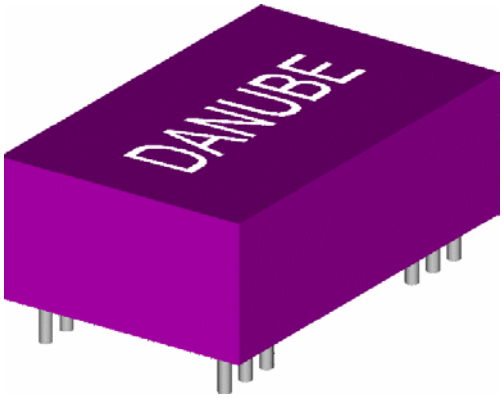
DC-DC Converter UNIT

CBR Series (2W-3W REGULATED DC-DC CONVERTER)

FEATURES

- 3000VDC ISOLATION
- HIGH EFFICIENCY
- NO HEATSINK REQUIRED
- LOW COST
- NO EXTERNAL COMPONENTS REQUIRED
- UP TO 3W REGULATED OUTPUT POWER
- DUAL IN LINE PACKAGE
- 100% BURNED IN
- LOW NOISE
- MTBF > 850,000 HOURS



OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-3% max
Temperature Coefficient	+/-0.03%/ °C
Ripple & Noise (20MHz BW)	100mVp-p max
Line Regulation[1]	+/-0.5% max
Load Regulation[2]	+/-0.5% max
Short Circuit Protection	Current Limit Protection
Short Circuit Restart	Automatic

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25 °C to +71 °C
Storage Temperature	-55 °C to +125 °C
Cooling	Free-Air Convection

ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD , AND 25 °C UNLESS OTHERWISE NOTED.

INPUT SPECIFICATIONS

Input Voltage Range	+/-10% max
Input Filter	Pi Network

GENERAL SPECIFICATIONS

Efficiency	60% min
Isolation Voltage[3]	3000 VDC min
Isolation Resistance	10^9 ohms min
Switching Frequency	25 KHz min
Isolation Capacitance	80pF max
MTBF	850,000 Hours
Weight	12.0g-14.4g
Case Material	Non-Conductive Plastic
Case Size	31.8mm*20.3mm*10.2mm

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[1] *High Line to Low Line.*

[2] *Load Regulation is for output load current change from 10% to 100%.*

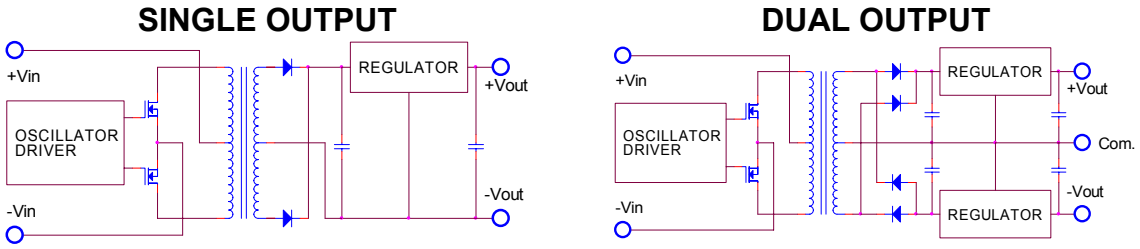
[3] *For 60 seconds*

SELECTION GUIDE
2W-3W OUTPUT

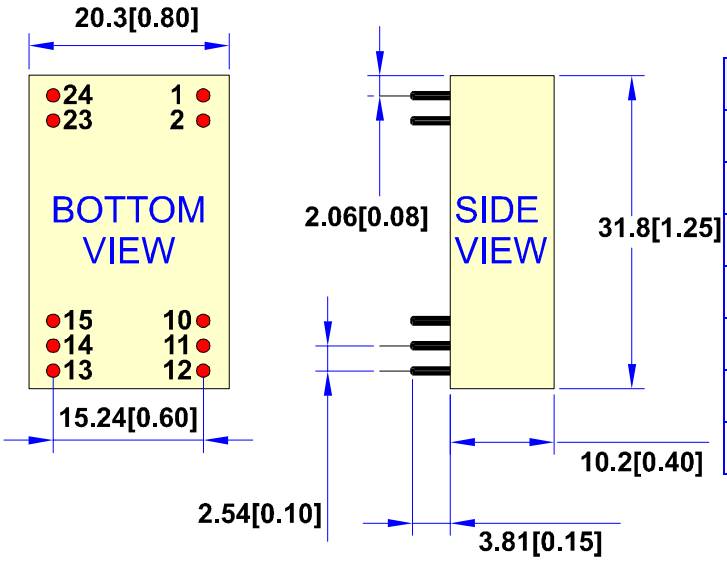
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
CBRS-0505-3K	4.5-5.5	5	400	645	80	62	3000
CBRS-0512-3K	4.5-5.5	12	165	634	80	63	3000
CBRS-0515-3K	4.5-5.5	15	133	634	80	63	3000
CBRD-0512-3K	4.5-5.5	+/-12	+/-83	634	80	63	3000
CBRD-0515-3K	4.5-5.5	+/-15	+/-66	634	80	63	3000
CBRS-1205-3K	10.8-13.2	5	400	264	40	63	3000
CBRS-1212-3K	10.8-13.2	12	165	256	40	65	3000
CBRS-1215-3K	10.8-13.2	15	200	378	45	66	3000
CBRD-1212-3K	10.8-13.2	+/-12	+/-83	256	40	65	3000
CBRD-1215-3K	10.8-13.2	+/-15	+/-100	378	45	66	3000
CBRS-2405-3K	21.6-26.4	5	400	132	20	63	3000
CBRS-2412-3K	21.6-26.4	12	165	128	20	65	3000
CBRS-2415-3K	21.6-26.4	15	200	192	25	65	3000
CBRD-2412-3K	21.6-26.4	+/-12	+/-83	128	20	65	3000
CBRD-2415-3K	21.6-26.4	+/-15	+/-100	192	25	65	3000
CBRS-4805-3K	43.2-52.8	5	400	66	10	63	3000
CBRS-4812-3K	43.2-52.8	12	165	65	10	64	3000
CBRS-4815-3K	43.2-52.8	15	200	97	12	64	3000
CBRD-4812-3K	43.2-52.8	+/-12	+/-83	65	10	64	3000
CBRD-4815-3K	43.2-52.8	+/-15	+/-100	97	12	64	3000

Note: Other input to output voltages may be available. Please contact factory.

SIMPLIFIED SCHEMATIC

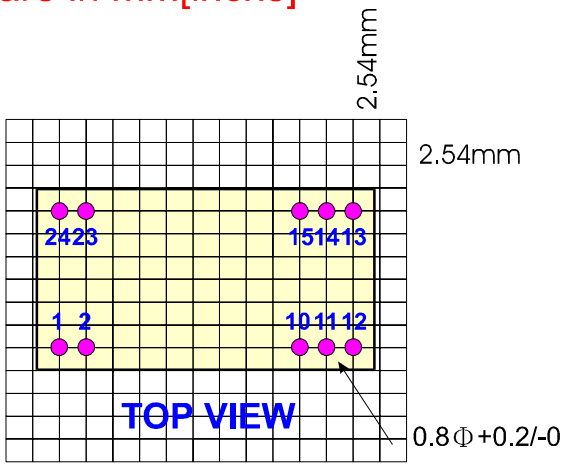


MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



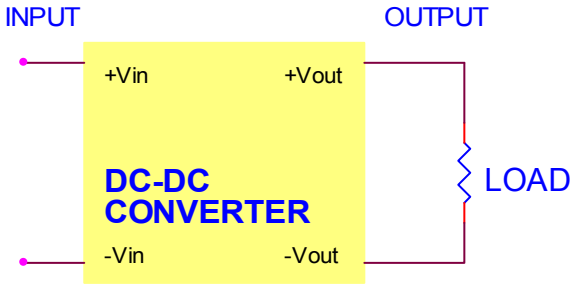
PIN	SINGLE	DUAL
1 & 2	+Vin	+Vin
10 & 11	NO PIN	Common
12	-Vout	NO PIN
13	+Vout	-Vout
14	NO PIN	NO PIN
15	NO PIN	+Vout
23 & 24	-Vin	-Vin

All dimensions are in mm[inchs]

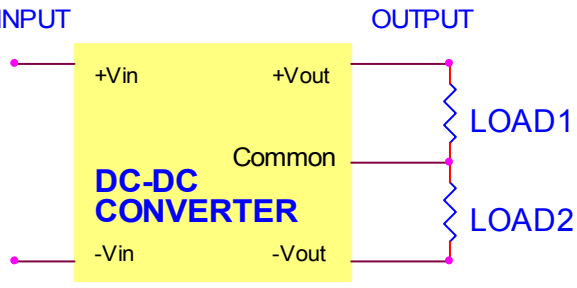


TYPICAL APPLICATIONS

SINGLE OUTPUT



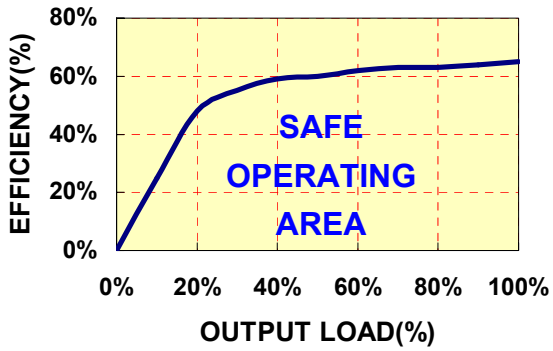
DUAL OUTPUT



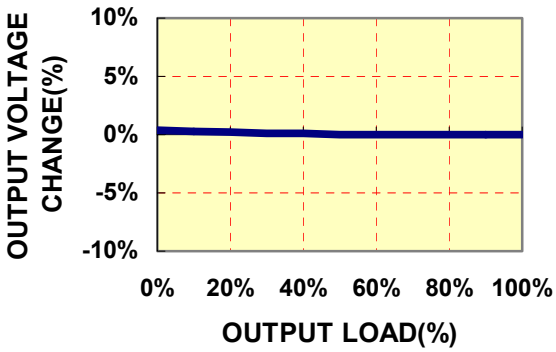
TYPICAL PERFORMANCE CUREVES

Specifications typical at ta=25 °C,nominal input voltage , rated output current unless otherwise specified.

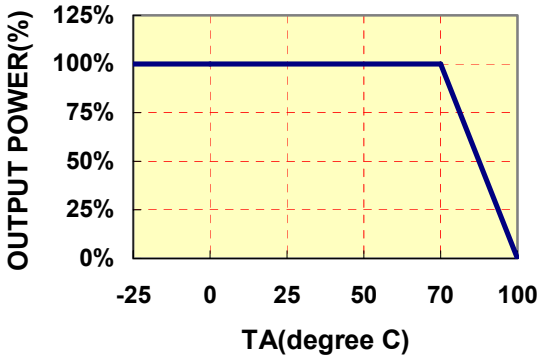
OUTPUT LOAD vs EFFICIENCY



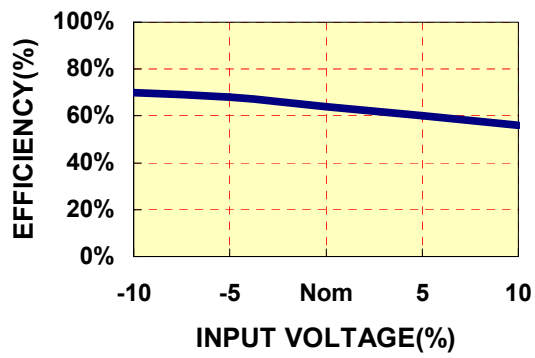
OUTPUT LOAD vs OUTPUT VOLTAGE



TEMPERATURE DERATING



INPUT VOLTAGE vs EFFICIENCY



CBR SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the CBR series.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 100KHz is required.

External output capacitance is not required for operation, however it is recommended that 10uF tantalum and 0.1uF ceramic capacitance be selected for reduced system noise.

Additional output capacitance may be added for increased filtering, but should not exceed 220uF.

Negative Outputs:

A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting –OUT as the negative output.

FOR MORE INFORMATION CALL:

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