500			VAC	At 250 VAC working voltage, 1 MOPP
Switching Frequency	175		1000	kHz	May enter burst mode frequency of 12-28 kHz at light load
Isolation Resistance	10 ⁹			Ω	
Isolation Capacitance			27	pF	
Power Density			14	W/in ³	
Mean Time Between Failure	1			MHrs	MIL-HDBK-217F, +25 °C GB
Weight		0.009 (4.2)		lb (g)	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-20		+100	°C	Derate from 100% load at +60 °C to 50% at +80 °C
Storage Temperature	-40		+125	°C	
Case Temperature			+105	°C	
Humidity			95	%RH	Non-condensing
Cooling					Natural convection

EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55011	Class B	See Application Note
Radiated	EN55011	Class B	

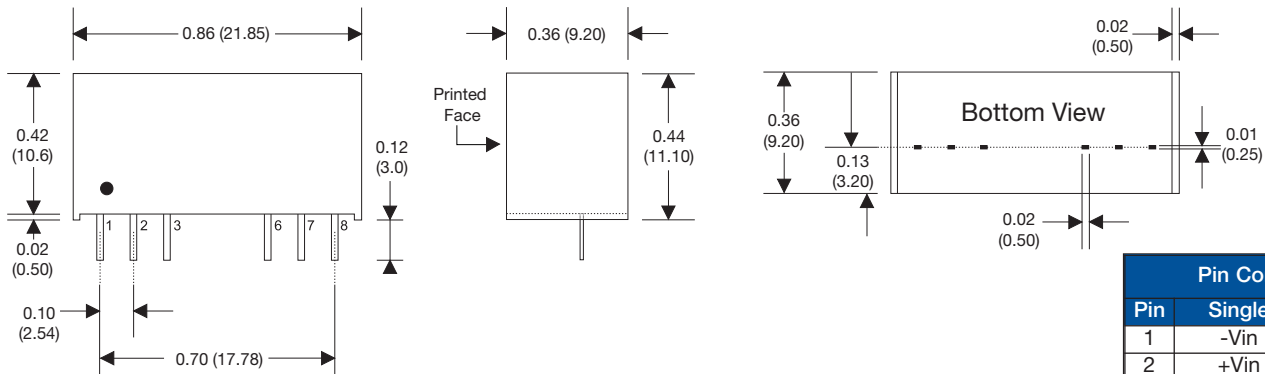
EMC: Immunity

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD Immunity	EN61000-4-2	±15 kV	A	Air Discharge
Radiated Immunity	EN61000-4-3	10 Vrms	A	
EFT/Burst	EN61000-4-4	2 kV	A	External input filter required, see applications note
Surge	EN61000-4-5	2 kV	A	External input filter required, see applications note
Conducted Immunity	EN61000-4-6	10 V rms	A	
Magnetic Fields	EN61000-4-8	30 A/m	A	

Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
UL	ANSI/AMMI ES60601-1	
CSA	CSA C22.2 No. 60601-1	
TUV	EN60601-1	
CB	IEC60601-1	

Mechanical Details



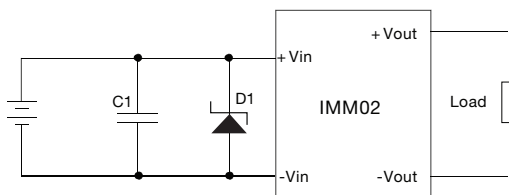
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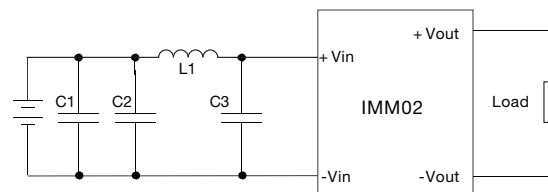
Application Note

External Filter for Surge and EFT



C1 is 220 μ F, 100 V electrolytic capacitor
D1 is 18 V, 3 kW TVS for 5 V input or 28 V, 3 kW TVS for 12 V input

EMI Filter Conducted Emissions



C2 & C3 are 10 μ F, 35 V multilayer ceramic chip capacitors, placed as close as possible to the input pins
L1 is 12 μ H inductor
C1 is 200 μ F, 100 V Electrolytic Capacitor for 5 V input version only