

## Precision Fixed Metal Film Resistors, High Stability

Type: **ERN55**

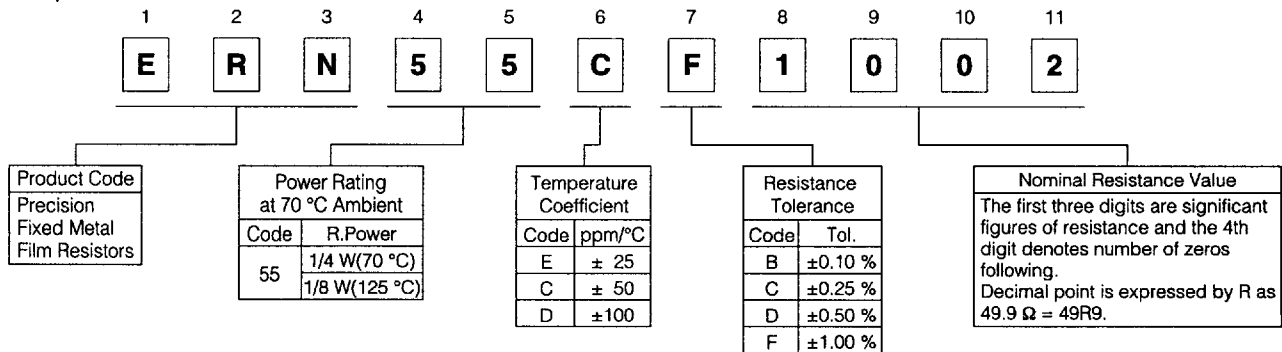
### ■ Features

- High Precision Resistance Tolerance:  $\pm 0.1\%$   
T.C.R.:  $\pm 25$  ppm/ $^{\circ}\text{C}$
- Wide operating temperature range  
 $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$
- High stability over a long period of time
- Clear stamp-marking
- Approved under the ISO-9001 system

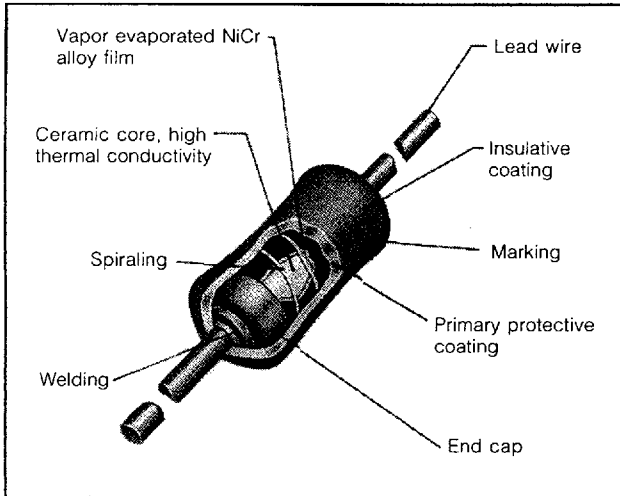
### ■ Recommended Applications

Measuring equipment, Industrial machines, A/D, D/A-converters, Radder networks, Synchro diverging circuit etc.

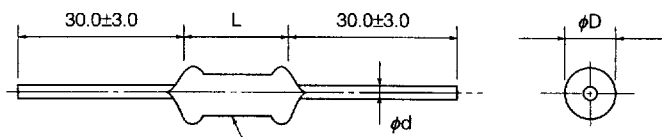
### ■ Explanation of Part Numbers



### Construction



### Dimensions in mm (not to scale)



Stamp Marking=10 kΩ, Class F, Type 55C

1002  
F  
1002  
55C  
1002

### Ratings

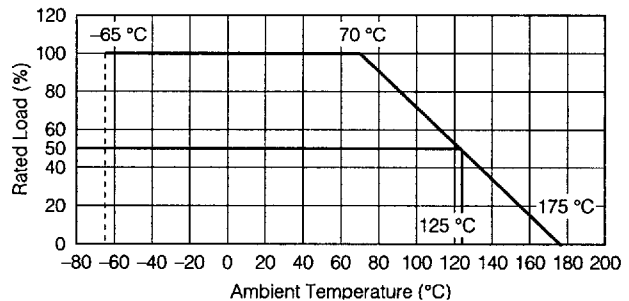
Part No.	Power Rating	Maximum RCWV*	Overload Voltage**	Dielectric With-standing Voltage	T.C.R. (ppm/°C)	Resistance Tolerance (%)	Resistance Range (Ω)		Standard Resistance Values	Dimensions			Equivalent Type No. MIL-R-10509	Weight g/ 1000 pcs.
							min.	max.		L	ϕD	ϕd		
ERN55E	70 °C :1/4 W	250 V	500 V	500 V	± 25	±0.10	100	301 k	E-192	±0.50	±0.20	±0.05	RN55E RN55C RN55D	219 g
ERN55C	125 °C				± 50	±0.25	49.9	301 k	E- 96					
ERN55D	:1/8 W				±100	±1.00	49.9	301 k	E- 96					

\* Rated Continuous Working Voltage (RCWV) shall be determined from  $RCWV = \sqrt{\text{Power Rating} \times \text{Resistance Value}}$ , or maximum RCWV listed above, whichever less.

\*\* Short-time Overload Test Voltage (SOTV) shall be determined from  $SOTV = 2.5 \times \text{Power Rating}$  or max. Overload Voltage listed above whichever less.

### Power Derating Curve

For resistors operated in ambient temperatures above 70 °C, power rating shall be derated in accordance with the right figure.



### Performance Specifications

Characteristics	Specifications	Test Methods
Load Life in Humidity	±(0.5 % + 0.05 Ω)	1000 hours (1.5 h ON, 0.5 h OFF) Rated power, at 40 °C in 90 to 95 % RH
Load Life	±(0.5 % + 0.05 Ω)	1000 hours (1.5 h ON, 0.5 h OFF) Rated power, at 125 °C

### ⚠ Cautions for Safety

Refer common precautions (ER3 page) and individual cautions (ER55 page).