

Metal Film Resistors

MFR-SS series (super mini-size)

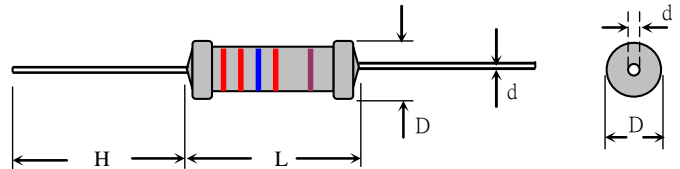
FEATURES

- Space saving on PC board
- Cost comparable to conventional sizes
- Standard T.C.: ± 100 PPM
- Standard Tolerance: $\pm 5\%$ (Available 1%~5%)
- Standard Value: 10R-1Meg in E24/E96 series
- Body Color: grey silicone
- Color band marking
- Flameproof coating
- Operating Temperature : $-55^{\circ}\text{C} \sim +155^{\circ}\text{C}$

MATERIAL

- Element: Vacuum-deposited Ni-Cr Alloy
- Core: High purity ceramic Al_2O_3
- Termination: Standard solder-plated cooper lead
- Coating: grey silicone

DIMENSION



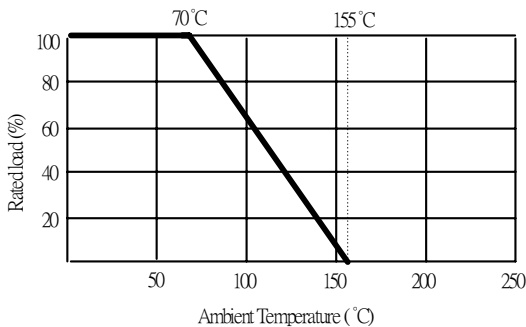
GENERAL SPECIFICATION

TYPE	DIMENSION (mm)				POWER	MAXIMUM VOLTAGE		RANGE $\pm 5\%, \pm 2\%, \pm 1\%$
	L	D	H	$d \pm 0.05$		WORKING*	OVERLOAD**	
MFR050SS	3.2 \pm 0.2	1.5 \pm 0.2	27 \pm 3.0	0.45	1/2W	200V	400V	10 Ω ~ 1M Ω
MFR100SS	6.0 \pm 0.5	2.3 \pm 0.3	27 \pm 3.0	0.55	1W	250V	500V	10 Ω ~ 1M Ω
MFR200SS	9.0 \pm 0.5	3.0 \pm 0.5	27 \pm 3.0	0.70	2W	350V	700V	10 Ω ~ 1M Ω
MFR300SS	11 \pm 1.0	4.0 \pm 0.5	33 \pm 3.0	0.80	3W	500V	1000V	10 Ω ~ 1M Ω

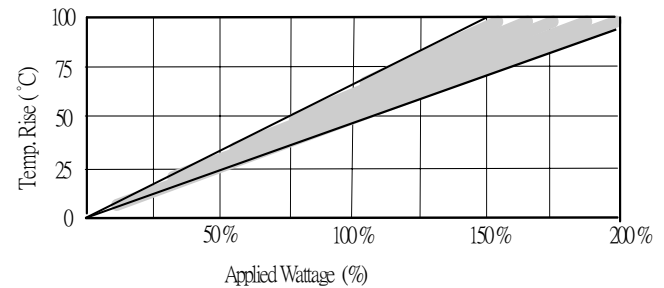
* Maximum Working Voltage determined by $E = \sqrt{P \times R}$, where E should not exceed value listed in column above.

** Maximum Overload Voltage equals to 2.5xE, but should not exceed value listed in column above

DERATING CURVE



TEMPERATURE RISE



CHARACTERISTIC

Temperature Coefficient	± 100 ppm
Insulation Resistance	10,000M Ω Min.
Load Life (1000 hours)	$< \pm 3.5\%$
Shorttime Overload	$\pm 5\%$ Max.
Temperature Cycling	$\pm 2\%$ Max.
Moisture Resistance	$\pm 3\%$ Max.
Shock & Vibration	$\pm 1\%$ Max.
Effect of Soldering	$\pm 1\%$ Max.

* Total maximum resistance change is $\Delta R + 0.01R$

HOW TO ORDER :

MFR100SS	F	TB	=	10R
↓	↓	↓	↓	↓
Type/Power	Tol.	Package	ppm	Resistance
MFR050SS	B= $\pm 0.1\%$	B=Bulk	= Based on spec.	10R = 10 Ω
MFR100SS	C= $\pm 0.25\%$	TB=Tape/box	E=50ppm	1K2 = 1.2K Ω
MFR200SS	D= $\pm 0.5\%$	TR=Tape/reel	D=25ppm	1M = 1M Ω
MFR300SS	F= $\pm 1\%$	Lead forming		
	G= $\pm 2\%$	M		
	J= $\pm 5\%$	F		

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