

# NONFLAME FUSIBLE METAL FILM RESISTORS

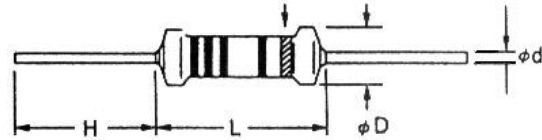
## Dimensions

Type		Dimension (mm)			
		L	D	H	d ( $\pm 0.005$ )
FR-1/2WS	FR-1/4W	6.5 $\pm$ 0.5	2.3 $\pm$ 0.3	28 $\pm$ 2	0.59
FR-1WS	FR-1/2W	9.0 $\pm$ 0.5	3.2 $\pm$ 0.5	28 $\pm$ 2	0.59
FR-2WS	FR-1W	12.0 $\pm$ 1.0	4.5 $\pm$ 0.5	28.0 35.0 $\pm$ 2	0.78
FR-3WS	FR-2W	16.0 $\pm$ 1.0	5.0 $\pm$ 0.5	28.0 35.0 $\pm$ 2	0.78

## POWER RATING :

STANDARD TYPE: 1/4W, 1/2W, 1W, 2W

MINIATURE TYPE: 1/2WS, 1WS, 2WS, 3WS



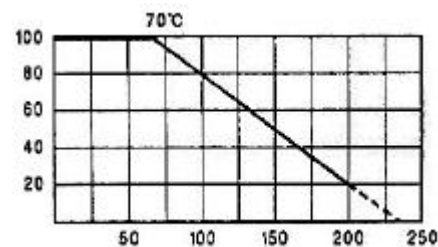
## General Specification

Type		Power Rating	Maximum Working Voltage	Maximum Overload Voltage	Resistance Range	
					$\pm 2\%$ (G)	$\pm 5\%$ (J)
-	FR-1/4W	1/4W	200	400	4.7 $\Omega$ - 100K $\Omega$	0.22 $\Omega$ - 100K $\Omega$
FR-1/2WS	FR-1/2W	1/2W	250	500	4.7 $\Omega$ - 100K $\Omega$	0.22 $\Omega$ - 100K $\Omega$
FR-1WS	FR-1W	1W	350	700	4.7 $\Omega$ - 100K $\Omega$	0.22 $\Omega$ - 100K $\Omega$
FR-2WS	FR-2W	2W	500	1000	4.7 $\Omega$ - 100K $\Omega$	0.22 $\Omega$ - 100K $\Omega$
FR-3WS	-	3W	500	1000	4.7 $\Omega$ - 100K $\Omega$	0.22 $\Omega$ - 100K $\Omega$

## Performance

Temperature Coefficient	$\pm 100$ ppm Type 350 max.
Insulation Resistance	10,000M $\Omega$ min.
Load Life (1,000 hours)	$\pm 5\%$ + 0.05 $\Omega$ max.
Short time Overload	$\pm 2\%$ + 0.05 $\Omega$ max.
Temperature Cycling	$\pm 1\%$ + 0.05 $\Omega$ max.
Moisture Resistance	$\pm 5\%$ + 0.05 $\Omega$ max.
Shock and Vibration	$\pm 1\%$ + 0.05 $\Omega$ max.
Effect of Soldering	$\pm 1\%$ + 0.05 $\Omega$ max.

## Derating Curve



## Fusing Characteristics

