

## MFRC - Series

## Precision Metal Film Resistors

### FEATURES

- Resistance from 10Ω to 100KΩ
- Temperature Coefficients to 5ppm/°C
- Low Inductive Design
- RoHS compliant



### RATED VALUES (IEC 60115-5)

Resistance Range	Ω	10Ω to 100KΩ (any non E-series resistance)
Temperature Coefficient	ppm/°C	±25ppm/°C; ±15ppm/°C; ±10ppm/°C; ±5ppm/°C
Power P <sub>70</sub>	(W)	0,165W; 0,25W
Resistance Tolerance	%	±0,05%; ±0,1%; ±0,25%; ±0,5%; ±1%
Working Voltage (U <sub>max</sub> AC/DC)	V	350V
Insulation Resistance (R <sub>ins</sub> )	Ω	>10GΩ
Operating Temperature Range (T)	°C	-55°C to 125°C

### RANGES

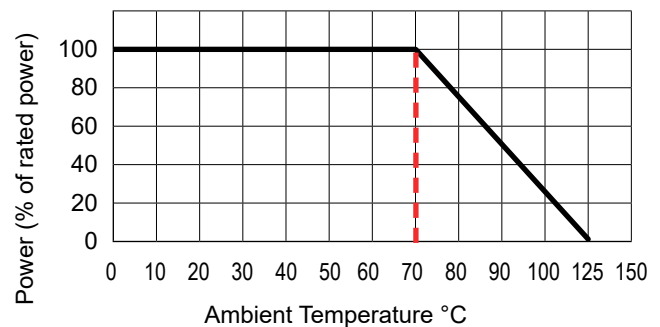
Resistance Range	Resistance Tolerance	Temperature Coefficient*
1R00 - 9R90	±0,5%; ±1%	±25ppm/°C; ±15ppm/°C; ±10ppm/°C
10R0 - 24R9	±0,25%; ±0,5%; ±1%	
25R0 - 99R9	±0,1%; ±0,25%; ±0,5%; ±1%	
100R0 - 100K0	±0,05%; ±0,1%; ±0,25%; ±0,5%; ±1%	±25ppm/°C; ±15ppm/°C; ±10ppm/°C; ±5ppm/°C

\*Temperature coefficient specified within a temperature range of 20°C to 70°C

### CONSTRUCTION

Resistor Material	NiCr - Alloy
Substrate	Alumina
Coating	Epoxy Housing
Leads	Tin plated copper wire

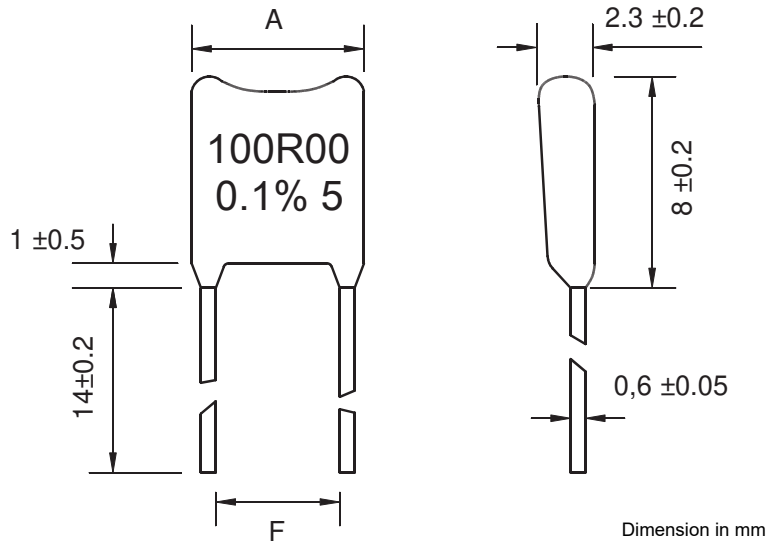
### POWER DERATING CURVE



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### DIMENSIONS



Power	A	F
0,165 Watts	5,2 ±0,2	2,54 ±0,2
0,250 Watts	7,0 ±0,2	5,08 ±0,2

### PERFORMANCE

IEC 60115-1	Test	Conditions of Test	Test Limits
4.23	Moisture Resistance	+40°C, 90-95% R.H., rated voltage, 1000h	±(0,1% ΔR +0,01Ω)
4.19	Thermal Shock	-55°C 30 min, +125°C 30 min, 5 cycles	±(0,05% ΔR +0,01Ω)
4.6	Insulation Resistance	U <sub>ins</sub> 500 V, 1 min	10GΩ
4.13	Short Time Overload	2.5 x rated voltage U <sub>max</sub> , 5s	±(0,05% ΔR +0,01Ω)
4.25	Endurance	+70°C, U <sub>max</sub> 1,5h „ON“ and 0,5h „OFF“, 1000h	±(0,1% ΔR +0,01Ω)
4.17	Solderability	245°C, max. 3s	95% contact covered
4.18	Solder Heat Resistance	350°C, max. 5s	±(0,03% ΔR +0,01Ω)

### OPTIONS

Matched - Sets (on request)	Resistor sets, matched (selected) by T.C.R and tolerance
Lead Wires (on request)	Other length or diameter

### ORDERING INFORMATION

**MFRC 100R00 0,1% TK25 0,25W** (MFRC 100R00; ±0,1%; ±25ppm°C; 0,25Watts)

Type	Special	Resistance	Tolerance	Temperature Coefficient	Power	Lead Space	Packaging
<b>MFRC</b>	- XXX	0R1000 100R00 10K000	0,05% 0,1% 0,25% 0,5% 1,0%	TK5 TK10 TK15 TK25	0,165 W 0,25 W	- Standard	-

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