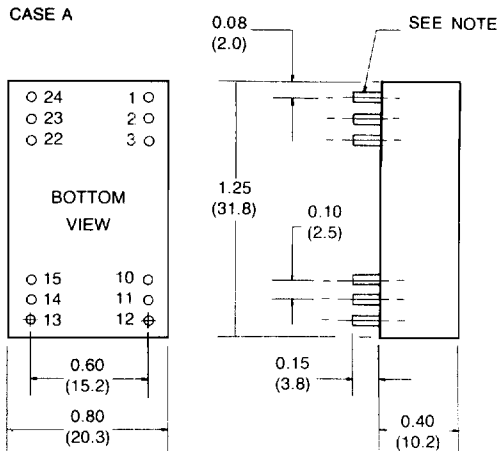


1 to 1.5 WATT DC/DC CONVERTERS CEM200NR SERIES

- 24-Pin DIP Package
- 70% Efficiency
- Unregulated Outputs
- PI Input Filter
- 500Vdc Isolation

| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT | | CASE |
|--------------|---------------|----------------|----------------|---------------|-----------|------|
| | | | | NO LOAD | FULL LOAD | |
| CEM201NR | 5 VDC | 5 VDC | 220 mA | 115 mA | 345 mA | A |
| CEM203NR | 5 VDC | 12 VDC | 125 mA | 115 mA | 450 mA | A |
| CEM205NR | 5 VDC | 15 VDC | 100 mA | 115 mA | 450 mA | A |
| CEM207NR | 5 VDC | ±12 VDC | ±62 mA | 115 mA | 450 mA | A |
| CEM209NR | 5 VDC | ±15 VDC | ±50 mA | 115 mA | 450 mA | A |
| CEM211NR | 12 VDC | 5 VDC | 220 mA | 45 mA | 125 mA | A |
| CEM213NR | 12 VDC | 12 VDC | 125 mA | 45 mA | 170 mA | A |
| CEM215NR | 12 VDC | 15 VDC | 100 mA | 45 mA | 170 mA | A |
| CEM217NR | 12 VDC | ±12 VDC | ±62 mA | 45 mA | 170 mA | A |
| CEM219NR | 12 VDC | ±15 VDC | ±50 mA | 45 mA | 170 mA | A |



ALL DIMENSIONS IN INCHES (MM)

NOTE: PIN SIZE IS .020 INCH (0.5mm) DIA. OR .020 x .014 INCH

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

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Input Voltage Range ± 10%
Input Filter Pi Network

OUTPUT SPECIFICATIONS

Voltage Accuracy ± 3.0% max.
Ripple and Noise¹, 20MHz BW 100mV P-P max.
Short Circuit Protection Short Term
Line Regulation² ± 1.2%
Load Regulation³, UM201NR ± 8%
All Other Models ± 6%

GENERAL SPECIFICATIONS

Efficiency 60-80%
Isolation Voltage 500 VDC min.
Isolation Capacitance 80pF
Isolation Resistance 10⁹ ohms
Switching Frequency 20kHz, min.
Operating Temperature Range -25°C to +71°C
Storage Temperature Range -40°C to +100°C
Dimensions 1.25 x 0.8 x 0.4 inches
(31.8 x 20.3 x 10.2mm)
Case Material Non-Conductive Black Plastic

NOTE:

1. 15 μ F 35V, Tantalum Capacitor Across Each Output.
2. Line regulation is per 1.0% change in input voltage.
3. Load regulation is for load change from 100% to 20%. See graph of load regulation.

