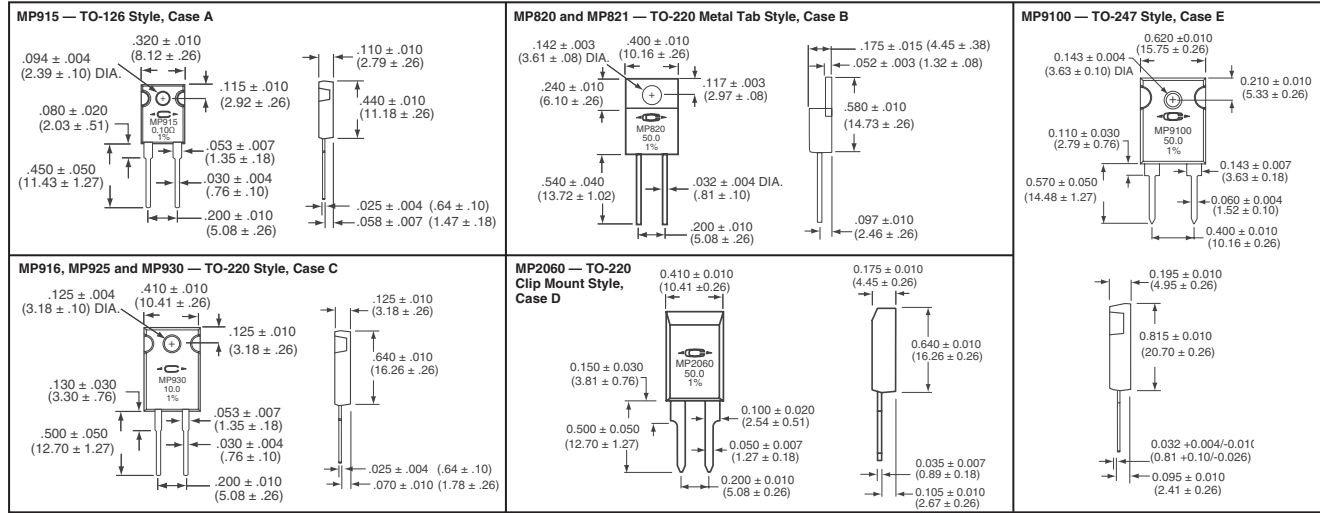


## MP Series TO-Style Power Film Resistors 15 Watts to 100 Watts

Features: • Non-Inductive design, ideal for Power Switching Circuits, Snubbers, Power Supplies, Industrial Controls, etc. • Values as low as 0.005Ω ideal for Current Sensing • RF Applications: 50Ω performance up to 500MHz • Resistor element electrically isolated from the mounting surface • Dielectric Withstanding Voltage: 1500VAC • Insulation Resistance: 10,000 MΩ minimum

Dimensions in Inches (mm)

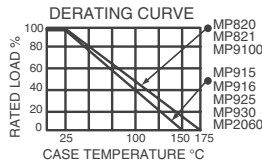


**Power Ratings** are based on 25°C case temperature. The case temperature is used to establish the maximum applied power, see Derating Curve. The case temperature measurement is made with a thermocouple contacting the bottom mounting surface of the package (center of heat dissipating surface), with the device mounted on the heat sink with thermal grease or thermal interface material.

**Mounting Note:** Mount on a smooth, clean, and flat heat sink surface with a thermal interface material such as thermal grease. The entire heat dissipating surface area must be in contact with the heat sink.

**Screw Mounting:** Mount with a compression washer (Belleville) that provides a force of 150 – 300 pounds. The maximum mounting torque to avoid damage to the package is 6 in-lbs (TO-126), 8 in-lbs (TO-220 and TO-247).

**Clip Mounting:** Recommended Clip Force is 8 – 30 pounds applied to the center of the package. The clip should be smooth to avoid any point concentrations of pressure. For additional information see the application notes online @ [www.caddock.com](http://www.caddock.com)



**Resistance Values MP820**

10.0	75.0	1.00K
20.0	100	2.00K
25.0	200	5.00K
50.0	500	10.0K

**Resistance Values MP821**

0.020	0.20	2.00
0.050	0.50	5.00
0.10	1.00	

**Resistance Values MP915**

0.020	2.00	75.0
0.050	5.00	100
0.10	10.0	200
0.20	20.0	500
0.50	25.0	1.00K
1.00	50.0	

**Resistance Values MP930**

0.020	2.00	75.0
0.050	5.00	100
0.10	10.0	200
0.20	20.0	500
0.50	25.0	1.00K
1.00	50.0	2.00K

**Resistance Values MP925**

5.00K	20.0K	100K
10.0K	50.0K	

**Resistance Values MP2060**

0.005	1.00	75.0
0.010	2.00	100
0.020	5.00	200
0.050	10.0	500
0.10	20.0	1.00K
0.20	25.0	
0.50	50.0	

**Resistance Values MP9100**

0.050	1.00	20.0	100
0.10	2.00	25.0	
0.20	5.00	50.0	
0.50	10.0	75.0	

**Temperature Coefficient:**

<b>MP915, MP916, MP925, MP930: ΔR taken at 150°C, ref. to 25°C</b>			
0.50Ω - 100K: -20 - +80ppm/°C	0.050Ω - 0.49Ω: 0 - +200ppm/°C		
0.020Ω - 0.049Ω: 0 - +300ppm/°C	0.010Ω - 0.019Ω: 0 - +500ppm/°C		
<b>MP820 and MP821: ΔR taken at 175°C, ref. to 25°C</b>			
5.00Ω - 10.0KΩ: -20 - +50ppm/°C	0.50Ω - 4.99Ω: -20 - +80ppm/°C		
0.050Ω - 0.49Ω: 0 - +200ppm/°C	0.020Ω - 0.049Ω: 0 - +300ppm/°C		
<b>MP2060: ΔR taken at 150°C, ref. to 25°C</b>			
0.50Ω - 1.00KΩ: -20 - +80ppm/°C	0.050Ω - 0.49Ω: 0 - +100ppm/°C		
0.015Ω - 0.049Ω: 0 - +200ppm/°C	0.005Ω - 0.014Ω: 0 - +300ppm/°C		
<b>MP9100: ΔR taken at 175°C, ref. to 25°C</b>			
0.50Ω - 100Ω: -20 - +80ppm/°C	0.050Ω - 0.49Ω: 0 - +150ppm/°C		

Caddock Model	Case Type	Power Rating @ 25°C Case Temperature	Thermal Resistance	Maximum Continuous Operating Voltage	Range Ω	Tolerance %	Digi-Key Part No.†	Price Each			
								1	10	25	50
MP915	A	15 Watts	8.33°C/Watt		0.020	5	MP915-0.020J-ND◆	3.22	2.86	2.51	2.29
MP915	A	15 Watts	8.33°C/Watt	200 Volts rms AC	0.050	1	MP915-0.050F-ND◆	3.22	2.86	2.51	2.29
MP915	A	15 Watts	8.33°C/Watt	or Limited by sqrt(PxR)	0.10 - 0.50	1	MP915-(Value)F-ND◆	2.35	2.10	1.83	1.67
MP915	A	15 Watts	8.33°C/Watt		1.00 - 5.00	1	MP915-(Value)F-ND◆	2.24	1.99	1.75	1.59
MP915	A	15 Watts	8.33°C/Watt		10.0 - 1.00K	1	MP915-(Value)F-ND◆	2.01	1.79	1.57	1.44
MP821	B	20 Watts	7.50°C/Watt		0.020 - 0.050	1	MP821-(Value)F-ND	6.31	5.61	4.91	4.49
MP821	B	20 Watts	7.50°C/Watt	300 Volts rms AC	0.10 - 0.50	1	MP821-(Value)F-ND	6.31	5.61	4.91	4.49
MP821	B	20 Watts	7.50°C/Watt	or Limited by sqrt(PxR)	1.00 - 5.00	1	MP821-(Value)F-ND	5.40	4.81	4.21	3.85
MP821	B	20 Watts	7.50°C/Watt		10.0 - 10.0K	1	MP821-(Value)F-ND	4.18	3.72	3.26	2.98
MP916	C	16 Watts	7.81°C/Watt		0.010	5	MP916-0.010J-ND◆	5.00	4.45	3.90	3.56
MP930	C	30 Watts	4.17°C/Watt		0.020	5	MP930-0.020J-ND◆	4.09	3.63	3.18	2.91
MP930	C	30 Watts	4.17°C/Watt	250 Volts rms AC	0.050	1	MP930-0.050F-ND◆	4.09	3.63	3.18	2.91
MP930	C	30 Watts	4.17°C/Watt	or Limited by sqrt(PxR)	0.10 - 0.50	1	MP930-(Value)F-ND◆	3.01	2.68	2.34	2.14
MP930	C	30 Watts	4.17°C/Watt		1.00 - 5.00	1	MP930-(Value)F-ND◆	2.86	2.55	2.23	2.03
MP930	C	30 Watts	4.17°C/Watt		10.0 - 2.00K	1	MP930-(Value)F-ND◆	2.55	2.27	1.99	1.82
MP925	C	25 Watts	5.00°C/Watt	500 Volts	5.00K - 100K	1	MP925-(Value)F-ND◆	2.56	2.28	2.00	1.83
MP2060	D	18 Watts	6.94°C/Watt		0.005	5	MP2060-0.005J-ND◆	7.14	6.35	5.56	5.08
MP2060	D	36 Watts	3.47°C/Watt		0.010	2	MP2060-0.010G-ND◆	6.80	6.04	5.29	4.84
MP2060	D	60 Watts	2.08°C/Watt	250 Volts rms AC	0.020 - 0.050	1	MP2060-(Value)F-ND◆	6.80	6.04	5.29	4.84
MP2060	D	60 Watts	2.08°C/Watt	or Limited by sqrt(PxR)	0.10 - 0.50	1	MP2060-(Value)F-ND◆	6.05	5.39	4.72	4.32
MP2060	D	60 Watts	2.08°C/Watt		1.00 - 5.00	1	MP2060-(Value)F-ND◆	5.20	4.62	4.05	3.70
MP2060	D	60 Watts	2.08°C/Watt		10.0 - 1.00K	1	MP2060-(Value)F-ND◆	4.81	4.33	4.05	3.66
MP9100	E	100 Watts	1.50°C/Watt		0.050	1	MP9100-0.050F-ND◆	9.07	8.06	7.06	6.45
MP9100	E	100 Watts	1.50°C/Watt	Limited by sqrt(PxR)	0.10 - 0.50	1	MP9100-(Value)F-ND◆	8.64	7.69	6.73	6.15
MP9100	E	100 Watts	1.50°C/Watt		1.00 - 5.00	1	MP9100-(Value)F-ND◆	7.99	7.10	6.22	5.69
MP9100	E	100 Watts	1.50°C/Watt		10.0 - 20.0	1	MP9100-(Value)F-ND◆	7.32	6.51	5.69	5.21
MP9100	E	100 Watts	1.50°C/Watt		25.0 - 100	1	MP9100-(Value)F-ND◆	6.65	5.91	5.18	4.74

† For complete part number, substitute Digi-Key value (from Resistance Value Chart) for (Value). ◆ RoHS Compliant

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