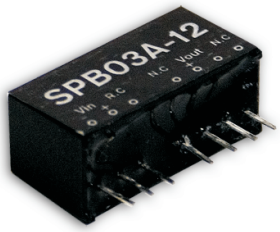
MEAN WELL

3W DC-DC Regulated Single Output Converter

SPB03 series



■ Features :

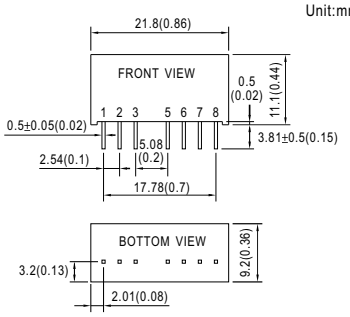
- 2:1 wide input range
- 1000VDC I/O isolation
- Built-in remote ON/OFF control
- Built-in EMI filter
- Protections: Short circuit / Overload
- Cooling by free air convection
- Single in line package
- 100% full load burn-in test
- Low cost / High reliability
- Modified models available: output 3.3V/9V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

SPECIFICATION

ORDER NO.		SPB03E-05	SPB03A-05	SPB03B-05	SPB03C-05	SPB03E-12	SPB03A-12	SPB03B-12	SPB03C-12	SPB03E-15	SPB03A-15	SPB03B-15	SPB03C-15
OUTPUT	DC VOLTAGE	5V				12V				15V			
	CURRENT RANGE	60 ~ 600mA				25 ~ 250mA				20 ~ 200mA			
	RATED POWER	3W											
	RIPPLE & NOISE (max.) Note.2	50mVp-p				60mVp-p				60mVp-p			
	LINE REGULATION Note.3	±0.5%											
	LOAD REGULATION Note.4	±0.5%											
	VOLTAGE ACCURACY	±2.0%											
	SWITCHING FREQUENCY	100KHz min.											
INPUT	VOLTAGE RANGE	E: 4.5 ~ 9VDC A: 9 ~ 18VDC B: 18 ~ 36VDC C: 36 ~ 72VDC											
	EFFICIENCY (Typ.)	74%	73%	77%	78%	76%	80%	80%	79%	75%	80%	80%	82%
	DC CURRENT	Full load	E: 810mA	A: 340mA	B: 165mA	C: 85mA							
		No load	E: 110mA	A: 40mA	B: 20mA	C: 10mA							
	FILTER	Pi network											
	PROTECTION	Fuse recommended											
PROTECTION (Note. 5)	OVERLOAD	150 ~ 250% 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.	-40 ~ +85℃ (Refer to output load derating curve)											
	WORKING HUMIDITY	20% ~ 90% RH non-condensing											
	STORAGE TEMP., HUMIDITY	-25 ~ +105℃, 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	WITHSTAND VOLTAGE	I/P-O/P:1KVDC											
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25℃/ 70% RH											
	ISOLATION CAPACITANCE	80pF max.											
	EMI CONDUCTION & 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	REMOTE CONTROL	Power ON : R.C. ~ +Vin < 1VDC or open ; Power OFF : R.C. ~ +Vin > 4VDC or short											
	MTBF	600Khrs min. MIL-HDBK-217F(25℃)											
	DIMENSION	21.8*9.2*11.1mm or 0.86"*0.36"*0.44" inch (L*W*H)											
	WEIGHT	4.8g											

■ Mechanical Specification

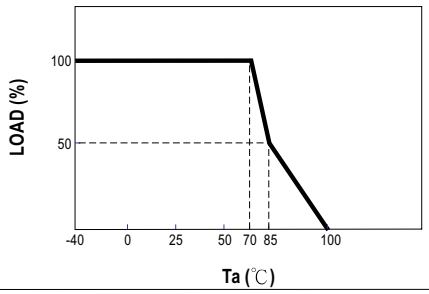
Unit:mm(inch)



■ 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	
	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 10% to 100% rated load. 5.Please prevent the converter from operating in overload or short circuit condition for more than 30 seconds.

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