



### ■ Features :

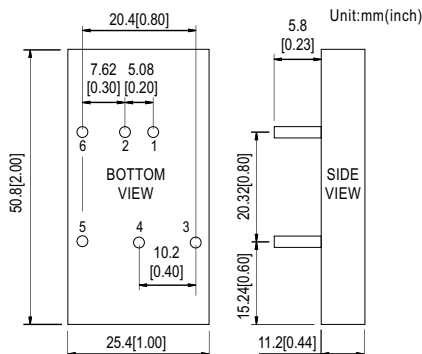
- 2"x1" compact size
- 2:1 wide input range
- High efficiency up to 89.5%
- 1500VDC I/O isolation
- Built-in remote ON/OFF control
- Built-in trimming output
- Built-in EMI filter
- Protections: Short circuit / Overload / Input and Output Over voltage
- Cooling by free air convection
- Six-sided shield 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                       |             |           | 12V          |  |            | 15V          |           |                  |  |  |
|                                | CURRENT RANGE                    |             |           | 166 ~ 1666mA |  |            | 133 ~ 1333mA |           |                  |  |  |
|                                | RATED POWER                      |             |           |              |  |            |              |           |                  | 20W  |  |
|                                | RIPPLE & NOISE (max.) Note.2     |             |           | 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.) |             |           | 220uF        |  |            | 100uF        |           |                  |  |  |
| EXTERNAL TRIM Adj. RANGE(Typ.) |                                  |             | ±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<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed         |  |
|                                | SHORT CIRCUIT                    |             |           |              |  |            |              |           |                  | All output equipped with short circuit<br>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°C (Refer to "Derating Curve")  |  |
|                                | WORKING HUMIDITY                 |             |           |              |  |            |              |           |                  | 20% ~ 90% RH non-condensing  |  |
|                                | STORAGE TEMP., HUMIDITY          |             |           |              |  |            |              |           |                  | -55 ~ +125°C, 10 ~ 95% RH  |  |
|                                | TEMP. COEFFICIENT                |             |           |              |  |            |              |           |                  | ±0.03% / °C (0 ~ 50°C)   |  |
|                                | VIBRATION                        |             |           |              |  |            |              |           |                  | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes  |  |
| SAFETY & EMC                   | WITHSTAND VOLTAGE                |             |           |              |  |            |              |           |                  | I/P-O/P: 1.5KVDC   |  |
|                                | ISOLATION RESISTANCE             |             |           |              |  |            |              |           |                  | I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH  |  |
|                                | EMC EMISSION                     |             |           |              |  |            |              |           |                  | Compliance to EN55022 Class A, FCC part 15 Class A   |  |
|                                | EMC IMMUNITY                     |             |           |              |  |            |              |           |                  | Compliance to EN61000-4-2,3,4,5,6,8, light industry level, criteria A  |  |
| OTHERS                         | MTBF                             |             |           |              |  |            |              |           |                  | 700Khrs min. MIL-HDBK-217F(25°C)   |  |
|                                | DIMENSION                        |             |           |              |  |            |              |           |                  | 50.8*25.4*11.2 mm or 2**1**0.44" inch (L*W*H)  |  |
|                                | WEIGHT                           |             |           |              |  |            |              |           |                  | 31.2g  |  |

### ■ Mechanical Specification

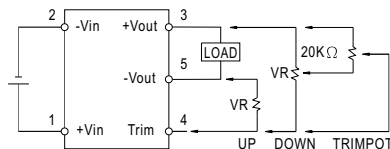


### ■ Pin Configuration

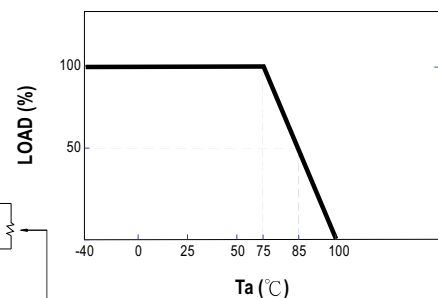
| Pin No. | Output | Pin No. | Output |
|---------|--------|---------|--------|
| 1       | +Vin   | 4       | Trim   |
| 2       | -Vin   | 5       | -Vout  |
| 3       | +Vout  | 6       | R.C    |

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°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.