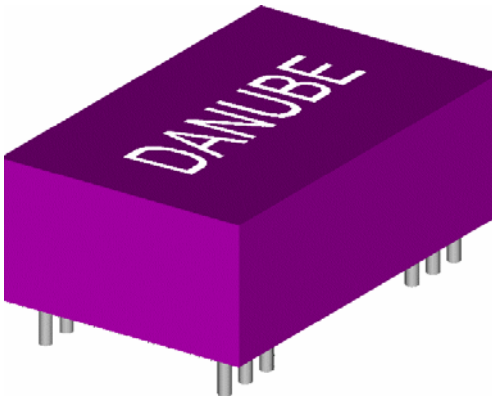
DC-DC Converter UNIT

CAR Series (2W REGULATED DC-DC CONVERTER)

FEATURES

- 1000VDC ISOLATION
- HIGH EFFICIENCY
- SIX-SIDED SHIELD TO REDUCE EMI
- LOW COST
- NO EXTERNAL COMPONENTS REQUIRED
- UP TO 2W REGULATED OUTPUT POWER
- DUAL IN LINE PACKAGE
- 100% BURNED IN
- LOW NOISE



OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.03%/ °C
Ripple & Noise (20MHz BW)	100mVp-p max
Line Regulation[1]	+/-0.2% max
Load Regulation[2]	+/-0.2% 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	58% min
Isolation Voltage[3]	1000 VDC min
Isolation Resistance	10^9 ohms min
Switching Frequency	50 KHz min
Isolation Capacitance	80pF max
MTBF	850,000 Hours
Weight	12.0g-14.4g
Case Material	Non-Conductive Plastic Or Six-Sided Shield Case
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*

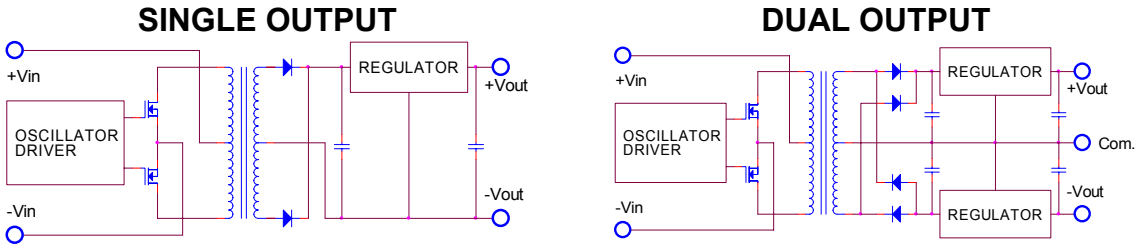
SELECTION GUIDE
2W OUTPUT

MODEL NUMBER[4]	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (Ma)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
CARS-0505(M)	4.5-5.5	5	400	727	64	55	1000
CARS-0509(M)	4.5-5.5	9	222	635	50	63	1000
CARS-0512(M)	4.5-5.5	12	167	615	50	65	1000
CARS-0515(M)	4.5-5.5	15	133	625	50	64	1000
CARD-0505(M)	4.5-5.5	+/-5	+/-200	696	70	57	1000
CARD-0512(M)	4.5-5.5	+/-12	+/-84	649	63	62	1000
CARD-0515(M)	4.5-5.5	+/-15	+/-67	625	50	64	1000
CARS-1205(M)	10.8-13.2	5	400	273	20	61	1000
CARS-1209(M)	10.8-13.2	9	222	265	20	63	1000
CARS-1212(M)	10.8-13.2	12	167	252	20	66	1000
CARS-1215(M)	10.8-13.2	15	133	242	20	69	1000
CARD-1205(M)	10.8-13.2	+/-5	+/-200	273	20	61	1000
CARD-1212(M)	10.8-13.2	+/-12	+/-84	252	20	66	1000
CARD-1215(M)	10.8-13.2	+/-15	+/-67	257	38	65	1000
CARS-2405(M)	21.6-26.4	5	400	132	13	63	1000
CARS-2409(M)	21.6-26.4	9	222	126	13	66	1000
CARS-2412(M)	21.6-26.4	12	167	121	13	69	1000
CARS-2415(M)	21.6-26.4	15	133	121	13	69	1000
CARD-2405(M)	21.6-26.4	+/-5	+/-200	132	13	63	1000
CARD-2412(M)	21.6-26.4	+/-12	+/-84	121	13	69	1000
CARD-2415(M)	21.6-26.4	+/-15	+/-67	121	13	69	1000
CARS-4805(M)	43.2-52.8	5	400	66	8	63	1000
CARS-4809(M)	43.2-52.8	9	222	63	8	66	1000
CARS-4812(M)	43.2-52.8	12	167	60	8	69	1000
CARS-4815(M)	43.2-52.8	15	133	60	8	69	1000
CARD-4805(M)	43.2-52.8	+/-5	+/-200	66	8	63	1000
CARD-4812(M)	43.2-52.8	+/-12	+/-84	60	8	69	1000
CARD-4815(M)	43.2-52.8	+/-15	+/-67	60	8	69	1000

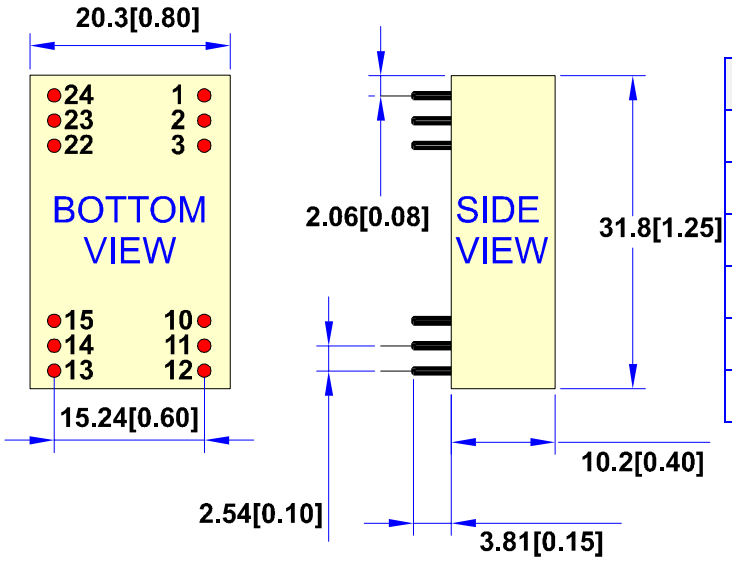
Note: Other input to output voltages may be available. Please contact factory.

[4] *CAR*-**** ------ Non-Conductive Plastic CAR*-****M ------ Six -sided shield case*

SIMPLIFIED SCHEMATIC

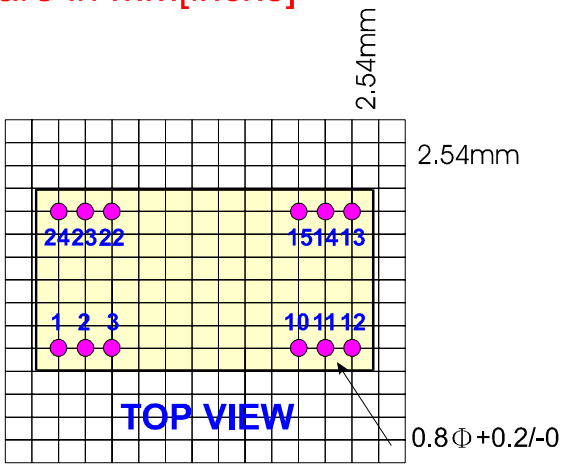


MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



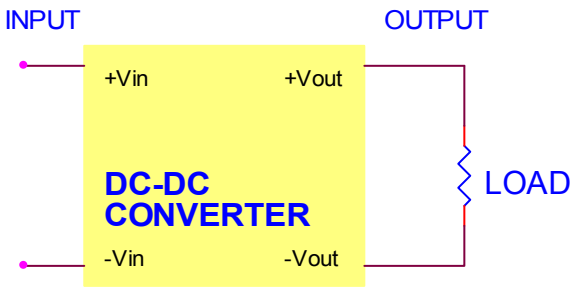
PIN	SINGLE	DUAL
1 & 24	+Vin	+Vin
2 & 23	NC	-Vout
3 & 22	NC	Common
10 & 15	-Vout	Common
11 & 14	+Vout	+Vout
12 & 13	-Vin	-Vin

All dimensions are in mm[inchs]

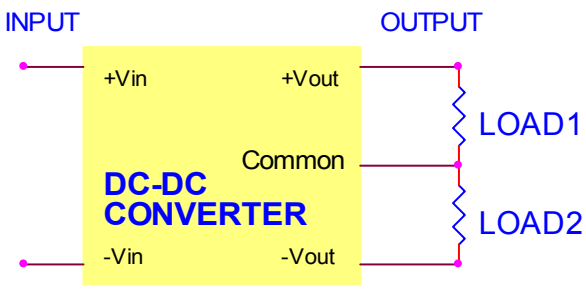


TYPICAL APPLICATIONS

SINGLE OUTPUT



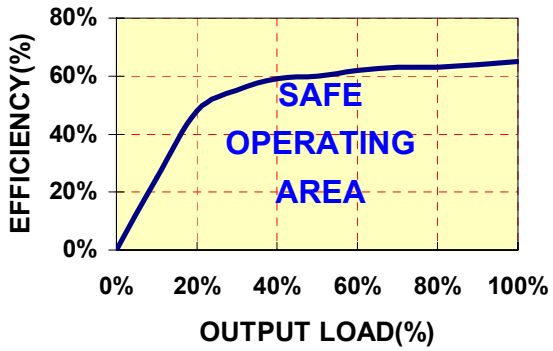
DUAL OUTPUT



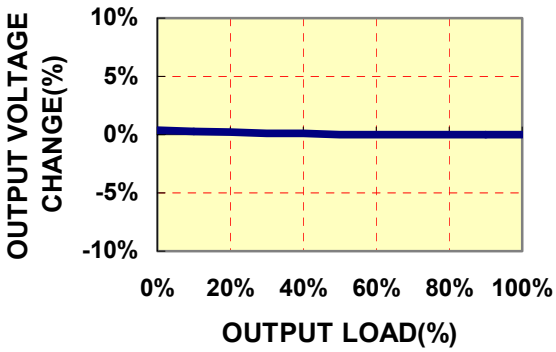
TYPICAL PERFORMANCE CUREVES

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

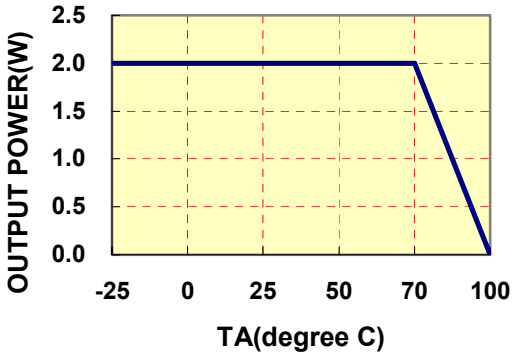
OUTPUT LOAD vs EFFICIENCY



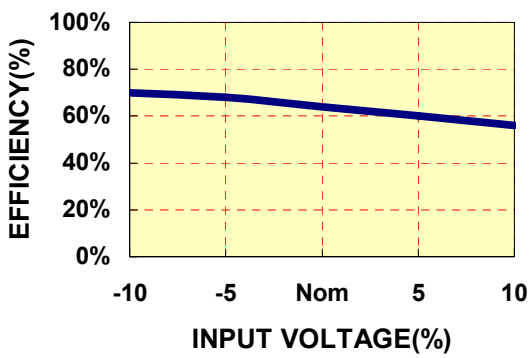
OUTPUT LOAD vs OUTPUT VOLTAGE



TEMPERATURE DERATING



INPUT VOLTAGE vs EFFICIENCY



CAR SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the CAR 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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