



3W DC-DC Regulated Single Output Converter

SPB03 series



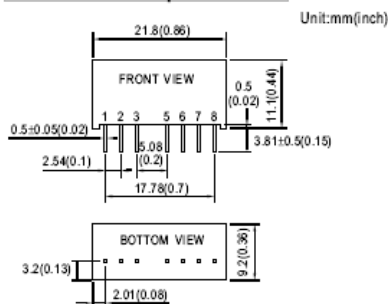
- Features :
  - 2:1 wide input range
  - 1000VDC I/O isolation
  - Built-in remote ON/OFF control
  - Built-in EMI filter
  - Protections: Short circuit / Overload
  - Cooling by free air convection
  - Single in line package
  - 100% full load burn-in test
  - Low cost / High reliability
  - Modified 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°C (Refer to output load derating curve)											
	WORKING HUMIDITY	20% ~ 90% RH non-condensing											
	STORAGE TEMP., HUMIDITY	-25 ~ +105°C, 10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.05% / °C (0 ~ 50°C)											
SAFETY	WITHSTAND VOLTAGE	I/P-O/P: 1KVDC											
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25°C / 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°C)											
	DIMENSION	21.8*9.2*11.1mm or 0.86**0.36**0.44" inch (L*W*H)											
	WEIGHT	4.8g											

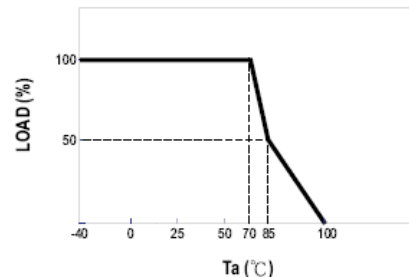
■ Mechanical Specification



■ 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°C 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.