



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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MFP Series

Precision Metal Film Resistors

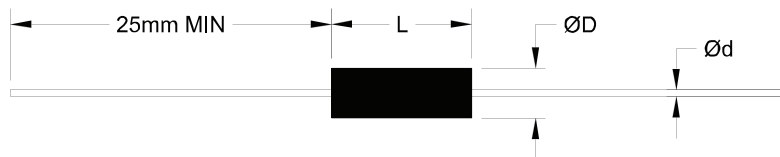


- Resistances from 10Ohm to 1MOhms
- Power Rating to 2Watts
- Resistance Tolerances to $\pm 0.01\%$
- TCR's to $\pm 5\text{ppm}/^\circ\text{C}$
- Convenient RN Type Package Styles
- Lower Tolerance Available on Request

SPECIFICATIONS

Type	MFP50	MFP55	MFP60	MFP65	MFP70
MIL-R-55182	RN50	RN55	RN60	RN65	RN70
DIN-44061	0204	0207	0411	0617	0719
Resistance Range *	10 Ω to 1M				
Power rating (70°C)	0.125W	0.25W	0.5W	1W	2W
Tolerances	0.1% - 0.5%	0.01%, 0.025%, 0.05%, 0.1%, 0.25%, 0.5%			
Temperature Coefficient	5 / 10 / 15 / 25 / 50 ppm/ $^\circ\text{C}$				
Operating Voltage	200V	250V	300V	500V	500V
Short Time Overload Voltage	400V	500V	700V	1000V	1000V
Operating Temperature Range	-65 to 155 $^\circ\text{C}$				
Dimensions (mm)					
L	3.3 \pm 0.2	6.5 \pm 0.5	9.5 \pm 1.0	12.0 \pm 1.0	16.0 \pm 1.0
Φ D	1.7 \pm 0.2	2.3 \pm 0.2	3.5 \pm 0.5	4.5 \pm 0.5	5.5 \pm 0.5
Φ d	0.45 \pm 0.05	0.6 \pm 0.05	0.6 \pm 0.05	0.8 \pm 0.05	0.8 \pm 0.05

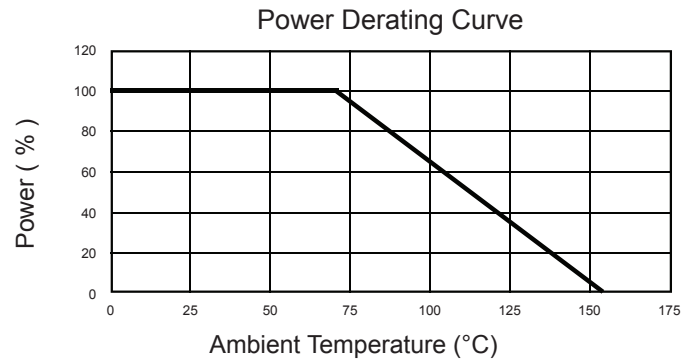
* Lower than 10 Ohm or higher than 1 MOhm consult factory.



Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR
MFP65 10K Ohms 0.1% 10ppm

Performance Data



Test	Procedure	Specification ΔR	Typical ΔR
Dielectric	3X rated Voltage, 1min	$\pm 0.2\% + 0.1\Omega$	$\pm 0.02\%$
Load Life	Rated Power, 70°C, 2000hr	$\pm 0.5\% + 0.01\Omega$	$\pm 0.1\%$
Temp. Cycling	30 minutes at -55°C & 30 minutes at 150°C (5 total number of cycles)	$\pm 0.2\% + 0.01\Omega$	$\pm 0.05\%$
Short Time Overload	2.5X Rated Power, 5s @ 25°C	$\pm 0.2\% + 0.01\Omega$	$\pm 0.02\%$
Humidity Resistance	40°C, 90 to 95% RH, 56 days (Dissipation $\leq 0.01 P_n$)	$\pm 0.5\% + 0.05\Omega$	$\pm 0.1\%$
Solder Heat	260°C $\pm 5^\circ\text{C}$, 10 sec, 6 mm from the body	$\pm 0.1\% + 0.01\Omega$	$\pm 0.03\%$
Shock	1Km/s ²	$\pm 0.2\% + 0.01\Omega$	$\pm 0.02\%$
Vibration	10 to 2000 Hz: m/S ²	$\pm 0.2\% + 0.01\Omega$	$\pm 0.02\%$
Low Temperature Exposure	2 hours at -65°C	$\pm 0.2\% + 0.01\Omega$	$\pm 0.05\%$
High Temperature Exposure	16 hours at 150°C	$\pm 0.2\% + 0.01\Omega$	$\pm 0.1\%$
Solderability	Solder Dip ± 0.5 at 235° $\pm 5^\circ\text{C}$	95% Coverage	95% Coverage
Insulation Resistance	500VDC, 1min	10G Ohm	10G Ohm