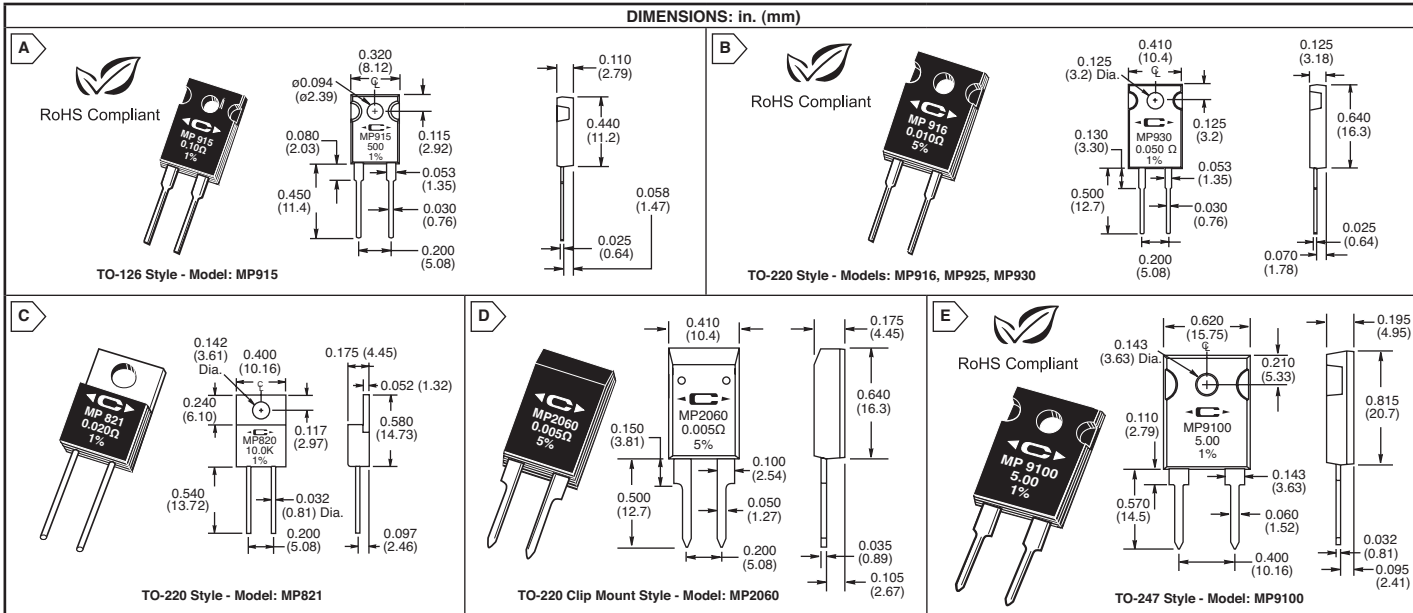


# CADDOCK 15W-100W Power Film Resistors

DIMENSIONS: in. (mm)



## MP SERIES

### Non-Inductive, Heat Sink Mount TO-126, TO-220 and TO-247 Packages

#### Features:

- Non-Inductive Design, Ideal for Power Switching Circuits, Snubbers, RF Applications: 50Ω performance up to 500MHz
- Values as low as 0.005Ω ideal for Current Sensing in Power Supplies, Motor Controls, and Battery Charging Circuits
- Resistor Element Electrically Isolated from the Ceramic Heat Dissipating Mounting Surface (1500V ACrms)
- 1% Tolerance for most resistance values

#### \*Power Ratings are based on +25°C Case Temp.:

The case temp. is used to establish the max. applied power, see Derating Curve. The case temp. measurement is made with a thermocouple contacting the bottom mounting surface of the package (center of heat dissipating ceramic), the device mounted on the heat sink with thermal grease. See Mounting Note.

#### Without a Heat Sink:

When in free air at +25°C the MP Series have the following power ratings:  
MP915: 1.25W MP916, MP925, MP930: 2.25W; MP2060: 2.5W MP9100: 3.5W

#### Mounting Note:

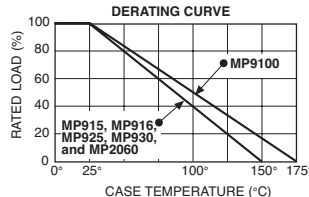
Mount on a smooth, clean, and flat heat sink surface with a thermal interface material such as thermal grease. The entire exposed ceramic area must be in contact with the heat sink. For additional technical information please refer to the Caddock Applications Notes for the MP Series available online at [www.caddock.com](http://www.caddock.com).

#### Screw Mounting:

The use of a compression washer (Belleville type) is recommended. The compression washer must provide a force of 150 to 300lbs. Recommended mounting torque is 6in-lbs. Maximum mounting torque to avoid damage to the package is 8in-lbs.

#### Clip Mounting:

Recommended Clip Force is 8 to 35lbs applied to the center of the package. The clip should be smooth to avoid any point concentrations of pressure.



0.005	0.2	10	100	5K
0.01	0.5	20	200	10K
0.02	1	25	500	20K
0.05	2	50	1K	50K
0.1	5	75	2K	100K

#### Temperature Coefficient:

##### MP915, MP916, MP925, MP930:

- ΔR taken at +150°C, ref to +25°C  
0.50Ω to 100K: -20 to +80ppm/°C  
0.050Ω to 0.49Ω: 0 to +200ppm/°C  
0.020Ω to 0.049Ω: 0 to +300ppm/°C  
0.010Ω to 0.019Ω: 0 to +500ppm/°C

##### MP2060:

- ΔR taken at +150°C, ref to +25°C  
0.50Ω to 100K: -20 to +80ppm/°C  
0.050Ω to 0.49Ω: 0 to +100ppm/°C  
0.015Ω to 0.049Ω: 0 to +200ppm/°C  
0.005Ω to 0.014Ω: 0 to +300ppm/°C

##### MP821, MP820:

- ΔR taken at +175°C, ref to +25°C  
5.00Ω to 10K: -20 to +50ppm/°C  
0.50Ω to 4.99Ω: -20 to +80ppm/°C  
0.050Ω to 0.49Ω: 0 to +200ppm/°C  
0.020Ω to 0.049Ω: 0 to +300ppm/°C

##### MP9100:

- ΔR taken at +175°C, ref to +25°C  
0.50Ω to 100Ω: -20 to +80ppm/°C  
0.050Ω to 0.49Ω: 0 to +150ppm/°C

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Caddock Part No.	Case Style	Fig.	Power Rating *	Thermal Res. (Film to Case)	Max. Operating Voltage ACrms	Ohm Range (See Table of Stocked Values)	Tol.	Price Each			
									1	10	25	50
684-MP915-Value	MP915-Value-Tol.	TO-126	A	15W	8.33°C/W	Power Limited	0.02	5%	4.99	3.99	3.69	3.48
		TO-126	A	15W	8.33°C/W	Power Limited	0.05	1%	4.99	3.99	3.69	3.48
		TO-126	A	15W	8.33°C/W	Power Limited	0.1 to 0.5	1%	3.68	2.94	2.71	2.57
		TO-126	A	15W	8.33°C/W	200V	1 to 5	1%	3.47	2.78	2.56	2.43
		TO-126	A	15W	8.33°C/W	200V	10 to 1K	1%	3.17	2.48	2.29	2.16
684-MP916-Value	MP916-Value-Tol.	TO-220	B	16W	7.81°C/W	Power Limited	0.01	5%	7.75	6.19	5.73	5.41
684-MP821-Value	MP821-Value-Tol.	TO-220	C	20W	7.5°C/W	Power Limited	0.02 to 0.05	1%	10.25	8.19	7.58	7.17
		TO-220	C	20W	7.5°C/W	Power Limited	0.1 to 0.5	1%	9.70	7.75	7.17	6.78
		TO-220	C	20W	7.5°C/W	300V	1.0 to 5	1%	7.82	6.25	5.79	5.47
684-MP820-Value	MP820-Value-Tol.	TO-220	C	20W	7.5°C/W	300V	10 to 10K	1%	6.45	5.13	4.76	4.51
684-MP850-Value	MP850-Value-Tol.	TO-220	B	50W	2.5°C/W	300	0.50	1%	13.46	11.96	10.47	9.57
684-MP850-Value	MP850-Value-Tol.	TO-220	B	50W	2.5°C/W	300	2 to 5	1%	9.62	8.56	7.49	6.83
684-MP850-Value	MP850-Value-Tol.	TO-220	B	50W	2.5°C/W	300	10 to 1K	1%	8.59	7.64	6.67	6.10
684-MP925-Value	MP925-Value-Tol.	TO-220	B	25W	5.0°C/W	500V	5K to 100K	1%	3.95	3.16	2.92	2.76
684-MP930-Value	MP930-Value-Tol.	TO-220	B	30W	4.17°C/W	Power Limited	0.02	5%	6.39	5.11	4.71	4.47
		TO-220	B	30W	4.17°C/W	Power Limited	0.05	1%	6.39	5.11	4.71	4.47
		TO-220	B	30W	4.17°C/W	Power Limited	0.1 to 0.5	1%	4.63	3.71	3.43	3.24
		TO-220	B	30W	4.17°C/W	250V	1 to 5	1%	4.41	3.53	3.26	3.10
		TO-220	B	30W	4.17°C/W	250V	10 to 2K	1%	3.97	3.18	2.93	2.79
684-MP2060-Value	MP2060-Value-Tol.	TO-220 Clip	D	18W	6.94°C/W	Power Limited	0.005	5%	10.76	8.60	7.95	7.52
		TO-220 Clip	D	36W	3.47°C/W	Power Limited	0.01	2%	10.54	8.42	7.79	7.36
		TO-220 Clip	D	60W	2.08°C/W	Power Limited	0.02 to 0.05	1%	10.54	8.42	7.79	7.36
		TO-220 Clip	D	60W	2.08°C/W	Power Limited	0.1 to 0.5	1%	9.39	7.50	6.94	6.57
		TO-220 Clip	D	60W	2.08°C/W	250V	1 to 5	1%	8.04	6.43	5.95	5.62
		TO-220 Clip	D	60W	2.08°C/W	250V	10 to 1K	1%	6.71	5.36	4.95	4.70
684-MP9100-Value	MP9100-Value-Tol.	TO-247	E	100W	1.50°C/W	Power Limited	0.05	1%	13.96	11.16	10.31	9.78
		TO-247	E	100W	1.50°C/W	Power Limited	0.1 to 0.5	1%	13.27	10.65	9.83	9.30
		TO-247	E	100W	1.50°C/W	Power Limited	1 to 5	1%	12.25	9.81	9.07	8.58
		TO-247	E	100W	1.50°C/W	Power Limited	10 to 20	1%	11.24	8.99	8.32	7.87
		TO-247	E	100W	1.50°C/W	Power Limited	25 to 100	1%	10.22	7.96	7.55	7.14