



- Features :
  - 1500VDC I/O isolation
  - 3000VDC I/O isolation(optional)
  - Operating temperature range of -40 ~ +85°C 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%

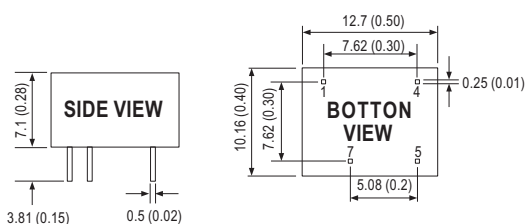
ORDER NO.	SMA01L-12	SMA01M-12	SMA01N-12	SMA01L-15	SMA01M-15	SMA01N-15
DC OUTPUT VOLTAGE	12V			15V		
OUTPUT CURRENT RANGE	0 ~ 84mA			0 ~ 67mA		
EFFICIENCY(Typ.)	78%	80%	78%	79%	79%	77%

### 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°C (Refer to "Derating Curve")						
	WORKING HUMIDITY	20% ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-55 ~ +125°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 & EMC	WITHSTAND VOLTAGE	I/P-O/P: 1.5KVDC						
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH						
	ISOLATION CAPACITANCE	80pF max.						
	EMI RADIATION	Compliance to EN55032 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°C)						
	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

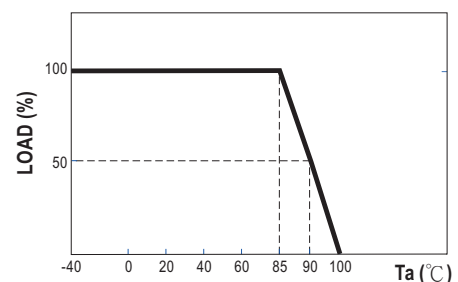
Unit: mm (inch)



### ■ Pin Configuration

Pin No.	Output
1	-Vin
4	+Vin
5	+Vout
7	-Vout

### ■ Derating Curve



### NOTE

- 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 20% to 100% rated load.