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

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

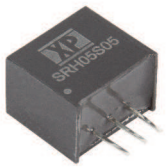
SRH05 Series

DC-DC Converter

XP Power

0.5 Amp

- 3 Pin Switching Regulator
- SIP Package
- Ultra Wide Input Range to 72 V
- -40 °C to +85 °C Operation
- Full Load to 60 °C Ambient
- Class B Conducted & Radiated Emissions
- MTBF >4.5 MHrs
- 3 Year Warranty



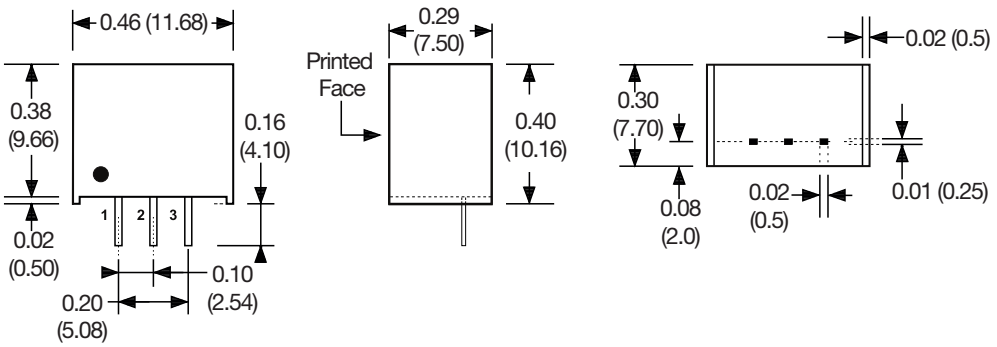
Dimensions:

SRH05:
0.46 x 0.29 x 0.4" (11.68 x 7.5 x 10.16 mm)

Models & Ratings

Input Voltage	Output Voltage	Output Current	Input Current			Efficiency		Max capacitive load	Model Number
			No Load	Full Load, min Vin	Full Load, max Vin	min Vin	max Vin		
9-72 V	3.3 V	500 mA	3 mA	225 mA	30 mA	82%	75%	100 µF	SRH05S3V3
9-72 V	5.0 V	500 mA	3 mA	315 mA	45 mA	88%	80%	100 µF	SRH05S05
9-72 V	6.5 V	500 mA	3 mA	395 mA	55 mA	91%	83%	100 µF	SRH05S6V5
14-72 V	7.2 V	500 mA	3 mA	285 mA	60 mA	91%	84%	100 µF	SRH05S7V2
14-72 V	9.0 V	500 mA	3 mA	350 mA	75 mA	92%	86%	100 µF	SRH05S09
17-72 V	12.0 V	500 mA	3 mA	375 mA	95 mA	94%	89%	100 µF	SRH05S12
21-72 V	15.0 V	400 mA	3 mA	300 mA	95 mA	95%	89%	100 µF	SRH05S15

Mechanical Details



Pin Connections	
Pin	Single
1	+Vin
2	Ground
3	+Vout

Notes

1. All dimensions are in inches (mm)
2. Weight: 0.004 lbs (2.1 g) approx.
3. Pin diameter: 0.02±0.002 (0.5±0.05)
4. Pin pitch tolerance: ±0.02 (±0.5)
5. Case tolerance: ±0.02 (±0.5)

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage Range	9		72	VDC	Model dependant. See Models and Ratings table
Input Filter	Capacitor				
Input Reflected Ripple			35	mA pk-pk	Through 12 µH inductor and 47 µF capacitor
Input Surge			75	VDC for 100 ms	

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	3.3		15	VDC	See Models and Ratings table
Initial Set Accuracy			3	%	At full load
Minimum Load	10			mA	Minimum load required to meet specification. Operation at no load will not cause damage.
Line Regulation			1.0	%	
Load Regulation			0.6	%	From 10% to full load
Transient Response			±3	%	For 25% load change
Ripple & Noise			75	mV pk-pk	20 MHz bandwidth
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		92		%	See models and ratings table
Isolation: Input to Output	0			VDC	Non isolated
Switching Frequency	120		800	kHz	See application notes
Mean Time Between Failure	4.5			MHrs	MIL-HDBK-217F, +25 °C GB
Weight		0.004 (2.1)		lb (g)	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-40		+85	°C	Derate from 100% load at +60 °C to 40% at +85 °C
Storage Temperature	-40		+125	°C	
Case Temperature			+100	°C	
Humidity			95	%RH	Non-condensing
Cooling					Natural convection

EMC: Emissions

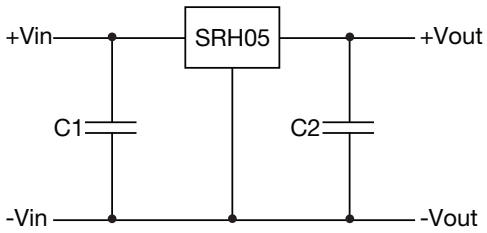
Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55032	Class B	See Application Note
Radiated	EN55032	Class B	See Application Note

EMC: Immunity

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD Immunity	EN61000-4-2	±6 kV/±8 kV	A	Contact discharge/Air discharge
Radiated Immunity	EN61000-4-3	10 Vrms	A	
EFT/Burst	EN61000-4-4	±2.0 kV	A	See Application Note
Surges	EN61000-4-5	±1.0 kV	A	See Application Note
Conducted Immunity	EN61000-4-6	10 V rms	A	
Magnetic Fields	EN61000-4-8	1 A/m	A	

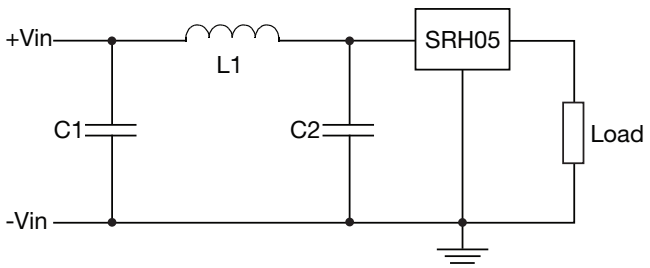
Application Note

Standard Application



C1 = 3.3 µF/100 V required if input voltage is above 50 VDC
C2 = 100 µF (optional) to improve transient response

EMI & Surge/EFT Filter



C1 = 220 µF/100 V
L1 = 12 µH
C2 = 220µF/100 V

C1, C2 and L1 should be placed as close to the SRH05 as possible

Switching Frequency vs Load