



### ■ Features :

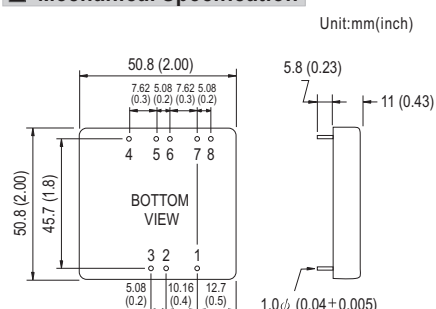
- 2"x2" compact size
- 2:1 wide input range
- High efficiency up to 93%
- 1500VDC I/O isolation
- Built-in remote ON / OFF control
- Built-in remote sense
- Trimming output  $\pm 10\%$
- Comply with CE / FCC without external components
- Protections: Short circuit / Overload / Input and output Over voltage
- Cooling by free air convection
- Six-sided shield metal case
- 100% burn-in test
- Low cost / High reliability
- Output 3.3V available
- 2 years warranty



### SPECIFICATION

| ORDER NO.                      |                                  | SKA60A-05    | SKA60B-05                                                                                                                                                    | SKA60C-05 | SKA60A-12 | SKA60B-12 | SKA60C-12 | SKA60A-15 | SKA60B-15 | SKA60C-15 |        |
|--------------------------------|----------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|
| OUTPUT                         | DC VOLTAGE                       | 5V           |                                                                                                                                                              |           | 12V       |           |           | 15V       |           |           |        |
|                                | CURRENT RANGE                    | 1.2 ~ 12A    |                                                                                                                                                              |           | 0.5 ~ 5A  |           |           | 0.4 ~ 4A  |           |           |        |
|                                | RATED POWER                      | 60W          |                                                                                                                                                              |           |           |           |           |           |           |           |        |
|                                | RIPPLE & NOISE (max.) Note.2     | 60mVp-p      |                                                                                                                                                              |           | 80mVp-p   |           |           | 100mVp-p  |           |           |        |
|                                | LINE REGULATION Note.3           | ±0.5%        |                                                                                                                                                              |           |           |           |           |           |           |           |        |
|                                | LOAD REGULATION Note.4           | ±0.5%        |                                                                                                                                                              |           |           |           |           |           |           |           |        |
|                                | VOLTAGE ACCURACY                 | ±2.0%        |                                                                                                                                                              |           |           |           |           |           |           |           |        |
|                                | SWITCHING FREQUENCY              | 250KHz min.  |                                                                                                                                                              |           |           |           |           |           |           |           |        |
|                                | EXTERNAL CAPACITANCE LOAD (max.) | 1000uF       |                                                                                                                                                              |           | 220uF     |           |           | 100uF     |           |           |        |
| EXTERNAL TRIM Adj. RANGE(Typ.) |                                  | ±10%         |                                                                                                                                                              |           |           |           |           |           |           |           |        |
| INPUT                          | VOLTAGE RANGE                    |              | A: 9 ~ 18VDC B: 18 ~ 36VDC C: 36 ~ 75VDC                                                                                                                     |           |           |           |           |           |           |           |        |
|                                | EFFICIENCY (Typ.)                |              | 91%                                                                                                                                                          | 90.5%     | 92%       | 92%       | 92.5%     | 92%       | 92%       | 93%       | 92.5%  |
|                                | DC CURRENT                       | Full load    | 5505mA                                                                                                                                                       | 2775mA    | 1370mA    | 5445mA    | 2715mA    | 1370mA    | 5400mA    | 2690mA    | 1370mA |
|                                |                                  | No load      | 185mA                                                                                                                                                        | 120mA     | 60mA      | 160mA     | 120mA     | 60mA      | 160mA     | 120mA     | 85mA   |
|                                | 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<br>(Note. 5)        | OVER CURRENT                     |              | 110% ~ 160% 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 ~ 25VDC B: >40 ~ 50VDC C: >80 ~ 100VDC input voltage Protection type : Shut down o/p voltage, recovers automatically after fault condition is removed |           |           |           |           |           |           |           |        |
|                                |                                  | Output(Typ.) | 5Vo : 7V ~ 8.95V ; 12Vo : 15V ~ 19.2V ; 15Vo : 18V ~ 23.3V Protection type : Clamp by TVS diode                                                              |           |           |           |           |           |           |           |        |
| ENVIRONMENT                    | WORKING TEMP.                    |              | -40 ~ +70℃ (Refer to "Derating Curve")                                                                                                                       |           |           |           |           |           |           |           |        |
|                                | CASE TEMP.                       |              | +100℃ max.                                                                                                                                                   |           |           |           |           |           |           |           |        |
|                                | WORKING HUMIDITY                 |              | 20% ~ 90% RH non-condensing                                                                                                                                  |           |           |           |           |           |           |           |        |
|                                | STORAGE TEMP., HUMIDITY          |              | -55 ~ +105℃, 10 ~ 95% RH                                                                                                                                     |           |           |           |           |           |           |           |        |
|                                | TEMP. COEFFICIENT                |              | ±0.03% / ℃ (0 ~ 50℃)                                                                                                                                         |           |           |           |           |           |           |           |        |
| SAFETY &<br>EMC                | VIBRATION                        |              | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                                                      |           |           |           |           |           |           |           |        |
|                                | WITHSTAND VOLTAGE                |              | I/P-O/P: 1.5KVDC                                                                                                                                             |           |           |           |           |           |           |           |        |
|                                | ISOLATION RESISTANCE             |              | I/P-O/P: 100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                                   |           |           |           |           |           |           |           |        |
|                                | EMC EMISSION                     |              | Compliance to EN55022 Class A, FCC part 15 Class A without external components                                                                               |           |           |           |           |           |           |           |        |
| OTHERS                         | EMC IMMUNITY                     |              | Compliance to EN61000-4-2,3,4,5,6,8, light industry level, criteria A                                                                                        |           |           |           |           |           |           |           |        |
|                                | DIMENSION                        |              | 50.8*50.8*11.0 mm or 2"*2"*0.43" inch (L*W*H)                                                                                                                |           |           |           |           |           |           |           |        |
|                                | WEIGHT                           |              | 67g                                                                                                                                                          |           |           |           |           |           |           |           |        |

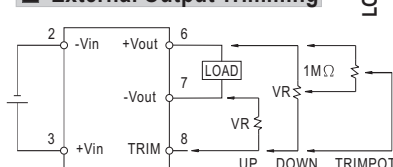
### ■ Mechanical Specification



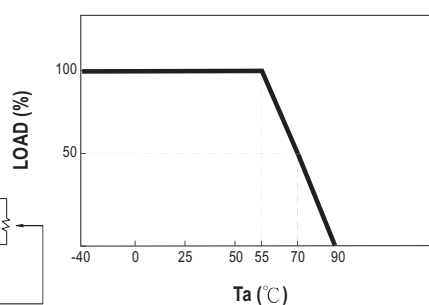
### ■ Pin Configuration

| Pin No. | Output | Pin No. | Output |
|---------|--------|---------|--------|
| 1       | R.C    | 5       | +R.S   |
| 2       | -Vin   | 6       | +Vout  |
| 3       | +Vin   | 7       | -Vout  |
| 4       | -R.S   | 8       | TRIM   |

### ■ 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.