



## 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 / EAC / CE / UKCA
- 2 years warranty

## ■ GTIN CODE

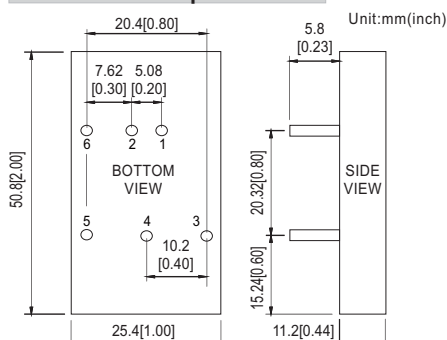
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## 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<br>(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                   | SAFETY STANDARDS                 |                                                                                           | EAC TP TC 020/2011 (EAC TP TC 004 for 48Vin type only) approved                                                                  |           |            |              |           |            |              |           |       |
|                                | 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 BS EN/EN55032 Class A, FCC part 15 Class A, EAC TP TC 020                                                          |           |            |              |           |            |              |           |       |
|                                | EMC IMMUNITY                     |                                                                                           | Compliance to BS EN/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°C)                                                                                                 |           |            |              |           |            |              |           |       |
|                                | DIMENSION                        |                                                                                           | 50.8*25.4*11.2 mm or 2"*1"*0.44" inch (L*W*H)                                                                                    |           |            |              |           |            |              |           |       |
|                                | PACKING                          |                                                                                           | 31.2g ; 10pcs/per tube, 400pcs/40 tube/per carton                                                                                |           |            |              |           |            |              |           |       |

## ■ Mechanical Specification

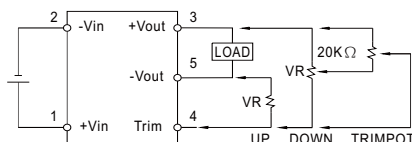


## ■ Pin Configuration

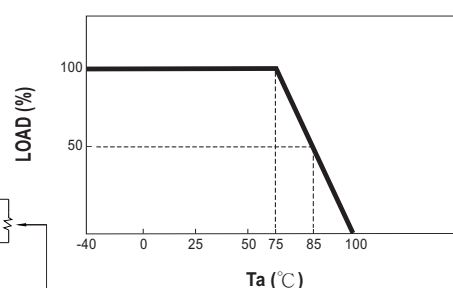
| Pin No. | Output | Pin No. | Output |
|---------|--------|---------|--------|
| 1       | +Vin   | 4       | Trim   |
| 2       | -Vin   | 5       | -Vout  |
| 3       | +Vout  | 6       | R.C    |

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.
- ※ Product Liability Disclaimer : For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>



## 20W DC-DC Regulated Single Output Converter

## SKA20 series

## ■ Packing

| Standard Tube Packing                                                     | MPQ<br>Per Tube<br>(PCS) | One Tube<br>G.W. | Max. Q'TY/<br>Carton(PCS) | One Carton<br>G.W. |
|---------------------------------------------------------------------------|--------------------------|------------------|---------------------------|--------------------|
| <p>Unit : mm</p> <p>Tube pattern</p> <p>CARTON<br/>L600 x W230 x H220</p> | 10                       | 400g             | 400                       | 16.8Kg             |

## ■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>