20W DC-DC Regulated Single Output Converter

SKA20 series

Features :

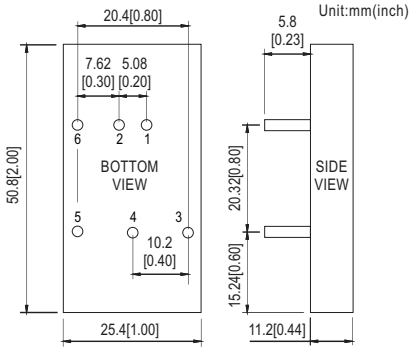
- 2"x1" compact size
- 2:1 wide input range
- High efficiency up to 89.5%
- 1500VDC I/O isolation
- Built-in remote ON/OFF control
- Built-in trimming output
- Built-in EMI filter
- Protections: Short circuit / Overload / Input and Output Over voltage
- Cooling by free air convection
- Six-sided shield metal case
- 100% burn-in test
- Low cost / High reliability
- Approvals: FCC / CE
- 2 years warranty

SPECIFICATION

ORDER NO.			SKA20A-05	SKA20B-05	SKA20C-05	SKA20A-12	SKA20B-12	SKA20C-12	SKA20A-15	SKA20B-15	SKA20C-15
OUTPUT	DC VOLTAGE		5V			12V			15V		
	CURRENT RANGE		400 ~ 4000mA			166 ~ 1666mA			133 ~ 1333mA		
	RATED POWER		20W								
	RIPPLE & NOISE (max.) Note.2		50mVp-p			60mVp-p			60mVp-p		
	LINE REGULATION Note.3		±0.2%								
	LOAD REGULATION Note.4		±0.5%								
	VOLTAGE ACCURACY		±2.0%								
	SWITCHING FREQUENCY		300KHz typ.								
	EXTERNAL CAPACITANCE LOAD (max.)		1000uF			220uF			100uF		
	EXTERNAL TRIM Adj. RANGE(Typ.)		±10%			-20 ~ +10%			-20 ~ +10%		
INPUT	VOLTAGE RANGE		A: 9 ~ 18VDC B: 18 ~ 36VDC C: 36 ~ 75VDC								
	EFFICIENCY (Typ.)		87.5%	88%	88.5%	88%	88.5%	87.5%	89%	89.5%	88%
	DC CURRENT	Full load	1910mA	970mA	490mA	1910mA	970mA	500mA	1870mA	950mA	490mA
		No load	80mA	55mA	40mA	35mA	25mA	15mA	35mA	25mA	15mA
	FILTER		Pi network								
	REMOTE CONTROL		Power ON : R.C ~ -Vin > 2.5VDC or open circuit ; Power OFF : R.C ~ -Vin < 0.5VDC or short								
	PROTECTION		Fuse recommended								
PROTECTION (Note. 5)	OVER CURRENT		110% ~ 180% 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								
	OVER VOLTAGE	Input(Typ.)	A: >20 ~ 23VDC B: >40 ~ 43VDC C: >80 ~ 82VDC input voltage								
		Output	Protection type : Shut down o/p voltage, recovers automatically after fault condition is removed								
ENVIRONMENT	WORKING TEMP.		-40 ~ +85℃ (Refer to "Derating Curve")								
	WORKING HUMIDITY		20% ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY		-55 ~ +125℃, 10 ~ 95% RH								
	TEMP. COEFFICIENT		±0.03% / ℃ (0 ~ 50℃)								
	VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
SAFETY & EMC	SAFETY STANDARDS		EAC TP TC 004 approved								
	WITHSTAND VOLTAGE		I/P-O/P:1.5KVDC								
	ISOLATION RESISTANCE		I/P-O/P: 100M Ohms / 500VDC / 25℃/ 70% RH								
	EMC EMISSION		Compliance to EN55032 Class A, FCC part 15 Class A, EAC TP TC 020								
	EMC IMMUNITY		Compliance to EN61000-4-2,3,4,5,6,8, light industry level, criteria A, EAC TP TC 020								
OTHERS	MTBF		700Khrs min. MIL-HDBK-217F(25℃)								
	DIMENSION		50.8*25.4*11.2 mm or 2"*1"*0.44" inch (L*W*H)								
	WEIGHT		31.2g								

Mechanical Specification

Unit:mm(inch)

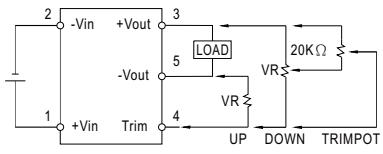


Pin Configuration

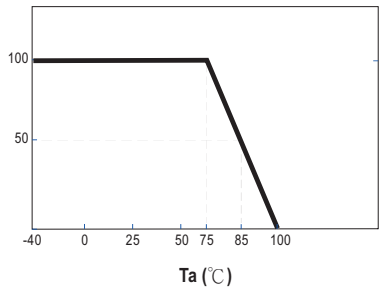
Pin No.	Output	Pin No.	Output
1	+Vin	4	Trim
2	-Vin	5	-Vout
3	+Vout	6	R.C

NOTE: Pin Size is Tolerance 1.0 ϕ ±0.10mm

External Output Trimming



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.