



## ■ Features :

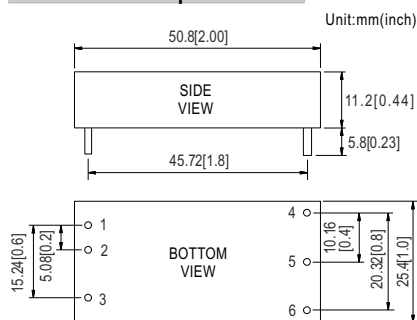
- 2"x1" compact size
- 2:1 wide input range
- High efficiency up to 90%
- 1500VDC I/O isolation
- Built-in remote ON/OFF control
- Built-in trimming output
- Comply with CE / FCC without external components
- Protections: Short circuit / Overload / Input and Output Over voltage
- Cooling by free air convection
- Six-sided shield metal case
- 100% burn-in test
- Low cost / High reliability
- Approvals: FCC / CE
- 2 years warranty



## SPECIFICATION

| ORDER NO.                      |                                  | SKM30A-05        | SKM30B-05                                                                                                                                                    | SKM30C-05 | SKM30A-12  | SKM30B-12   | SKM30C-12 | SKM30A-15  | SKM30B-15 | SKM30C-15 |       |
|--------------------------------|----------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-------------|-----------|------------|-----------|-----------|-------|
| OUTPUT                         | DC VOLTAGE                       |                  | 5V                                                                                                                                                           |           |            | 12V         |           |            | 15V       |           |       |
|                                | CURRENT RANGE                    |                  | 0.6 ~ 6A                                                                                                                                                     |           |            | 0.25 ~ 2.5A |           |            | 0.2 ~ 2A  |           |       |
|                                | RATED POWER                      |                  | 30W                                                                                                                                                          |           |            |             |           |            |           |           |       |
|                                | RIPPLE & NOISE (max.) Note.2     |                  | 90mVp-p                                                                                                                                                      |           |            | 120mVp-p    |           |            | 120mVp-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                                                                                                                     |           |            |             |           |            |           |           |       |
|                                | UNDER VOLTAGE SHUTDOWN           |                  | A: 8VDC B: 16VDC C: 32VDC                                                                                                                                    |           |            |             |           |            |           |           |       |
|                                | EFFICIENCY (Typ.)                |                  | 88%                                                                                                                                                          | 88.5%     | 88%        | 89.5%       | 89%       | 89%        | 89.5%     | 90%       | 90%   |
|                                | DC CURRENT                       | Full load        | 2840mA                                                                                                                                                       | 1420mA    | 720mA      | 2810mA      | 1420mA    | 710mA      | 2800mA    | 1400mA    | 700mA |
|                                |                                  | No load          | 170mA                                                                                                                                                        | 95mA      | 60mA       | 150mA       | 40mA      | 55mA       | 135mA     | 40mA      | 30mA  |
|                                | 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% ~ 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 ~ 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 ~ +75℃ (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 &<br>EMC                | 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                                                                               |           |            |             |           |            |           |           |       |
|                                | 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℃)                                                                                                                              |           |            |             |           |            |           |           |       |
|                                | DIMENSION                        |                  | 50.8*25.4*11.2 mm or 2**1**0.44" inch (L*W*H)                                                                                                                |           |            |             |           |            |           |           |       |
|                                | WEIGHT                           |                  | 31.2g                                                                                                                                                        |           |            |             |           |            |           |           |       |

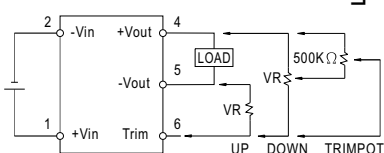
## ■ Mechanical Specification



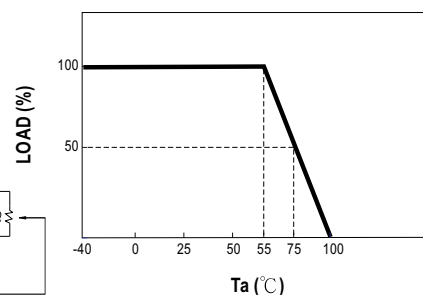
## ■ Pin Configuration

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