

# TDK DC to DC Converters, DC to AC Inverters

1.5W

40E D ■ 8821248 0004995 5 ■ TDKA

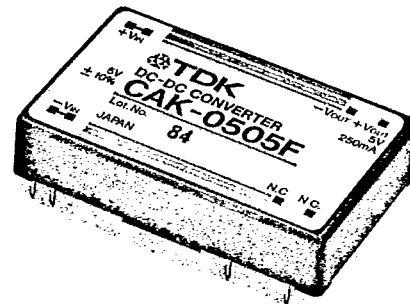
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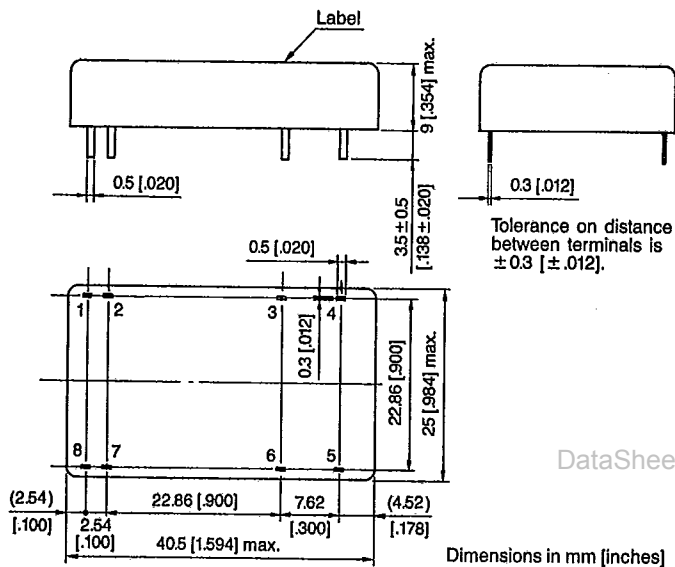
## CAK SERIES DC TO DC CONVERTERS

### 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



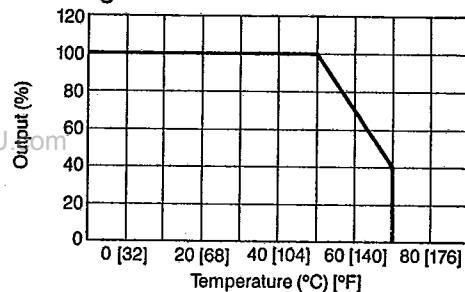
### TEMPERATURE AND HUMIDITY RANGES

Operating temperature  $-10$  to  $+70^{\circ}\text{C}$  [ $+14$  to  $+158^{\circ}\text{F}$ ] (at  $50^{\circ}\text{C}$  [ $122^{\circ}\text{F}$ ] or above, refer to derating curve.)

Storage temperature  $-20$  to  $+85^{\circ}\text{C}$  [ $-4$  to  $+185^{\circ}\text{F}$ ]

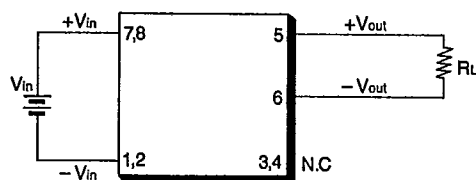
Humidity 95% max. (Maximum wet bulb temperature:  $38^{\circ}\text{C}$  [ $100.4^{\circ}\text{F}$ ])

### Derating curve

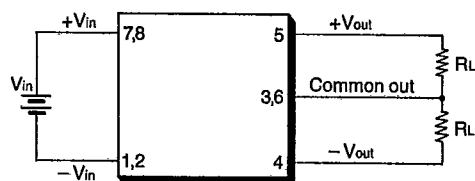


### Terminal pin configuration

CAK-□□□□F series (single output type)



CAK-00□□F series (dual output type)



Terminal pin No.	Part No.	
	CAK-□□□□F	CAK-00□□F
1		
2	$-V_{in}$	$-V_{in}$
3	No connection	Common out
4	No connection	$-V_{out}$
5	$+V_{out}$	$+V_{out}$
6	$-V_{out}$	Common out
7		
8	$+V_{in}$	$+V_{in}$

## TDK DC to DC Converters, DC to AC Inverters

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40E D ■ 8821248 0004996 7 ■ TDKA

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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		Dielectric strength 1 minute 500Vac Resistance 50MΩ min. 500Vdc	15
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		
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.