

2 WATT DC/DC CONVERTERS CEM2000 SERIES

- 24-Pin DIP Package
- High Efficiency (up to 83%)
- Regulated Outputs
- Pi Input Filter
- 500 Vdc Isolation
- Continuous Short Circuit Protection

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		CASE	EFFICIENCY
				NO LOAD	FULL LOAD		
CEM2001	5 VDC	5 VDC	400 mA	100 mA	600 mA	A	65%
CEM2002	5 VDC	12 VDC	160 mA	100 mA	550 mA	A	70%
CEM2003	5 VDC	15 VDC	130 mA	100 mA	550 mA	A	70%
CEM2004A	5 VDC	± 5 VDC	± 150 mA	110 mA	600 mA	A	50%
CEM2005	5 VDC	± 12 VDC	± 80 mA	130 mA	610 mA	A	63%
CEM2006	5 VDC	± 15 VDC	± 65 mA	130 mA	610 mA	A	63%
CEM2007	5 VDC	9 VDC	250 mA	100 mA	645 mA	A	70%
CEM2011	12 VDC	5 VDC	400 mA	50 mA	230 mA	A	73%
CEM2012	12 VDC	12 VDC	160 mA	50 mA	215 mA	A	75%
CEM2013	12 VDC	15 VDC	130 mA	50 mA	215 mA	A	75%
CEM2014	12 VDC	± 5 VDC	± 200 mA	60 mA	290 mA	A	57%
CEM2015	12 VDC	± 12 VDC	± 80 mA	60 mA	240 mA	A	67%
CEM2016	12 VDC	± 15 VDC	± 65 mA	60 mA	240 mA	A	67%
CEM2017	12 VDC	9 VDC	250 mA	50 mA	250 mA	A	75%
CEM2021	24 VDC	5 VDC	400 mA	20 mA	115 mA	A	75%
CEM2022	24 VDC	12 VDC	160 mA	20 mA	100 mA	A	80%
CEM2023	24 VDC	15 VDC	130 mA	20 mA	100 mA	A	80%
CEM2024	24 VDC	± 5 VDC	± 200 mA	35 mA	135 mA	A	62%
CEM2025	24 VDC	± 12 VDC	± 80 mA	35 mA	115 mA	A	70%
CEM2026	24 VDC	± 15 VDC	± 65 mA	35 mA	115 mA	A	70%
CEM2027	24 VDC	9 VDC	250 mA	20 mA	120 mA	A	78%
CEM2031	48 VDC	5 VDC	400 mA	5 mA	54 mA	A	78%
CEM2032	48 VDC	12 VDC	160 mA	5 mA	48 mA	A	83%
CEM2033	48 VDC	15 VDC	130 mA	5 mA	48 mA	A	83%
CEM2034	48 VDC	± 5 VDC	± 200 mA	10 mA	70 mA	A	60%
CEM2035	48 VDC	± 12 VDC	± 80 mA	10 mA	56 mA	A	72%
CEM2036	48 VDC	± 15 VDC	± 65 mA	10 mA	56 mA	A	72%

- Dual Output Models With Separated Output.
- Dual Output Models Suffix a "C" To The Model Number With Common Output.

SPECIFICATIONS

All Specifications are Typical at Nominal Line, Full Load, and 25°C Unless Otherwise Noted.

INPUT SPECIFICATIONS

Input Voltage Range	5V	4-5.5V
	12V	9-18V
	24V	18-36V
	48V	36-72V
Input Filter		Pi Network

OUTPUT SPECIFICATIONS

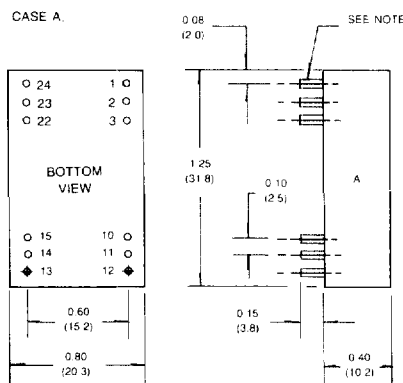
Voltage Accuracy	± 2.0% max.
Voltage Balance (Dual)	± 2.0% max.
Ripple and Noise, 20MHz BW	60mV P-P max.
Temperature Coefficient	± 0.05%/°C
Short Circuit Protection	Continuous
Line Regulation ¹	± 0.5%
Load Regulation ²	± 0.5%

GENERAL SPECIFICATIONS

Efficiency	See Table
Isolation Voltage	500 VDC min.
Isolation Resistance	10 ⁹ ohms
Switching Frequency	150KHz-850KHz (Depending on Loading)
Operating Temperature Range	- 25°C to + 71°C (100% Load)
Derating	None
Storage Temperature Range	- 40°C to + 100°C
Humidity	95% R.H. max.
Cooling	Free air Convection
Dimensions CASE A	1.25 x 0.8 x 0.4 inches (31.8 x 20.3 x 10.2mm)
Case Material	
Standard Models	Non-Conductive Black Plastic
Weight	15g

NOTE

1. Measured From High Line to Low Line.
2. Measured From Full Load to 10% Load.



ALL DIMENSIONS IN INCHES(MM)
NOTE: PIN SIZE IS 020 INCH (0.5mm) DIA OR 020 x 0.14 INCH

Pin 1 Identification:
Cut-Corner Marking

Pin Connections		
Pin	Single Output	Dual Output
1	+ V Input	+ V Input
2	NC *	- V2 Output
3	NC *	+ V2 Output
10	- V Output	- V1 Output
11	+ V Output	+ V1 Output
12	- V Input	- V Input
13	- V Input	- V Input
14	+ V Output	+ V1 Output
15	- V Output	- V1 Output
22	NC *	+ V2 Output
23	NC *	- V2 Output
24	+ V Input	+ V Input

* NC: NO CONNECTION.