

TDK DC to DC Converters, DC to AC Inverters

1.5W

40E D ■ 8821248 0004995 5 ■ TDKA

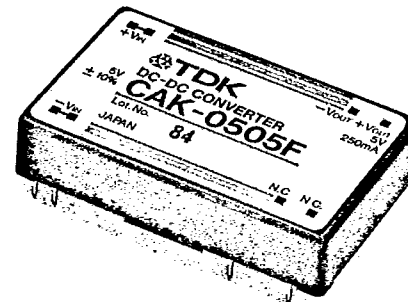
T D K CORP

T-57-11

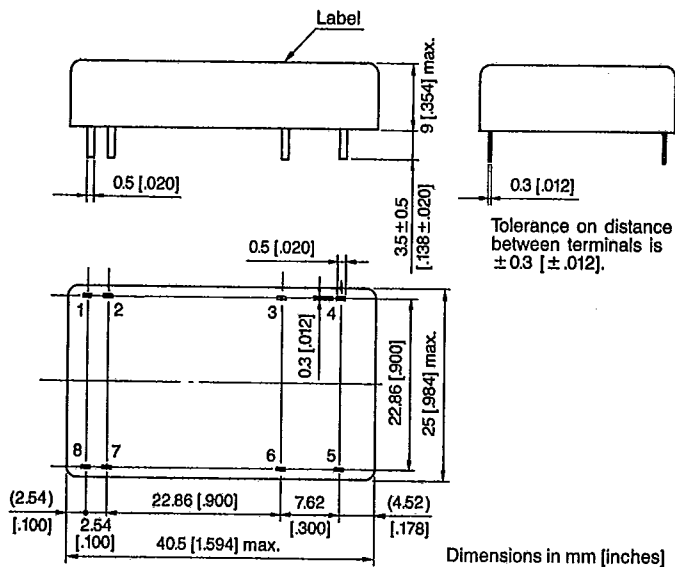
CAK SERIES DC TO DC CONVERTERS

FEATURES

- No electrolytic capacitors used, ensuring long life and high reliability.
- High output voltage stability.
- Floating input and output.
- Low ripple and noise voltage.
- External components are unnecessary.



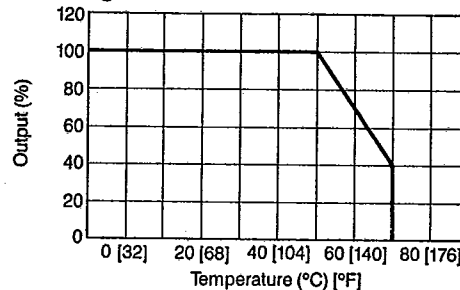
SHAPES AND DIMENSIONS



TEMPERATURE AND HUMIDITY RANGES

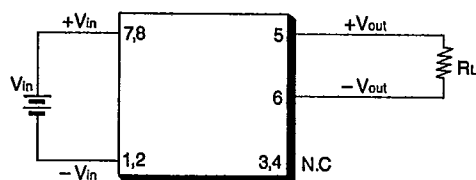
| | |
|-----------------------|---|
| Operating temperature | -10 to +70°C [+14 to +158°F] (at 50°C [122°F] or above, refer to derating curve.) |
| Storage temperature | -20 to +85°C [-4 to +185°F] |
| Humidity | 95% max. (Maximum wet bulb temperature: 38°C [100.4°F]) |

Derating curve

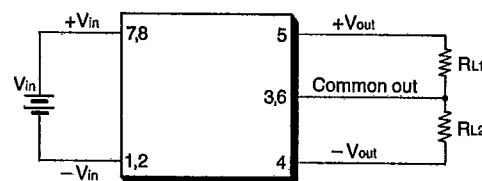


Terminal pin configuration

CAK-□□□□F series (single output type)



CAK-00□□F series (dual output type)



| Terminal pin No. | Part No. | |
|------------------|---------------|------------|
| | CAK-□□□□F | CAK-00□□F |
| 1 | - Vin | - Vin |
| 2 | - Vin | - Vin |
| 3 | No connection | Common out |
| 4 | No connection | - Vout |
| 5 | + Vout | + Vout |
| 6 | - Vout | Common out |
| 7 | + Vin | + Vin |
| 8 | + Vin | + Vin |

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ELECTRICAL CHARACTERISTICS

| Part No. | Input voltage (V) | Output* ¹ voltage (V) | Output current (mA) | Ripple and noise voltage* ² (% p-p) | Output voltage stability depending on: | | | Efficiency* ³ (%) min. | Input-output isolation | Weight (g) |
|-----------|-------------------|----------------------------------|---------------------|--|--|---------------|-------------------|-----------------------------------|---|------------|
| | | | | | Input (%) typ. | Load (%) typ. | Temp. (%/°C) typ. | | | |
| CAK-0505F | 5 ± 10% | | | | | | | | | |
| CAK-1205F | 12 ± 10% | 5 ± 5% | 0 to 250 | 1.0 | 0.05 | 0.4 | 0.01 | | | |
| CAK-2405F | 24 ± 10% | | | | | | | | | |
| CAK-0512F | 5 ± 10% | | | | | | | | | |
| CAK-1212F | 12 ± 10% | 12 ± 5% | 0 to 150 | 1.0 | 0.06 | 0.25 | 0.01 | 60 | Dielectric strength 1 minute 500Vac Resistance 50MΩ min. 500Vdc | 15 |
| CAK-2412F | 24 ± 10% | | | | | | | | | |
| CAK-0515F | 5 ± 10% | | | | | | | | | |
| CAK-1215F | 12 ± 10% | 15 ± 5% | 0 to 130 | 1.0 | 0.07 | 0.2 | 0.01 | | | |
| CAK-2415F | 24 ± 10% | | | | | | | | | |
| CAK-001AF | 5 ± 10% | | | | | | | | | |
| CAK-001LF | 12 ± 10% | ± 12 ± 5% | (0 to 60) × 2 | 1.0 | 0.03 | 0.03 | 0.01 | | | |
| CAK-001MF | 24 ± 10% | | | | | | | | | |
| CAK-002AF | 5 ± 10% | | | | | | | | | |
| CAK-002LF | 12 ± 10% | ± 15 ± 5% | (0 to 50) × 2 | 1.0 | 0.03 | 0.03 | 0.01 | 50 | Dielectric strength 1 minute 500Vac Resistance 50MΩ min. 500Vdc | 15 |
| CAK-002MF | 24 ± 10% | | | | | | | | | |

*¹ Tolerance of output voltage includes fluctuations in the input (± 10%), load (0 to 100%) and temperature (− 10 to +70°C [14 to 158°F]). Ripple and noise voltage are included.

*² Measured with a 50MHz bandwidth.

*³ Maximum load at typical input voltage.