1W DC-DC Unregulated Single Output Converter

SMA01 series



Features :

- 1500VDC I/O isolation
- 3000VDC I/O isolation(optional)
- Operating temperature range of -40 ~ +85℃ without derating
- Internal SMD technology
- Built-in EMI filter
- Cooling by free air convection
- Non-conductive plastic case
- Dual in line package
- Industry standard pinout
- 100% burn-in test
- Low cost / High reliability
- 2 years warranty

SELECTION GUIDE

ORDER NO.		SMA01L-05	SMA01M-05	SMA01N-05	SMA01L-09	SMA01M-09	SMA01N-09
	DC OUTPUT VOLTAGE	5V			9V		
	OUTPUT CURRENT RANGE	0 ~ 200mA			0 ~ 110mA		
	EFFICIENCY(Typ.)	77%	79%	77%	77%	78%	75%

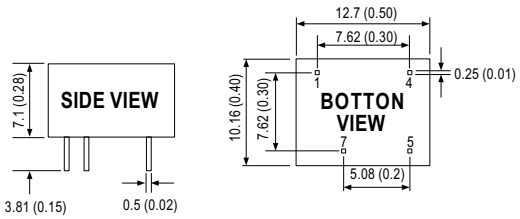
ORDER NO.		SMA01L-12	SMA01M-12	SMA01N-12	SMA01L-15	SMA01M-15	SMA01N-15
	DC OUTPUT VOLTAGE	12V			15V		
	OUTPUT CURRENT RANGE	0 ~ 84mA			0 ~ 67mA		
	EFFICIENCY(Typ.)	78%	80%	78%	79%	79%	77%

SPECIFICATION

OUTPUT	RATED POWER		1W					
	RIPPLE & NOISE (max.) Note.2		100mVp-p					
	LINE REGULATION Note.3		±1.2% for 1% input variation					
	LOAD REGULATION Note.4		±8.0%					
	VOLTAGE ACCURACY		±2.0%					
	SWITCHING FREQUENCY(Typ.)		100KHz					
INPUT	VOLTAGE RANGE		4.5 ~ 5.5V	10.8 ~ 13.2V	21.6 ~ 26.4V	4.5 ~ 5.5V	10.8 ~ 13.2V	21.6 ~ 26.4V
	NORMAL VOLTAGE		5V	12V	24V	5V	12V	24V
	INPUT CURRENT	Full load	265mA	110mA	57mA	265mA	110mA	57mA
		No load	32mA	15mA	11mA	32mA	15mA	11mA
	PROTECTION (FUSE RECOMMENDED)		500mA	250mA	150mA	500mA	250mA	150mA
	FILTER		Capacitor type					
PROTECTION	OVERLOAD		Momentary					
			Protection type : Broken					
	SHORT CIRCUIT		Momentary					
			Protection type : Broken					
ENVIRONMENT	WORKING TEMP.		-40 ~ +90℃ (Refer to output load derating curve)					
	WORKING HUMIDITY		20% ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY		-55 ~ +125℃, 10 ~ 95% RH					
	TEMP. COEFFICIENT		±0.05% / ℃ (0 ~ 50℃)					
	VIBRATION		10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes					
SAFETY & EMC	WITHSTAND VOLTAGE		I/P-O/P:1.5KVDC					
	ISOLATION RESISTANCE		I/P-O/P: 100M Ohms / 500VDC / 25℃/ 70% RH					
	ISOLATION CAPACITANCE		80pF max.					
	EMI RADIATION		Compliance to EN55022 Class B, FCC part 15 Class B					
	EMS IMMUNITY		Compliance to EN61000-4-2,3,4,5,6,8 light industry level, criteria A					
OTHERS	MTBF		700khrs min. MIL-HDBK-217F(25℃)					
	DIMENSION (L*W*H)		12.7*10.16*7.1mm or 0.50"*0.40"*0.28" inch for 5V,12V input ; 12.7*10.16*7.62mm or 0.50"*0.40"*0.30" inch for 24V input					
	WEIGHT		1.7g					

Mechanical Specification

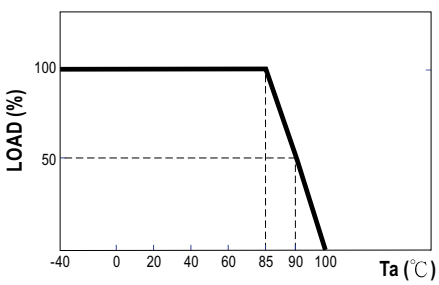
Unit: mm (inch)



Pin Configuration

Pin No.	Output
1	-Vin
4	+Vin
5	+Vout
7	-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.Line regulation is measured from low line to high line at rated load.
4.Load regulation is measured from 20% to 100% rated load.