1W SMD Package DC-DC Regulated Converter

SMT01 series



Features

- SMD package with industry standard pinout
- 2:1 wide input range
- Operating temperature range -40 ~ +90℃
- Comply to BS EN/EN55032 radiated Class A without additional components
- Protection: Short circuit(continuous)/Over load
- 1.5KVDC I/O isolation
- Optional reel packing
- 3 years warranty

Applications

- Telecom/datacom system
- Wireless network
- Industrial control facility
- Instrument
- Analyzer
- Detector
- Data switch

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

SMT01 series is 1W isolated and regulated module type DC-DC converter with SMD package. It features international standard pins, wide working temperature range -40~+90℃, 1.5KVDC I/P-O/P isolation voltage, compliance to BS EN/EN55032 radiated Class A without additional components, short circuit protection, etc. The models account for different input voltage 9~18V,18~36V and 36~72V 2:1 wide input range, and various output voltage, 5V/12V/15V for single output which are suitable for all kinds of systems, Such as industrial control, telecommunication field, distributed power architecture, and so on.

Model Encoding

SMT01 A – 12

- 12 — Output voltage (5/12/15Vdc)
- A — Input voltage (A: 9 ~ 18Vdc，B: 18 ~ 36Vdc，C: 36 ~ 72Vdc)
- 01 — Rated wattage
- SMT — Series name

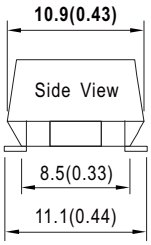
MODEL SELECTION TABLE

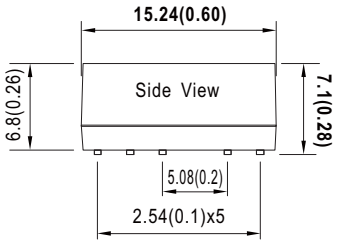
ORDER NO.	INPUT			OUTPUT		EFFICIENCY (TYP.)	CAPACITOR LOAD (MAX.)
	INPUT VOLTAGE (RANGE)	INPUT CURRENT		OUTPUT VOLTAGE	OUTPUT CURRENT		
		NO LOAD	FULL LOAD				
SMT01A-05	Normal 12V (9 ~ 18V)	10mA	111mA	5V	20 ~ 200mA	75%	1500μF
SMT01A-12		15mA	111mA	12V	8.3 ~ 83mA	75%	470μF
SMT01A-15		15mA	111mA	15V	6.7 ~ 67mA	75%	470μF
SMT01B-05	Normal 24V (18 ~ 36V)	10mA	56mA	5V	20 ~ 200mA	75%	1500μF
SMT01B-12		12mA	56mA	12V	8.3 ~ 83mA	75%	470μF
SMT01B-15		13mA	56mA	15V	6.7 ~ 67mA	75%	470μF
SMT01C-05	Normal 48V (36 ~ 72V)	5mA	28mA	5V	20 ~ 200mA	75%	1500μF
SMT01C-12		5mA	28mA	12V	8.3 ~ 83mA	75%	470μF
SMT01C-15		6mA	28mA	15V	6.7 ~ 67mA	75%	470μF

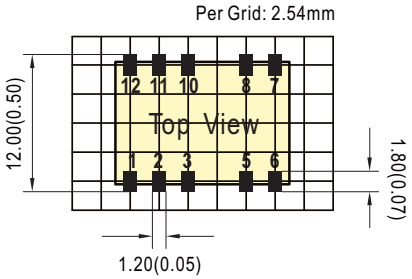
SPECIFICATION				
INPUT	VOLTAGE RANGE	A: 9 ~ 18Vdc B: 18 ~ 36Vdc C: 36 ~ 72Vdc		
	FILTER	Internal capacitor		
	PROTECTION	Fuse recommended. 12Vin models: 300mA Slow-Blow Type 24Vin models: 150mA Slow-Blow Type 48Vin models: 100mA Slow-Blow Type		
	INTERNAL POWER DISSIPATION	500mW		
OUTPUT	VOLTAGE ACCURACY	±2.0%		
	RATED POWER	1W		
	RIPPLE & NOISE Note.2	100mVp-p		
	LINE REGULATION Note.3	±0.5%		
	LOAD REGULATION Note.4	±0.5%		
	SWITCHING FREQUENCY (Typ.)	500KHz		
PROTECTION	OVERLOAD	130 ~ 200% rated output power		
		Protection type : Recovers automatically after fault condition is removed		
	SHORT CIRCUIT	Protection type: Continuous, automatic recovery		
ENVIRONMENT	COOLING	Free-air convection		
	WORKING TEMP.	Standard model: -40 ~ +90℃ (Refer to "Derating Curve")		
	CASE TEMPERATURE	+110℃ max.		
	WORKING HUMIDITY	20% ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-55 ~ +125℃, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	0.03% / ℃ (0 ~ 85℃)		
	SOLDERING TEMPERATURE	1.5mm from case of 1 ~ 10sec./240℃ max.		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
SAFETY & EMC (Note.5,6)	SAFETY STANDARDS	EAC TP TC 020/2011 approved		
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVDC		
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH		
	ISOLATION CAPACITANCE (Typ.)	80pF		
	EMC EMISSION	**Parameter**	**Standard**	**Test Level / Note(Note.6)**
		Conducted	BS EN/EN55032(CISPR32)	N/A
		Radiated	BS EN/EN55032(CISPR32)	Class A
	EMC IMMUNITY	**Parameter**	**Standard**	**Test Level / Note**
		ESD	BS EN/EN61000-4-2	Level 3, ±8KV air, Level 2, ±4KV contact
		Radiated Susceptibility	BS EN/EN61000-4-3	Level 2, 3V/m
		EFT/Burest	BS EN/EN61000-4-4	Level 1, 0.5KV at power, Level 2, 0.5KV at signa
		Surge	BS EN/EN61000-4-5	Level 2, 0.5KV Line-Line, Level 2, 1KV Line-gro
		Conducted	BS EN/EN61000-4-6	Level 2, 3V(e.m.f)
		Magnetic Field	BS EN/EN61000-4-8	Level 1, 1A/m
OTHERS	MTBF	630Khrs min. MIL-HDBK-217F(25℃)		
	DIMENSION (L*W*H)	15.24*10.9*7.1mm (0.6*0.43*0.28 inch)		
	CASE MATERIAL	Non-Conductive black plastic (UL 94V-0 rated)		
	PACKING	Standard :1.4g ; 32pcs/per tube,3840pcs/120 tube/per carton Optional : 1.4g ; 500pcs/per reel, 2500pcs/5 reel/per carton		
NOTE	1.All parameters are specified at normal input(A:12Vdc, B:24Vdc, C:48Vdc), rated load, 25℃ 70% RH ambient. 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf & 47μf capacitor. 3.Line regulation is measured from low line to high line at rated load. 4.Load regulation is measured from 10% to 100% rated load. 5.The final equipment must be re-confirm that it still meet EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.”(as available on http://www.meanwell.com) 6.An external input filter capacitor is required if the module has to meet BS EN/EN61000-4-4, BS EN/EN61000-4-5. The filter capacitor Power Mate suggest: 470μF/100V.			

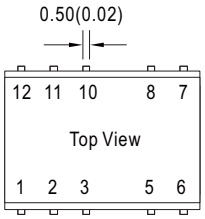
■ Mechanical Specification

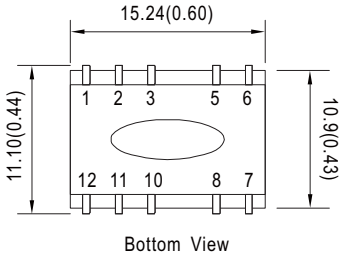
- All dimensions in mm(inch)
- Tolerance:x.x±0.5mm(x.xx±0.02")
  x.xx±0.25mm(x.xxx±0.01")
- Pin size is 0.50x0.30mm (0.02"x0.01")
- Pin is Tolerance:x.xx±0.07mm(x.xxx±0.003")







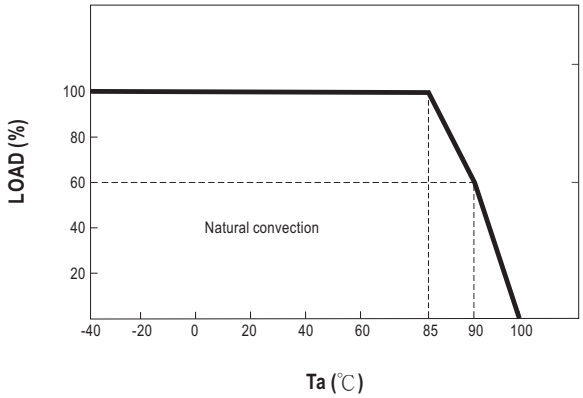




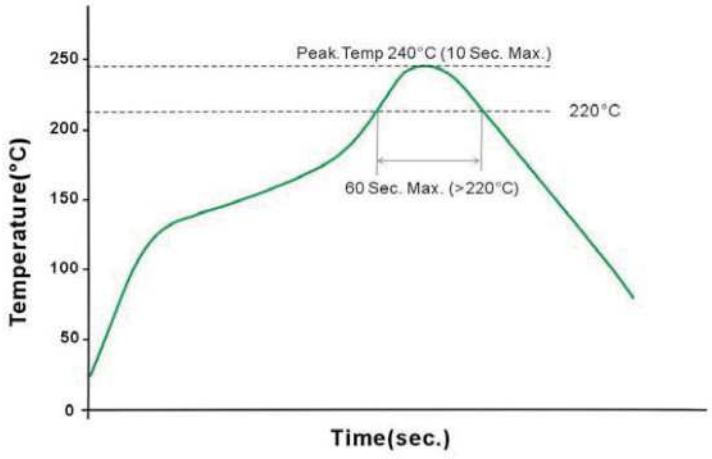
■ Pin Configuration

Pin No.	Pin-Out
1	-Vin
5	-Vout
6	+Vout
12	+Vin
2,3,7,8,10,11	N.C.

■ Derating Curve

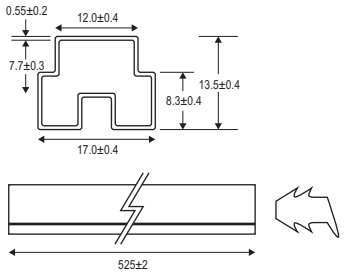
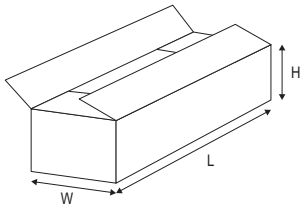


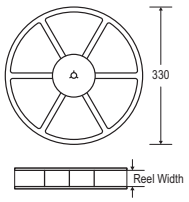
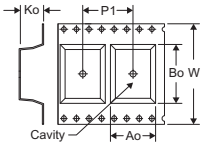
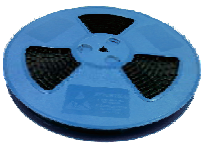
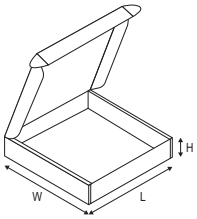
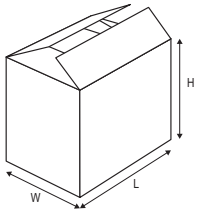
■ Reflow Soldering Curve



Remark: The curve applies only to the hot air reflow soldering.

■ Packing

Standard Tube Packing	MPQ Per Tube (PCS)	One Tube G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
Unit : mm  TUBE PATTERN   CARTON L620 x W230 x H230 	32	0.065Kg	3840	8.6Kg

Optional Reel Packing	MPQ Per Reel (PCS)	One Box G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
Unit : mm  Reel Width=32  W=32(+0.3/-0.1) Ao=11.4(±0.1) Bo=15.5(±0.1) Ko=7.4(±0.1) P1=16(±0.1)   INNER BOX L355*W338*H50  OUTER CARTON L380*W290*H370 	500	1.4Kg	2500	7.8Kg

■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html