

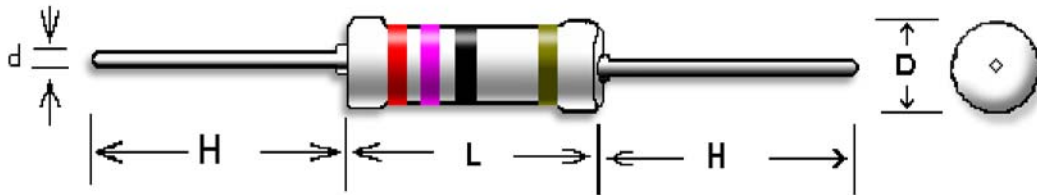
# PMA - Professional Metal Film Axial Resistor

## Specifications Per

- IEC-60115-1
- MIL R-10509F
- DIN 44051

## Features

- Conformal Multi-layer Coating
- Low Temperature Coefficient and Tolerances
- Excellent Stability
- Superior Power Handling



## Dimensions:

Type	Body Length (L, mm)	Body Diameter (D, mm)	Lead Wire Length (H, mm)	Lead Wire Diameter (d, mm)	Net Weight Per 1000Pcs
PMA204	3.2±1.0	1.9±0.2	28±3.0	0.45±0.02	145 Grams
PMA204T	3.2±1.0	1.9±0.2	28±3.0	0.45±0.02	145 Grams
PMA25	6.5±1.0	2.4±0.2	26±3.0	0.55±0.03	220 Grams
PMA207	6.5±1.0	2.4±0.2	26±3.0	0.55±0.03	220 Grams
PMA70	8.8±1.0	3.2±0.2	26±3.0	0.60±0.03	340 Grams
PMA100	12.0±1.0	4.5±0.5	26±3.0	0.70±0.03	600 Grams
PMA120	15.5±1.0	6.0±0.5	26±3.0	0.80±0.03	1200 Grams

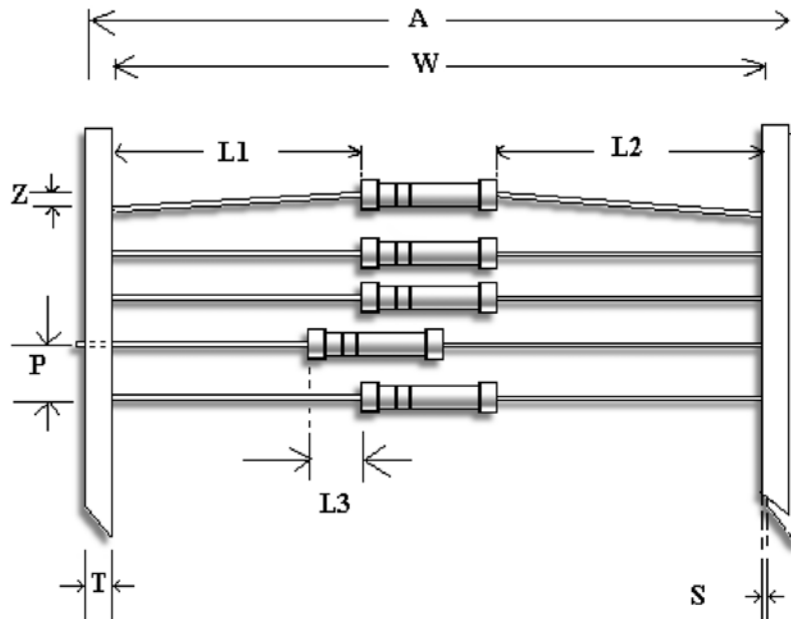
## General Specifications:

Type	Power Rating At 70°C	Max. Working Voltage	Max. Overload Voltage	Min. Resistance	Max. Resistance	Resistance Tolerance	Standard Resistance Values
PMA204	0.4W	250V	500V	10Ω	1MΩ	±0.1~5%	E-24~192
PMA204T	0.5W	250V	500V	10Ω	330KΩ	±0.1~5%	E-24~192
PMA25	0.25W	350V	600V	10Ω	1MΩ	±0.1~5%	E-24~192
PMA207	0.6W	350V	600V	1Ω	4.7MΩ	±0.1~5%	E-24~192
PMA70	0.7W	350V	600V	10Ω	1MΩ	±0.1~5%	E-24~192
PMA100	1.0W	500V	1000V	10Ω	1MΩ	±0.1~5%	E-24~192
PMA120	1.2W	600V	1000V	10Ω	1MΩ	±0.1~5%	E-24~192

*Special sizes, values, and specifications not listed available on special order.*

# PMA - Professional Metal Film Axial Resistor

Taping/Packing Specifications:

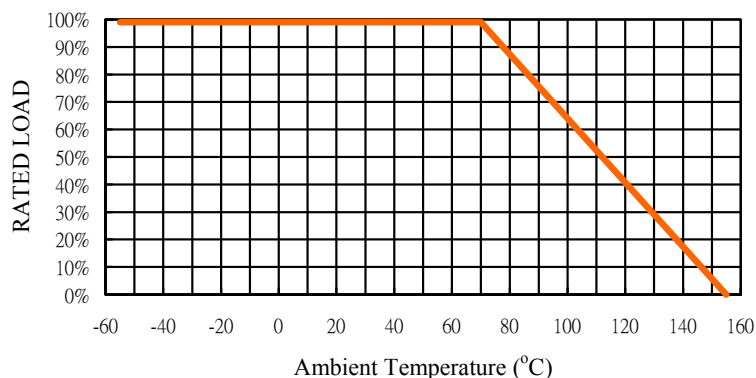


Unit (mm)

Type	A (Max.)	L1-L2 (Max.)	L3 (Max.)	P ±0.5	S (Max.)	T ±0.5	W ±1.5	Z (Max.)
PMA204	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
PMA204T	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
PMA25	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
PMA207	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
PMA70	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
PMA100	65	±1.0	0.5	5.0	0.8	6.0	52.5	1.2
PMA120	76	±1.5	1.0	10.0	0.8	6.0	63.5	1.2

Type	Packing Type	PMA204	PMA204T	PMA25	PMA207	PMA70	PMA100	PMA120
Minimum Packing QTY (pcs)	Reel	5000	5000	5000	5000	3000	2000	1000
	Ammo pack	5000	5000	5000	5000	2000	1000	500

POWER DERATING CURVE

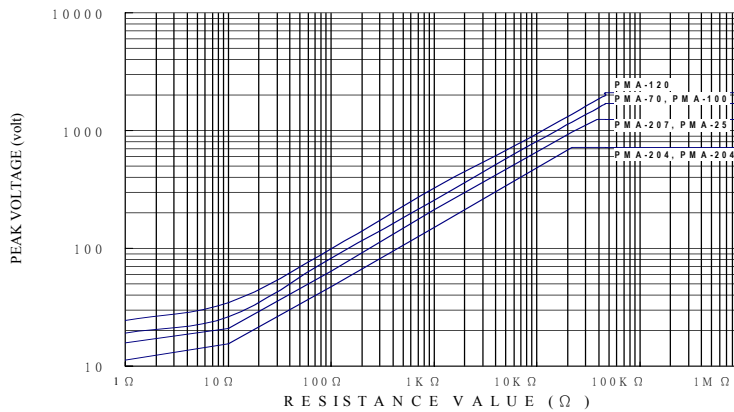


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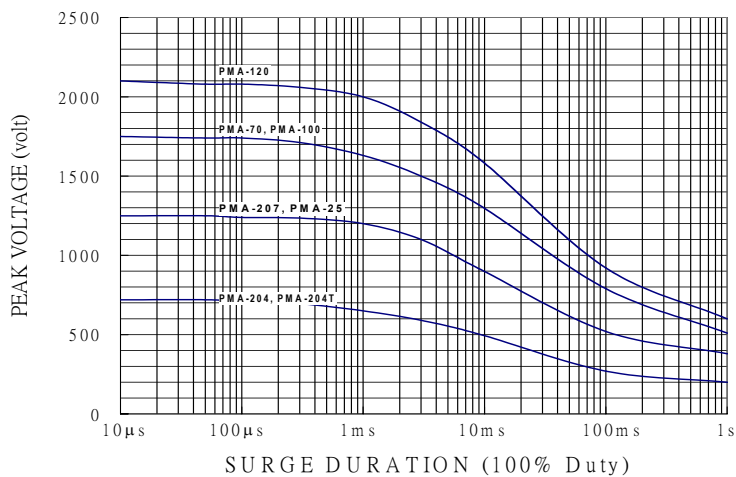
# PMA- Professional Metal Film Axial Resistor

1.2 / 50  $\mu$ s PEAK PULSE

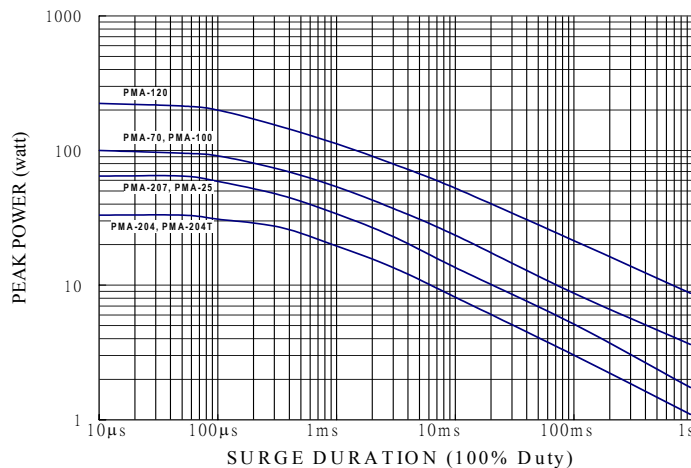
5 pulses at 12-sec interval for 0.5% permanent change



## SURGE PERFORMANCE PEAK VOLTAGE



## SURGE PERFORMANCE PEAK POWER



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# PMA - Professional Metal Film Axial Resistor

## Technical Summary:

Characteristics	Limits				
	PMA204 PMA204T	PMA25 PMA207	PMA70	PMA100	PMA120
Dielectric Withstanding Voltage, VAC	300	500	700	700	700
Thermal Resistance, K/W	<170	<145	<120	<95	<75
Current Noise, dB	R≤10K: -25		R≤47K: -25		
	R>10K: -25 + 8 /decade		R>47K: -25 + 8 /decade		
Axial Terminal Strength, N	>30	>45	>60	>70	>70
Temperature Coefficient, PPM /°C	±5, ±10, ±15, ±20, ±25, ±50, ±100				
Operating Temperature Range, °C	-55 ~ +155				
Insulation Resistance, MΩ	>10 <sup>5</sup>				
Voltage Coefficient, PPM / V	<1				
Failure Rate	<1 pcs / 10 <sup>9</sup> Device Hours				

## Performance Specifications:

Tests Characteristics	Test Conditions	Limits
Short Time Over Load	IEC 60115-1 4.13 6.25 times of rated power 2 seconds for PMA-204 & 204T, 5 seconds for other sizes	±(0.1%+0.05R)
Load Life In Humidity	IEC 60115-1 4.24 56 days at 40°C and 93% relative humidity	±(0.5%+0.05R)
Load Life	1000 hours	±(0.5%+0.05R)
	8000 hours	±(1.0%+0.05R)
	100000 hours	±(1.5%+0.05R)
Resistance To Soldering Heat	IEC 60115-1 4.18 10 seconds at 260°C solder bath temperature	±(0.1%+0.05R)
Solderability	MIL-STD-202 Method 208 Solder area covered after 230±5°C/5±0.5 seconds w/ flux applied	95% Lead Coverage Min.
Vibration	IEC 60115-1 4.22 Six hours in each parallel and axial direction w/ a simple harmonic motion having an amplitude of 0.75mm and 10 to 500 Hz.	±(0.1%+0.05R)
Terminal Endurance	IEC 60115-1 4.25.3 1000 hours at 155°C without load	±(0.1%+0.05R)
Thermal Shock	IEC 60115-1 4.19 -55°C 30minutes, +155°C 30minutes, 5 cycles	±(0.1%+0.05R)

## Ordering Information

Type	Tolerance	Temperature Coefficient	Resistance Value	Packaging	Special Request (Optional)
PMA204	B (0.1%), C (0.25%) D (0.5%), F (1%) G (2%), J (5%)	TK100	10K	TB (Tape/Box)	LV (Low value)

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