

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









## 1 Watt

- Dual Output
- SIP Package
- -40 °C to +105 °C Operation
- Full Load to 95 °C Ambient
- 1500 VDC Isolation
- Class B Conducted & Radiated Emissions
- MTBF >3.5 MHrs
- 3 Year Warranty



#### Dimensions

ITA:

 $0.76 \times 0.24 \times 0.39$ " (19.5 × 6.0 × 10.0 mm)

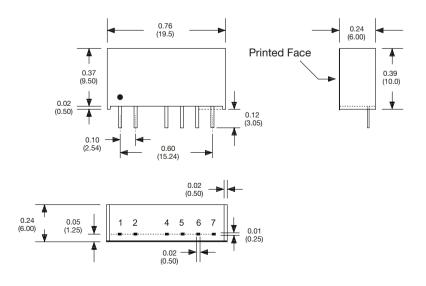
## **Models & Ratings**

Input Voltage	Output Voltage	Output Current	Input (	Current <sup>(1)</sup>	Maximum	Efficiency(3)	Model Number
iliput voltage		Output Gurrent	No Load	Full Load	Capacitive Load(2)	Efficiency	Wiodel Nulliber
	±5 V	±100 mA	30 mA	253 mA	±100 μF	80%	ITA0505S
5 V	±12 V	±41.6 mA	30 mA	250 mA	±47 μF	81%	ITA0512S
	±15 V	±33.3 mA	30 mA	250 mA	±47 μF	81%	ITA0515S
	±5 V	±100 mA	15 mA	106 mA	±100 μF	80%	ITA1205S
12 V	±12 V	±41.6 mA	15 mA	106 mA	±47 μF	80%	ITA1212S
	±15 V	±33.3 mA	15 mA	104 mA	±47 μF	81%	ITA1215S
	±5 V	±100 mA	7 mA	53 mA	±100 μF	80%	ITA2405S
24 V	±12 V	±41.6 mA	7 mA	53 mA	±47 μF	80%	ITA2412S
	±15 V	±33.3 mA	7 mA	53 mA	±47 μF	80%	ITA2415S

#### Notes

- 1. Input currents measured at nominal input voltage.
- 2. Maximum capacitive load is per output.
- 3. Measured at nominal input voltage and full load.

#### **Mechanical Details**



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

### Notes

- 1. All dimensions are in inches (mm)
- 2. Weight: 0.0053lbs (2.4 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)

# **ITA Series**





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Professional Control of the Control					
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
	4.5		5.5	VDC	5 V nominal
Input Voltage Range	10.8		13.2	VDC	12 V nominal
	21.6		26.4	VDC	24 V nominal
Input Filter	Capacitor				
Input Reflected Ripple			15	mA pk-pk	Through 12 μH inductor and 47 μF capacitor
			9	VDC for 1000 ms	5 V models
Input Surge			18	VDC for 1000 ms	12 V models
			30	VDC for 1000 ms	24 V models

Colpoi					
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	±5		±15	VDC	See Models and Ratings table
Initial Set Accuracy			±5	%	At 70% load
Minimum Load	10			%	Minimum load required to meet specification. Operation at no load will not cause damage.
Line Regulation			±1.2	%/1%Vin	
Load Regulation			+5, -2.5	%	From 10% to full load from 70% load point
Cross Regulation			±5	%	When one load is varied between 25% and 100% and other is fixed at 100%
Ripple & Noise			60	mV pk-pk	20 MHz bandwidth. Measured using 0.1 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		80		%	See Models and Ratings table
Isolation: Input to Output	1500			VDC	
Switching Frequency	40/50		50/70	kHz	5 V/12-24 V input
Isolation Resistance	10°			Ω	
Isolation Capacitance		50		pF	
Power Density			14	Win <sup>3</sup>	
Mean Time Between Failure	3.6			MHrs	MIL-HDBK-217F, +25 °C GB
Weight		0.0053 (2.4)		lb (g)	

## **Environmental**

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-40		+105	°C	Derate from 100% load at +95 °C to 90% at +105 °C
Storage Temperature	-55		+125	°C	
Case Temperature			+115	°C	
Humidity			95	%RH	Non-condensing
Cooling					Natural convection





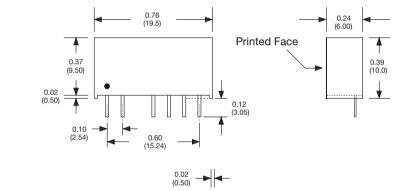
### **EMC: Emissions**

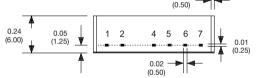
Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55022	Class B	See Application Note
Radiated	EN55022	Class B	

## **EMC: Immunity**

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD Immunity	EN61000-4-2	3	Α	
Radiated Immunity	EN61000-4-3	10 Vrms	Α	
EFT/Burst	EN61000-4-4	3	Α	External input capacitor required 330 µF/100 V
Surges	EN61000-4-5	1	А	External input capacitor required 330 μF/100 V
Conducted Immunity	EN61000-4-6	3 V rms	А	
Magnetic Fields	EN61000-4-8	1 A/m	А	

## **Mechanical Details**





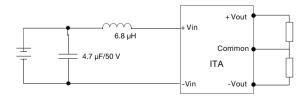
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## **Application Note**

#### **EMI Filter**



1206 Chip Capacitor, placed as close as possible to the input pins