



10W DC-DC Regulated Dual Output Converter

**DKE10** series



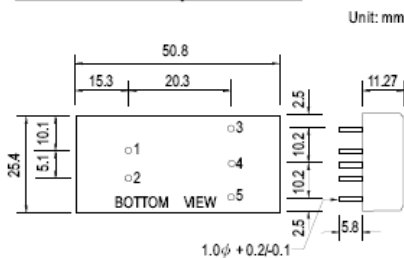
- Features :
  - 2:1 wide input range
  - 4:1 wide input range(option)
  - 1000VDC I/O isolation
  - 3000VDC I/O isolation(option)
  - Built-in EMI filter
  - Protections: Short circuit / Overload
  - Cooling by free air convection
  - Six-sided shield metal case
  - 100% burn-in test
  - Low cost / High reliability
  - Approvals: FCC / CE
  - 2 years warranty



**SPECIFICATION**

| ORDER NO.            | DKE10A-05                    | DKE10B-05 | DKE10C-05 | DKE10A-12   | DKE10B-12 | DKE10C-12 | DKE10A-15  | DKE10B-15 | DKE10C-15 | DKE10A-24      | DKE10B-24 | DKE10C-24 |              |  |  |
|----------------------|------------------------------|-----------|-----------|---|-----------|-----------|--|-----------|-----------|----------------|-----------|-----------|--------------|--|--|
| OUTPUT               | DC VOLTAGE                   |           |           | ±5V   |           |           | ±12V   |           |           | ±15V           |           |           | ±24V         |  |  |
|                      | CURRENT RANGE                |           |           | ±100 ~ ±1000mA  |           |           | ±42 ~ ±420mA   |           |           | ±33.3 ~ ±333mA |           |           | ±21 ~ ±210mA |  |  |
|                      | RATED POWER                  |           |           | 10W   |           |           |  |           |           |                |           |           |              |  |  |
|                      | RIPPLE & NOISE (max.) Note.2 |           |           | 50mVp-p   |           |           | 60mVp-p  |           |           | 60mVp-p        |           |           | 80mVp-p      |  |  |
|                      | LINE REGULATION Note.3       |           |           | ±0.3%   |           |           |  |           |           |                |           |           |              |  |  |
|                      | LOAD REGULATION Note.4       |           |           | ±0.5%   |           |           |  |           |           |                |           |           |              |  |  |
|                      | VOLTAGE ACCURACY             |           |           | ±2.0%   |           |           |  |           |           |                |           |           |              |  |  |
| INPUT                | SWITCHING FREQUENCY          |           |           | 250KHz min.   |           |           |  |           |           |                |           |           |              |  |  |
|                      | VOLTAGE RANGE                |           |           | A: 9 ~ 18VDC B: 18 ~ 36VDC C: 36 ~ 72VDC                                |           |           |  |           |           |                |           |           |              |  |  |
|                      | EFFICIENCY (Typ.)            |           |           | 78%   |           |           | 81%  |           |           | 82%            |           |           | 80%          |  |  |
|                      | DC CURRENT                   |           |           | Full load A: 1100mA B: 530mA C: 270mA                                   |           |           | No load A: 30mA B: 16mA C: 8mA   |           |           |                |           |           |              |  |  |
|                      | FILTER                       |           |           | PI network  |           |           |  |           |           |                |           |           |              |  |  |
| PROTECTION (Note. 5) | PROTECTION                   |           |           | Fuse recommended  |           |           |  |           |           |                |           |           |              |  |  |
|                      | OVER CURRENT                 |           |           | 160% ~ 250% 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 |           |           |                |           |           |              |  |  |
| ENVIRONMENT          | WORKING TEMP.                |           |           | -25 ~ +71°C (Refer to output load derating curve)                       |           |           |  |           |           |                |           |           |              |  |  |
|                      | WORKING HUMIDITY             |           |           | 20% ~ 90% RH non-condensing   |           |           |  |           |           |                |           |           |              |  |  |
|                      | STORAGE TEMP., HUMIDITY      |           |           | -25 ~ +105°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: 1KVDC  |           |           |  |           |           |                |           |           |              |  |  |
|                      | ISOLATION RESISTANCE         |           |           | I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH                             |           |           |  |           |           |                |           |           |              |  |  |
|                      | EMI CONDUCTION & RADIATION   |           |           | Compliance to EN55022 Class B, FCC part 15 Class B                      |           |           |  |           |           |                |           |           |              |  |  |
|                      | EMS IMMUNITY                 |           |           | Compliance to EN61000-4-2,3,4,5,6,8, light industry level, criteria A   |           |           |  |           |           |                |           |           |              |  |  |
| OTHERS               | MTBF                         |           |           | 500Khrs min. MIL-HDBK-217F(25°C)  |           |           |  |           |           |                |           |           |              |  |  |
|                      | DIMENSION                    |           |           | 50.8*25.4*11.2mm or 2**1**0.44" inch (L*W*H)                            |           |           |  |           |           |                |           |           |              |  |  |
|                      | WEIGHT                       |           |           | 32g   |           |           |  |           |           |                |           |           |              |  |  |

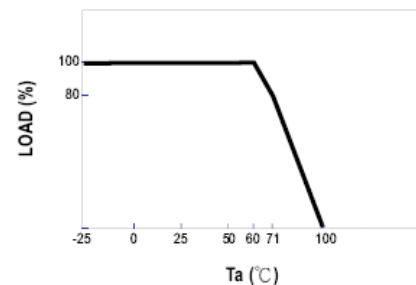
■ Mechanical Specification



■ Pin Configuration

| PinNo. | Output |
|--------|--------|
| 1      | +Vin   |
| 2      | -Vin   |
| 3      | +Vout  |
| 4      | COM    |
| 5      | -Vout  |

■ Derating Curve



NOTE

- All parameters are specified at normal input, rated load, 25°C 70% RH Ambient.
- Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.
- Line regulation is measured from low line to high line at rated load.
- Load regulation is measured from 10% to 100% rated load.
- Please prevent the converter from operating in overload or short circuit condition for more than 30 seconds.