



# PRECISION METAL FILM RESISTOR

## SUPER MINIATURE TYPE

### SPECIFICATIONS:

#### ELECTRICAL CHARACTERISTICS:

TYPE	MRS-40	MRS-50	MRS-60	MRS-100	MRS-180	MRS-300
Power Rating 70°C	0.4W	0.5W	0.6W	1W	1.8W	3W
Operating Temperature Range	-55°C ~ +155°C					
Max. Working Voltage	250V	200V	250V	250V	350V	500V
Max. Overload Voltage	500V	400V	500V	500V	700V	1000V
Dielectric Withstanding Voltage (AC)	500V	300V	500V	500V	700V	1000V
Max. Intermittence Overload Voltage	300V	250V	300V	300V	500V	1000V
Resistance Value Range	10Ω ~ 1MΩ					
Resistance Tolerance	±1%, ±5%					
Temperature Coefficient	±50ppm, ±100ppm					

\* Resistance values beyond the standard range are available for special order only.

#### PERFORMANCE CHARACTERISTICS:

TEST ITEM	TEST METHOD	MAX. RES. CHANGE
Short Time Overload	2.5 times RCWV* for 5 seconds (JIS-C-5202 5.2)	±(0.25%+0.05Ω)
Dielectric Withstanding Voltage	in V-Block for 60 seconds (JIS-C-5202 5.7)	--
Temperature Coefficient	-55°C ~ +155°C (JIS-C-5202 5.7)	--
Insulation Resistance	in V-Block (JIS-C-5202 5.6)	≥ 1000 MΩ
Solderability	235°C for 5±0.5 seconds (JIS-C-5202 6.5)	95% min. coverage
Resistance to Solvent	Trichroethance for 1min. with ultrasonic (JIS-C-5202 6.9)	No deterioration
Terminal Strength	Direct load for 10 sec. in the direction of the terminal leads	≥ 2.5Kg/24.5N
Pulse Overload	4 times RCWV* 10000 cycles(1 sec. on, 25 sec. off) (JIS-C-5202 5.8)	±(0.5%+0.05Ω)
Load Life in Humidity	40±2°C, 90~95% RH at rated voltage for 1000 hrs (JIS-C-5202 7.9)	±(0.5%+0.05Ω)
Load Life	70°C at RCWV* for 1000hrs(1.5hrs.on,0.5hrs.off) (JIS-C-5202 7.10)	±(0.5%+0.05Ω)
Temperature Cycling	65°C~150°C for 5 cycles (JIS-C-5202 7.4)	±(0.25%+0.05Ω)
Soldering Heat	350±10°C for 3±0.5 seconds (JIS-C-5202 6.4)	±(0.25%+0.05Ω)

\*Rated continuous Working Voltage (RCWV) =  $\sqrt{\text{power rating} \times \text{resistance value}}$