Power Supplies

DC to DC Converters
Single/Multi Output, General-Purpose

CBG Series

FEATURES

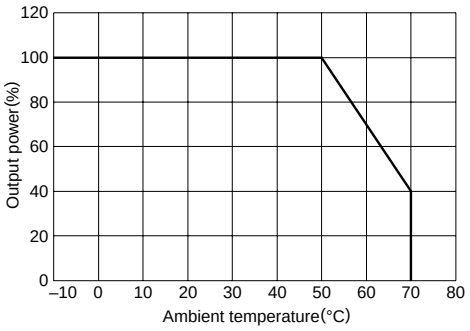
- These DC to DC converters are entirely shielded by a metal case(except base).
- No external components needed.
- Built-in short circuit protection and remote ON-OFF functions.

TEMPERATURE AND HUMIDITY RANGES

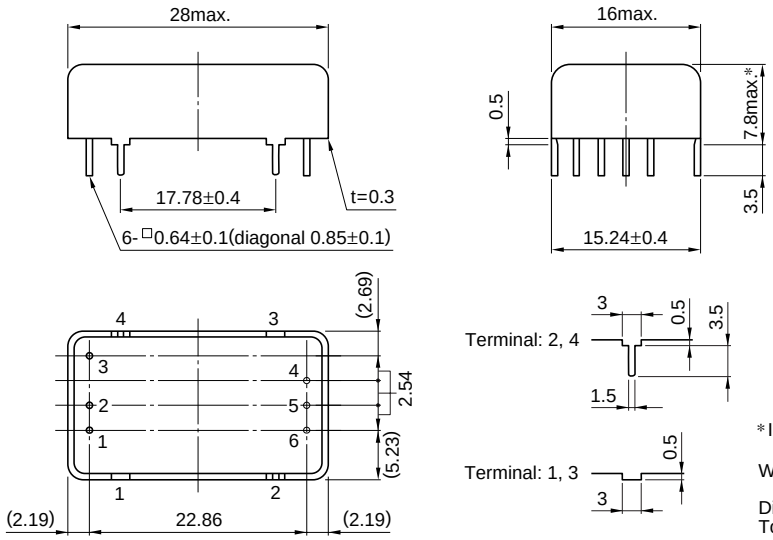
Temperature range	Operating	–10 to +70°C[With derating over 50°C]
	Storage	–20 to +85°C
Humidity range		95(%)RH max. [Maximum wet-bulb temperature:38°C]

DERATINGS

Derating is necessary when operating environment temperatures exceed 50°C.



SHAPES AND DIMENSIONS



*Including stand-off 0.5mm

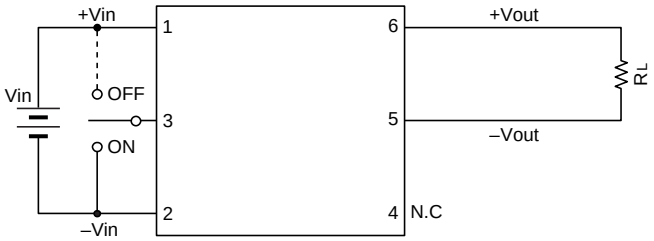
Weight: 8g

Dimensions in mm
Tolerance: ±0.3

CIRCUIT DIAGRAMS

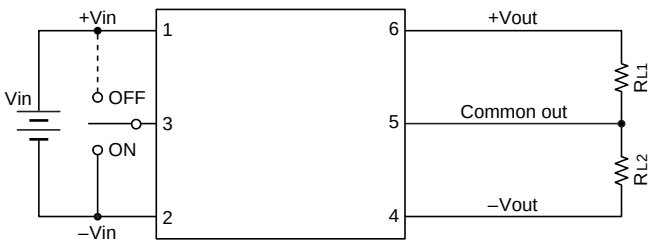
SINGLE OUTPUT TYPE

CBG-SF SERIES



2-OUTPUT TYPE

CBG-DF SERIES



TERMINAL CONNECTIONS

Series	CBG-SF	CBG-DF
No.1	+Vin	+Vin
No.2	–Vin	–Vin
No.3	Control	Control
No.4	NC	–Vout
No.5	–Vout	Common out
No.6	+Vout	+Vout

TDK

Power Supplies

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ELECTRICAL CHARACTERISTICS

Part No.	Input voltage Edc(V)	Output voltage*1 (V)	Output current (mA)	Output voltage stability(%) typ.			Output ripple noise voltage*3 Ep-p(mV)		Efficiency*4 (%)typ.	Input-output insulation
				Input	Load	Temperature*2	typ.	max.		
CBG-0505SF	4.5 to 6	5±5%	0 to 160	0.05	0.2	0.01	40	100	55	Withstand voltage AC.500V 1min Insulation resistance 50MΩ min. DC.500V
CBG-0512SF	4.5 to 6	12±5%	0 to 66	0.05	0.2	0.02	30	120	60	
CBG-0512DF	4.5 to 6	±12±8%	(0 to 33)×2	0.05	2*5	0.02	30	120	60	
CBG-0515SF	4.5 to 6	15±5%	0 to 52	0.05	0.2	0.02	30	150	60	
CBG-0515DF	4.5 to 6	±15±8%	(0 to 26)×2	0.05	2*5	0.02	30	150	60	
CBG-1205SF	10 to 16	5±5%	0 to 160	0.05	0.2	0.01	40	100	65	
CBG-1212SF	10 to 16	12±5%	0 to 66	0.05	0.2	0.02	30	120	70	
CBG-1212DF	10 to 16	±12±5%	(0 to 33)×2	0.05	2*5	0.02	30	120	70	
CBG-1215SF	10 to 16	15±5%	0 to 52	0.05	0.2	0.02	30	150	70	
CBG-1215DF	10 to 16	±15±5%	(0 to 26)×2	0.05	2*5	0.02	30	150	70	

*1 Output voltage:input variation(minimum to maximum input voltage), load variation :0 to 100%, temperature variation:–10 to +70°C.
*2 Variation value per 1°C .
*3 Measurement frequency:50MHz
*4 Input voltage:typical value, output current:maximum value
*5 2-output load variation condition:balanced load

PRECAUTIONS

- Ripple noise of the input applied voltage should be less than ±1% peak-to-peak of the standard input voltage.
- Parallel connection of outputs(to increase the converter output current) is not possible.
- Since the converter is entirely shielded by a metal case, care should be taken to isolate the case from the surrounding components and wiring pattern.
- A fuse should be connected to the input with a current rating 3 to 8 times that of the rated(normal) input current.