



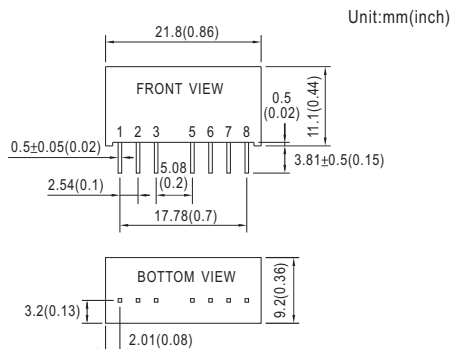
- Features :
  - 2:1 wide input range
  - 4:1 wide input range (Option)
  - 1000VDC I/O isolation
  - 3000VDC I/O isolation (Option)
  - Built-in remote ON/OFF control
  - Built-in EMI filter
  - Protections: Short circuit / Overload
  - Cooling by free air convection
  - Single in line package
  - 100% full load burn-in test
  - Low cost / High reliability
  - Modified models available: output 3.3V/9V
  - 2 years warranty



**SPECIFICATION**

ORDER NO.	SPA02E-05	SPA02A-05	SPA02B-05	SPA02C-05	SPA02E-12	SPA02A-12	SPA02B-12	SPA02C-12	SPA02E-15	SPA02A-15	SPA02B-15	SPA02C-15		
OUTPUT	DC VOLTAGE	5V				12V				15V				
	CURRENT RANGE	40 ~ 400mA				15 ~ 150mA		17 ~ 167mA		12 ~ 120mA		13 ~ 133mA		
	RATED POWER	2W				1.8W		2W		1.8W		2W		
	RIPPLE & NOISE (max.) Note.2	60mVp-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.)	71%	76%	76%	74%	74%	80%	80%	82%	76%	80%	80%	78%	
	DC CURRENT	Full load	E: 600mA A: 225mA B: 115mA C: 60mA											
		No load	E: 50mA A: 25mA B: 15mA C: 8mA											
	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	-40 ~ +105°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	WITHSTAND VOLTAGE	I/P-O/P:1KVDC												
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH												
	ISOLATION CAPACITANCE	80pF max.												
	EMC EMISSION	Compliance to EN55022 Class B, FCC part 15 Class B												
	EMC 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												

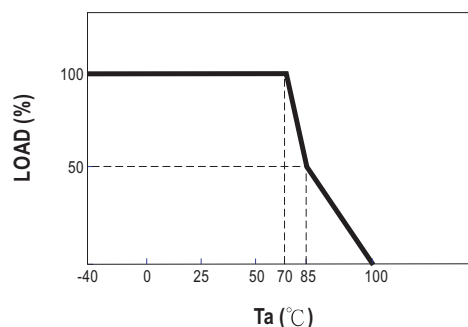
■ Mechanical Specification



■ 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

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