

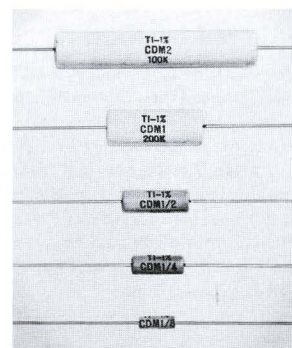
# MOLDED PRECISION CARBON FILM RESISTORS



Meet or exceed all requirements

of Specification MIL-R-10509C for Characteristic B

Full rated load at 70°C ambient  
 High degree of stability and reliability  
 Precision resistances — ±1% tolerance  
 Tough molded coating • Fully insulated



½ ACTUAL SIZE

MOLDED PRECISION CARBON FILM RESISTORS  
 BULLETIN NO. DL-C 1105 JUNE, 1959  
 REPLACES BULLETIN NO. DL-C 849

## specifications

TI type number	wattage rating — watts	MIL designation	standard resistance ranges	max. recommended voltage — volts	body length — inches	body diameter — inches	lead length — inches	lead diameter		avg. weight per 100 unpacked units — lbs.
								inches	awg #	
CDM $\frac{1}{8}$	$\frac{1}{8}$	RN60B	10 Ohm-1 Meg	350	0.406 (±0.015)	0.140 (±0.015)	1.500 (±0.062)	0.025	22	0.101
CDM $\frac{1}{4}$	$\frac{1}{4}$	RN65B	10 Ohm-1 Meg	500	0.585 (±0.015)	0.200 (±0.020)	1.500 (±0.062)	0.025	22	0.198
CDM $\frac{1}{2}$	$\frac{1}{2}$	RN70B	10 Ohm-5 Meg	750	0.750 (±0.015)	0.250 (±0.020)	1.450 (±0.062)	0.032	20	0.373
CDM 1	1	RN75B	10 Ohm-10 Meg	1000	1.062 (±0.020)	0.375 (±0.025)	1.500 (±0.062)	0.032	20	1.035
CDM 2	2	RN80B	50 Ohm-45 Meg	2000	2.187 (±0.020)	0.375 (±0.025)	1.500 (±0.062)	0.032	20	2.055

## commercial symbolization

Standard symbolization includes TI Type Number, Resistance Value, and Tolerance.

Space limitations on the 1/8 watt resistor require that the type designation be abbreviated to C1/8.

## military symbolization

Per MIL-R-10509 — Resistors, Fixed Film (High Stability)

All resistors are calibrated at 25°C. Resistance values are available expressed to a maximum of three significant figures.

## modifications available upon request

± ½, 2 or 5% Resistance Tolerance  
 Resistance Values Outside Published Ranges

TI carbon film resistors are manufactured under license agreement with the Western Electric Company.

SEMICONDUCTOR-COMPONENTS DIVISION

**TEXAS INSTRUMENTS**  
 INCORPORATED  
 SEMICONDUCTOR-COMPONENTS DIVISION  
 P. O. BOX 312 • 13500 N. CENTRAL EXPRESSWAY  
 DALLAS, TEXAS



# TYPICAL CHARACTERISTICS

## test

- Temperature Cycling per MIL-R-10509C (4.6.4)
- Low Temperature Operation per MIL-R-10509C (4.6.5)
- Short Time Overload per MIL-R-10509C (4.6.6)
- Effect of Soldering per MIL-R-10509C (4.6.10)
- Insulation Resistance per MIL-R-10509C (4.6.9)
- Acceleration per MIL-R-10509C (4.6.14)
- Shock per MIL-R-10509C (4.6.15)
- Vibration, High Frequency per MIL-R-10509C (4.6.16)
- Shelf Life, Change per Year
- Voltage Coefficient

## average performance of TI resistors\*

- +0.05 to -0.15 %
- less than  $\pm 0.10$  %
- less than  $\pm 0.10$  %
- less than  $\pm 0.05$  %
- greater than 100,000 megohms
- less than  $\pm 0.10$  %
- less than  $\pm 0.10$  %
- less than  $\pm 0.10$  %
- less than  $\pm 0.10$  %
- less than 0.002 % /volt

## limits MIL-R-10509C

- $\pm 0.50$  %
- $\pm 0.50$  %
- $\pm 0.75$  %
- $\pm 0.50$  %
- greater than 10,000 megohms
- $\pm 0.50$  %
- $\pm 0.50$  %
- $\pm 1.00$  %
- no requirement
- no requirement

\*Unless otherwise noted, data is % change in total resistance. The two sigma limits were used as the range indications in all tests shown.

