1W DC-DC Regulated Single Output Converter — SPR01 series



■ Features :

- 1000VDC I/O isolation
- Internal SMD technology
- Built-in EMI filter
- Cooling by free air convection
- Non-conductive plastic case
- Single in line package
- 100% burn-in test
- Low cost / High reliability
- Approvals: FCC / CE
- 2 years warranty

SELECTION GUIDE

ORDER NO.	SPR01L-05	SPR01M-05	SPR01N-05	SPR01O-05	SPR01L-09	SPR01M-09	SPR01N-09	SPR01O-09
DC OUTPUT VOLTAGE	5V				9V			
OUTPUT CURRENT RANGE	0 ~ 200mA				0 ~ 100mA			
EFFICIENCY	57%	65%	62%	62%	57%	60%	60%	56%

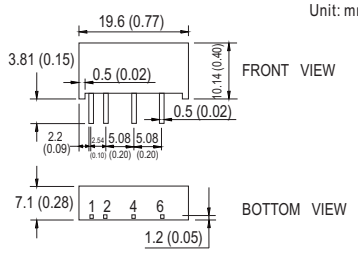
ORDER NO.	SPR01L-12	SPR01M-12	SPR01N-12	SPR01O-12	SPR01L-15	SPR01M-15	SPR01N-15	SPR01O-15
DC OUTPUT VOLTAGE	12V				15V			
OUTPUT CURRENT RANGE	0 ~ 84mA				0 ~ 67mA			
EFFICIENCY	58%	60%	60%	58%	60%	62%	60%	58%

SPECIFICATION

OUTPUT	RATED POWER		1W						
	RIPPLE & NOISE (max.) Note.2		100mVp-p						
	LINE REGULATION		±1.0%						
	LOAD REGULATION Note.3		±1.0%						
	VOLTAGE ACCURACY		±2.0%(Typ.) ±3.0%(max.)						
	SWITCHING FREQUENCY		50KHz min.						
INPUT	VOLTAGE RANGE		4.5 ~ 5.5V	10.8 ~ 13.2V	21.6 ~ 26.4V	43.2 ~ 52.8V	4.5 ~ 5.5V	10.8 ~ 13.2V	21.6 ~ 26.4V	43.2 ~ 52.8V
	NORMAL VOLTAGE		5V	12V	24V	48V	5V	12V	24V	48V
	INPUT CURRENT	Full load	350mA	141mA	67mA	35mA	350mA	141mA	67mA	35mA
		No load	32mA	15mA	10mA	6mA	32mA	15mA	10mA	6mA
	FILTER		Capacitor type						
	PROTECTION		Fuse recommended						
PROTECTION (Note. 4)	OVERLOAD		>110% rated output power						
			Protection type : Hiccup mode, recovers automatically after fault condition is removed						
	SHORT CIRCUIT		All output equipped with short circuit						
			Protection type : Hiccup mode, recovers automatically after fault condition is removed						
ENVIRONMENT	WORKING TEMP.		-25 ~ +71℃ (Refer to "Derating Curve")						
	WORKING HUMIDITY		20% ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY		-25 ~ +105℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT		±0.03% / ℃ (0 ~ 50℃)						
	VIBRATION		10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes						
SAFETY & EMC	SAFETY STANDARDS		EAC TP TC 004 approved						
	WITHSTAND VOLTAGE		I/P-O/P:1KVDC						
	ISOLATION RESISTANCE		I/P-O/P: 100M Ohms / 500VDC / 25℃/ 70% RH						
	ISOLATION CAPACITANCE		80pF max.						
	EMC EMISSION		Compliance to EN55032 Class B, FCC part 15 Class B, EAC TP TC 020						
	EMC IMMUNITY		Compliance to EN61000-4-2,3,4,5,6,8, light industry level, criteria A, EAC TP TC 020						
OTHERS	MTBF		700khrs min. MIL-HDBK-217F(25℃)						
	DIMENSION		19.6*7.1*10.2mm or 0.77"*0.28"*0.40" inch (L*W*H)						
	WEIGHT		2.3g						

■ Mechanical Specification

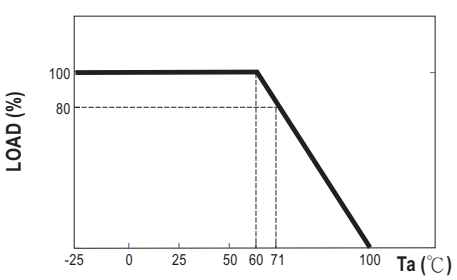
Unit: mm (inch)



■ Pin Configuration

Pin No.	Output
1	+Vin
2	-Vin
4	-Vout
6	+Vout

■ Derating Curve



NOTE

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