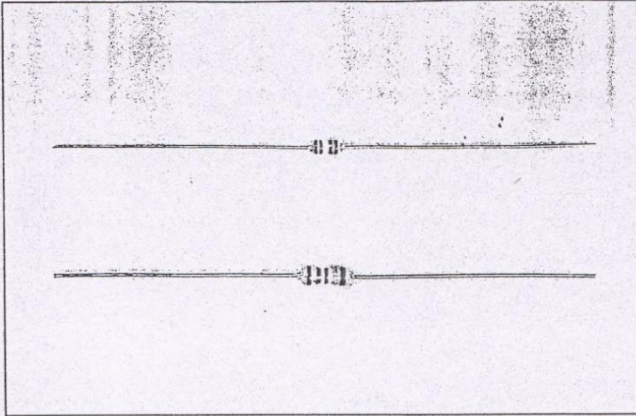




# TECH-MEN ELECTRONICS COMPONENTS

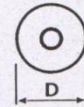
Supply \* Sub Assemblies \* Taping/ Forming Components  
Co. Reg. No: 45730100K

## Metal Film Resistors



### FEATURES:

- Coated blue epoxy for climatic protection.
- Standard tolerance:  $\pm 0.5\%$ ,  $\pm 1\%$ ,  $\pm 2\%$ ,  $5\%$ .
- Meet performance requirement of CNS 2320, JISC 5202, MIL-SFD-202F.
- High precision, stable and very dependable.
- Low noise and T.C.R  $\pm 15$  ppm/  $^{\circ}\text{C}$ ,  $\pm 25$  ppm/  $^{\circ}\text{C}$ ,  $\pm 50$  ppm/  $^{\circ}\text{C}$
- Variety of packaging-bulk, tape on reel, cut and formed and radial tape/panasert.
- Flame Proof coating also available, meet UL-1412 specification.
- Lead free and RoHS compliant part.



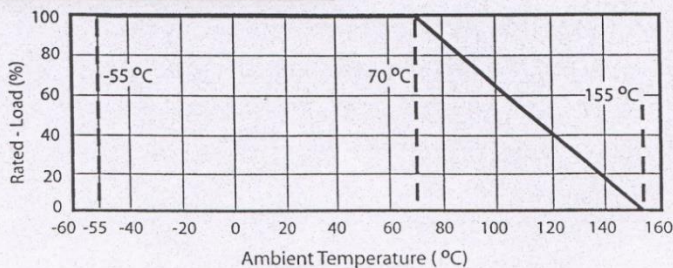
## METAL FILM RESISTORS

TYPE MFR	FINISHED DIMENSION (MM)				RATED POWER	MAX WORKING VOLTAGE	MAX OVERLOAD VOLTAGE	RES. VALUES RANGES			
	D $\pm 0.5$	L $\pm 0.5$	H $\pm 1.00$	d $\pm 0.05$				$\pm 0.5\%$	$\pm 1\%$	$\pm 2\%$	$\pm 5\%$
MFR12 / MFRS2	1.90	3.50	28.00	0.45	1/6W(1/4W)	200V	400V	10R - 1M			
MFR25	2.30	6.20	27.00	0.55	1/4W	300V	600V	10R - 1M			
MFRS1	2.30	6.20	27.00	0.55	1/2W	350V	700V	10R - 1M			
MFR33	3.20	9.10	27.00	0.55	1/2W	350V	700V	10R - 1M			
MFR100	4.20	11.20	34.80	0.78	1W	450V	900V	10R - 1M			
MFR200	5.00	15.20	33.80	0.78	2W	500V	1000V	10R - 1M			
MFR100S	3.20	9.10	27.00	0.55	1W	450V	900V	10R - 1M			

## CHARACTERISTICS

LOAD LIFE	Rated Voltage, ON (1.5 hrs) - OFF (0.5 hrs), 1000 $\pm$ 2hrs	$\pm(1\% + 0.05\Omega)$
SOLDERING HEAT	350 $\pm$ 10 $^{\circ}\text{C}$ , 3 $\pm$ 0.5 sec.	$\pm(0.5\% + 0.05\Omega)$
MOISTURE RESISTANCE	Rated Voltage, ON (1.5 hrs) - OFF (0.5 hrs), 40 $^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 90 ~ 95% RH 1000 $\pm$ 2hrs	$\pm(1\% + 0.05\Omega)$
SHORT TIME OVERLOAD	2.5 Times Rated Voltage 5 Sec.	$\pm(0.5\% + 0.05\Omega)$
TEMPERATURE CYCLING	-50 $^{\circ}\text{C}$ ~ 85 $^{\circ}\text{C}$ 5 Cycles	$\pm(0.5\% + 0.05\Omega)$
INSULATION RESISTANCE	AC 500V 1min.	Min. 1000 M $\Omega$

## DERATING CURVE





## METAL FILM SERIES

**MFR12 1/6 , 1/8 WATT (3.2 X 1.8 mm)**



**MFR25 ¼ WATT (6.5 X 2.3 mm)**



**MFR33 ½ WATT (9.0 X 3.0 mm)**



**MFR100 1 WATT (11.5 X 4.0 mm)**



**MFR100(S) 1 WATT (9.0 X 3.0 mm)  
Miniature 1 Watt**



**MFR100(SS) 1 WATT (6.5 X 2.3 mm)  
Super Miniature 1 Watt**



**MFR200 2 WATT (15.5 X 5.0 mm)**



**MFR200(S) 2 WATT (11.5 X 4.0 mm)  
Miniature 2 Watt**



**MFR200(SS) 2 WATT (9.0 X 3.0 mm)  
Super Miniature 2 Watt**



**MFRS1 MINIATURE ½ WATT  
(6.5 X 2.3 mm)**



**MFRS2 MINIATURE ¼ WATT  
(3.2 X 1.8 mm)**



**MFR25 ¼ WATT B ±0.1%  
(6.5 X 2.3 mm)**

