



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





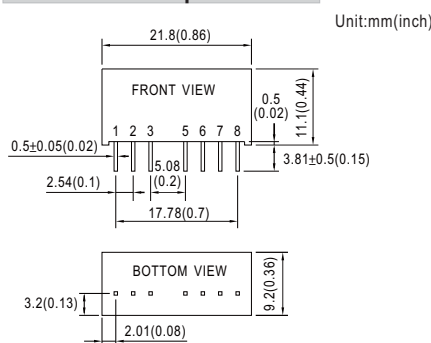
- Features :
 - 2:1 wide input range
 - 4:1 wide input range (Option)
 - 1000VDC I/O isolation
 - 3000VDC I/O isolation (Option)
 - Built-in remote ON/OFF control
 - Built-in EMI filter
 - Protections: Short circuit / Overload
 - Cooling by free air convection
 - Single in line package
 - 100% full load burn-in test
 - Low cost / High reliability
 - Modified models available: output 3.3V/9V
 - 2 years warranty



SPECIFICATION

ORDER NO.	SPA02E-05	SPA02A-05	SPA02B-05	SPA02C-05	SPA02E-12	SPA02A-12	SPA02B-12	SPA02C-12	SPA02E-15	SPA02A-15	SPA02B-15	SPA02C-15												
OUTPUT	DC VOLTAGE				12V				15V															
	CURRENT RANGE				15 ~ 150mA				17 ~ 167mA															
	RATED POWER				1.8W				2W															
	RIPPLE & NOISE (max.) Note.2				60mVp-p				60mVp-p															
	LINE REGULATION Note.3				±0.5%				±0.5%															
	LOAD REGULATION Note.4				±0.5%				±0.5%															
	VOLTAGE ACCURACY				±2.0%				±2.0%															
INPUT	SWITCHING FREQUENCY												100KHz min.											
	VOLTAGE RANGE												E: 4.5 ~ 9VDC A: 9 ~ 18VDC B: 18 ~ 36VDC C: 36 ~ 72VDC											
	EFFICIENCY (Typ.)												71% 76% 76% 74% 74% 80% 80% 82% 76% 80% 80% 80% 78%											
	DC CURRENT												Full load E: 600mA A: 225mA B: 115mA C: 60mA No load E: 50mA A: 25mA B: 15mA C: 8mA											
	FILTER												Capacitor Type											
	REMOTE CONTROL												Power ON : R.C. ~ -Vin < 1VDC or open ; Power OFF : R.C. ~ -Vin > 4VDC or short											
PROTECTION (Note. 5)	OVERLOAD												150 ~ 250% rated output power Protection type : Recovers automatically after fault condition is removed											
	SHORT CIRCUIT												All output equipped with short circuit Protection type : Recovers automatically after fault condition is removed											
ENVIRONMENT	WORKING TEMP.												-40 ~ +85°C (Refer to "Derating Curve")											
	WORKING HUMIDITY												20% ~ 90% RH non-condensing											
	STORAGE TEMP., HUMIDITY												-40 ~ +105°C, 10 ~ 95% RH											
	TEMP. COEFFICIENT												±0.05% / °C (0 ~ 50°C)											
	VIBRATION												10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes											
SAFETY	WITHSTAND VOLTAGE												I/P-O/P: 1KVDC											
	ISOLATION RESISTANCE												I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH											
	ISOLATION CAPACITANCE												80pF max.											
	EMC EMISSION												Compliance to EN55032 Class B, FCC part 15 Class B											
OTHERS	EMC IMMUNITY												Compliance to EN61000-4-2,3,4,5,6,8 light industry level, criteria A											
	MTBF												600Khrs min. MIL-HDBK-217F(25°C)											
	DIMENSION												21.8*9.2*11.1mm or 0.86**0.36**0.44" inch (L*W*H)											
WEIGHT												4.8g												

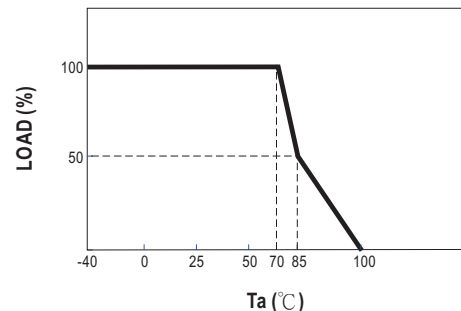
■ Mechanical Specification



■ Pin Configuration

Pin No.	Output
1	-Vin
2	+Vin
3	R.C.
5	N.C.
6	+Vout
7	-Vout
8	N.C.

■ Derating Curve



NOTE

- All parameters are specified at normal input, rated load, 25°C 70% RH ambient.
- Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.
- Line regulation is measured from low line to high line at rated load.
- Load regulation is measured from 10% to 100% rated load.
- Please prevent the converter from operating in overload or short circuit condition for more than 30 seconds.