High Power Thick Film Chip Resistors Multicomp PRO





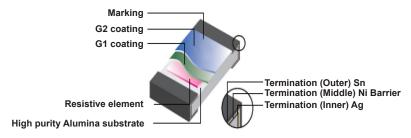
RoHS Compliant

Standards: AEC-200 Qualified

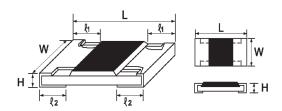
Ratings

Case Size	0603	0805	1206	2512		
Power Rating @70°C	1/5W	1/3W	1/2W	2W		
Max. Current for Jumper	5A	6A	10A	16A		
Max. Resistance for Jumper	8mΩ	5mΩ	5mΩ	5mΩ		
Max. Working Voltage	75V	150V	200V	250V		
Max. Overload Voltage	150V	300V	400V	500V		
Dielectric Withstanding Voltage	300V	500V	500V	500V		
Temperature Range	-55°C to +155°C					
Ambient Temperature	70°C					

Construction



Dimensions and Power Rating



	Case Size	L	W	Н	€1	€2
	0603	1.6 ±0.1	0.8 ±0.1	0.45 ±0.1	0.3 ±0.2	0.3 ±0.2
	0805	2 ± 0.15	1.25 +0.15 - 0.1	0.55 ±0.1	0.4 ±0.2	0.4 ±0.2
	1206	3.1 ±0.15	1.55 + 0.15 - 0.1	0.55 ±0.1	0.45 ±0.2	0.45 ±0.2
ĺ	2512	6.35 ±0.1	3.2 ±0.2	0.55 ±0.1	0.6 ±0.25	0.5 ±0.2

Jumper

Case Size	Power Rating	I Max.
0603	1/5W	5A
0805	1/3W	6A
1206	1/2W	10A
2512	2W	16A

Dimensions: Millimetres

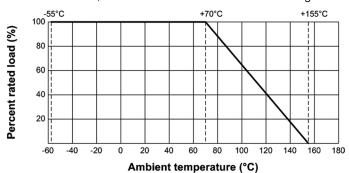


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Power Rating

Resistors shall have a power rating based on continuous load operation at an ambient temperature of 70°C. For temperature in excess of 70°C, the load shall be derate as shown in figure.



Nominal Resistance

Effective figures of nominal resistance shall be in accordance :

E-24 and E-96 series for 1 %

E-24 series for 2 % and 5 %

Power Rating Resistance range and T.C.R

Case Size	Power Rating at 70°C	Tolerance %	Resistance Range	TCR PPM/°C
0603	1/5W	±1	10Ω to 1MΩ	±100
0805	1/3W	±1	10Ω to 1MΩ	±100
1206	1/2W	±1	10Ω to 910kΩ	±100
2512	2W	±1	560Ω to 270kΩ	±75

Performance Specification

Characteristics	Limits	Test Methods (JIS C 5201-1)
Insulation resistance	1,000M Ω or more	Apply 500V DC between protective coating and termination for 1 min, then measure
*Dielectric withstanding voltage	No evidence of flashover mechanical damage, arcing or insulation break down	Apply 100V(0402) 300V(0603) & 500V (0805,1206,1210,2010, 2512) AC between protective coating and termination for 1 minute
Temperature Coefficient	Refer to "Dimensions and Power Rating"	Natural resistance change per temperature degree centigrade. R2-R1 R1(t2-t1) ×10 ⁶ (PPM/°C) R1: Resistance value at room temperature (T1) R2: Resistance value at room temp. plus 100°C (T2))
Short time overload	Resistance change rate is ±5% (2% +0.1Ω) Max. ±1% (1% +0.1Ω) Max.	Permanent resistance change after the application of a potential of 2.5 times RCWV for 5 seconds





Characteristics	Limits		Test Methods (JIS C 5201-1)			
*Solderability	95 % coverage Min.	Test temperature of solder : 245 ±3°C Dipping them solder : 2-3 seconds				
Soldering temperature reference	Electrical characteristics shall be satisfied. Without distinct deformation in appearance. (95 % coverage Min.)	Wave soldering condition: (2 cycles Max.) Pre-heat: 100°C to 120°C, 30 ± 5 sec. Suggestion solder temp.: 235°C to 255°C, 10 sec. (Max.) Peak temp.: 260°C Reflow soldering condition: (2 cycles Max.) Pre-heat: 150°C to 180°C, 90 to 120 sec. Suggestion solder temp.: 235°C to 255°C, 20 ~ 40 sec. Peak temp.: 260°C				
Soldering temperature reference	Electrical characteristics shall be satisfied. Without distinct deformation in appearance. (95 % coverage Min.)	Peak: 260°C (Max) 235°C - 255°C Pre Heating Zone 150 °C 150 °C Pre Heating Ime Temperature profile for avaluation Hand soldering condition: The soldering iron tip temperature should be less than 300°C and maximum contract time should be 5 sec.				
Soldering heat	Resistance change rate is: $\pm (1\%+0.05\Omega)$ Max.		tor into a solder bath I and hold it for 10 ±1 se		e of	
		Resistance of specified below	hange after continuou ow	us 5 cycles for duty o	cycle -	
	Danistanaa ahanna sata is	Step	Temperature	Time		
Temperature cycling	Resistance change rate is $\pm 5\%$ (1% + 0.05 Ω) Max.	1	-55°C ±3°C	30 mins	_	
	\pm 1% (0.5% + 0.05Ω) Max.	2	Room temp.	10~15 mins	_	
		3	+155°C ±2°C	30 mins	_	
		4	Room temp.	10~15 mins		
Load life in humidity	Resistance change rate is ± 5% (3% + 0.1Ω) Max. ± 1% (1.0% + 0.1Ω) Max.	Resistance change after 1,000 hours (1.5 hours "on", 0.5 hour "off") at RCWV in a humidity chamber controlled at 40°C ±2°C and 90 to 95 % relative humidity				
Load Life	Resistance change rate is ± 5% (3% + 0.1Ω) Max. ± 1% (1% + 0.1Ω) Max.	Permanent resistance change after 1,000 hours operating at RCWV, with duty cycle of (1.5 hours"on", 0.5 hour"off") at 70°C ± 2°C ambient				
Terminal bending	Resistance change rate is $\pm (1.0\% + 0.05\Omega)$ Max.	Twist of Test Y/X = 5/90 m	Board : im for 10 seconds			

The resistors of 0Ω only can do the characteristic noted of $\ensuremath{^*}$

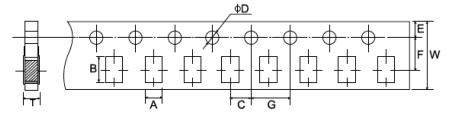


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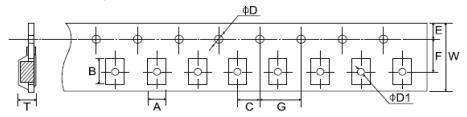
Packing Specification

Paper taping



Case Size	A ±0.2	B ±0.2	C ±0.05	ФD +0.1 -0	E ±0.1	F ±0.05	G ±0.1	W ±0.2	T ± 0.1
0603	1.1	1.9	2	1.5	1.75	3.5	4	8	0.67
0805	1.65	2.4	2	1.5	1.75	3.5	4	8	0.81
1206	2	3.6	2	1.5	1.75	3.5	4	8	0.81

Embossed taping

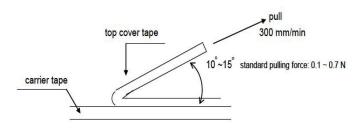


Case Size	A ±0.2	B ±0.2	C ±0.05	ФD ^{+0.1}	ФD1 ^{+0.1}	E ±0.1	F ±0.05	G ±0.1	W ±0.2	T ± 0.1
2512	3.5	6.7	2	1.5	1.5	1.75	5.5	4	12	1

Dimensions: Millimetres

Peeling Strength of Top Cover Tape

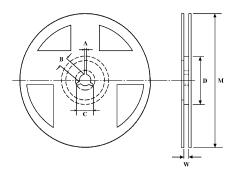
Test Condition: 0.1 to 0.7 N at a peel-off speed of 300mm / min.







Reel Dimension



Case Size	A ±0.5	B ± 0.5	C ±0.5	D ±1	M ±2	W ±1
0603						
0805	2	13	21	60	178	10
1206		13	21	60	170	
2512						13.8

Dimensions: Millimetres

Part Number Table

Description	Part Number
Chip Resistor, Thick Film, ±1%, 0R, 1/5W, 0603	MP001269
Chip Resistor, Thick Film, ±1%, 10R, ± 100 PPM/°C, 1/5W, 0603	MP001270
Chip Resistor, Thick Film, ±1%, 11R, ± 100 PPM/°C, 1/5W, 0603	MP001271
Chip Resistor, Thick Film, ±1%, 12R, ± 100 PPM/°C, 1/5W, 0603	MP001272
Chip Resistor, Thick Film, ±1%, 15R, ± 100 PPM/°C, 1/5W, 0603	MP001273
Chip Resistor, Thick Film, ±1%, 16R, ± 100 PPM/°C, 1/5W, 0603	MP001274
Chip Resistor, Thick Film, ±1%, 18R, ± 100 PPM/°C, 1/5W, 0603	MP001275
Chip Resistor, Thick Film, ±1%, 20R, ± 100 PPM/°C, 1/5W, 0603	MP001276
Chip Resistor, Thick Film, ±1%, 22R, ± 100 PPM/°C, 1/5W, 0603	MP001277
Chip Resistor, Thick Film, ±1%, 24R, ± 100 PPM/°C, 1/5W, 0603	MP001278
Chip Resistor, Thick Film, ±1%, 27R, ± 100 PPM/°C, 1/5W, 0603	MP001279
Chip Resistor, Thick Film, ±1%, 30R, ± 100 PPM/°C, 1/5W, 0603	MP001280
Chip Resistor, Thick Film, ±1%, 33R, ± 100 PPM/°C, 1/5W, 0603	MP001281
Chip Resistor, Thick Film, ±1%, 36R, ± 100 PPM/°C, 1/5W, 0603	MP001282
Chip Resistor, Thick Film, ±1%, 39R, ± 100 PPM/°C, 1/5W, 0603	MP001283
Chip Resistor, Thick Film, ±1%, 43R, ± 100 PPM/°C, 1/5W, 0603	MP001284
Chip Resistor, Thick Film, ±1%, 47R, ± 100 PPM/°C, 1/5W, 0603	MP001285
Chip Resistor, Thick Film, ±1%, 51R, ± 100 PPM/°C, 1/5W, 0603	MP001286
Chip Resistor, Thick Film, ±1%, 56R, ± 100 PPM/°C, 1/5W, 0603	MP001287
Chip Resistor, Thick Film, ±1%, 62R, ± 100 PPM/°C, 1/5W, 0603	MP001288
Chip Resistor, Thick Film, ±1%, 68R, ± 100 PPM/°C, 1/5W, 0603	MP001289
Chip Resistor, Thick Film, ±1%, 75R, ± 100 PPM/°C, 1/5W, 0603	MP001290
Chip Resistor, Thick Film, ±1%, 82R, ± 100 PPM/°C, 1/5W, 0603	MP001291
Chip Resistor, Thick Film, ±1%, 91R, ± 100 PPM/°C, 1/5W, 0603	MP001292
Chip Resistor, Thick Film, ±1%, 100R, ± 100 PPM/°C, 1/5W, 0603	MP001293





Description	Part Number
Chip Resistor, Thick Film, ±1%, 110R, ± 100 PPM/°C, 1/5W, 0603	MP001294
Chip Resistor, Thick Film, ±1%, 120R, ± 100 PPM/°C, 1/5W, 0603	MP001295
Chip Resistor, Thick Film, ±1%, 130R, ± 100 PPM/°C, 1/5W, 0603	MP001296
Chip Resistor, Thick Film, ±1%, 150R, ± 100 PPM/°C, 1/5W, 0603	MP001297
Chip Resistor, Thick Film, ±1%, 160R, ± 100 PPM/°C, 1/5W, 0603	MP001298
Chip Resistor, Thick Film, ±1%, 180R, ± 100 PPM/°C, 1/5W, 0603	MP001299
Chip Resistor, Thick Film, ±1%, 200R, ± 100 PPM/°C, 1/5W, 0603	MP001300
Chip Resistor, Thick Film, ±1%, 220R, ± 100 PPM/°C, 1/5W, 0603	MP001301
Chip Resistor, Thick Film, ±1%, 240R, ± 100 PPM/°C, 1/5W, 0603	MP001302
Chip Resistor, Thick Film, ±1%, 270R, ± 100 PPM/°C, 1/5W, 0603	MP001303
Chip Resistor, Thick Film, ±1%, 300R, ± 100 PPM/°C, 1/5W, 0603	MP001304
Chip Resistor, Thick Film, ±1%, 330R, ± 100 PPM/°C, 1/5W, 0603	MP001305
Chip Resistor, Thick Film, ±1%, 360R, ± 100 PPM/°C, 1/5W, 0603	MP001306
Chip Resistor, Thick Film, ±1%, 390R, ± 100 PPM/°C, 1/5W, 0603	MP001307
Chip Resistor, Thick Film, ±1%, 430R, ± 100 PPM/°C, 1/5W, 0603	MP001308
Chip Resistor, Thick Film, ±1%, 470R, ± 100 PPM/°C, 1/5W, 0603	MP001309
Chip Resistor, Thick Film, ±1%, 510R, ± 100 PPM/°C, 1/5W, 0603	MP001310
Chip Resistor, Thick Film, ±1%, 560R, ± 100 PPM/°C, 1/5W, 0603	MP001311
Chip Resistor, Thick Film, ±1%, 620R, ± 100 PPM/°C, 1/5W, 0603	MP001312
Chip Resistor, Thick Film, $\pm 1\%$, 680R, ± 100 PPM/°C, 1/5W, 0603	MP001313
Chip Resistor, Thick Film, $\pm 1\%$, 750R, ± 100 PPM/°C, 1/5W, 0603	MP001314
Chip Resistor, Thick Film, $\pm 1\%$, 820R, ± 100 PPM/°C, 1/5W, 0603	MP001315
Chip Resistor, Thick Film, $\pm 1\%$, $910R$, ± 100 PPM/°C, $1/5W$, 0603	MP001316
Chip Resistor, Thick Film, ±1%, 1K, ± 100 PPM/°C, 1/5W, 0603	MP001317
Chip Resistor, Thick Film, ±1%, 1K1, ± 100 PPM/°C, 1/5W, 0603	MP001318
Chip Resistor, Thick Film, ±1%, 1K2, ± 100 PPM/°C, 1/5W, 0603	MP001319
Chip Resistor, Thick Film, ±1%, 1K3, ± 100 PPM/°C, 1/5W, 0603	MP001320
Chip Resistor, Thick Film, ±1%, 1K5, ± 100 PPM/°C, 1/5W, 0603	MP001321
Chip Resistor, Thick Film, ±1%, 1K6, ± 100 PPM/°C, 1/5W, 0603	MP001322
Chip Resistor, Thick Film, ±1%, 1K8, ± 100 PPM/°C, 1/5W, 0603	MP001323
Chip Resistor, Thick Film, ±1%, 2K, ± 100 PPM/°C, 1/5W, 0603	MP001324
Chip Resistor, Thick Film, ±1%, 2K2, ± 100 PPM/°C, 1/5W, 0603	MP001325
Chip Resistor, Thick Film, ±1%, 2K4, ± 100 PPM/°C, 1/5W, 0603	MP001326
Chip Resistor, Thick Film, ±1%, 2K7, ± 100 PPM/°C, 1/5W, 0603	MP001327
Chip Resistor, Thick Film, ±1%, 3K, ± 100 PPM/°C, 1/5W, 0603	MP001328
Chip Resistor, Thick Film, ±1%, 3K3, ± 100 PPM/°C, 1/5W, 0603	MP001329
Chip Resistor, Thick Film, ±1%, 3K6, ± 100 PPM/°C, 1/5W, 0603	MP001330
Chip Resistor, Thick Film, ±1%, 3K9, ± 100 PPM/°C, 1/5W, 0603	MP001331
Chip Resistor, Thick Film, $\pm 1\%$, $4K3$, ± 100 PPM/°C, $1/5W$, 0603	MP001332





Description	Part Number
Chip Resistor, Thick Film, ±1%, 4K7, ± 100 PPM/°C, 1/5W, 0603	MP001333
Chip Resistor, Thick Film, ±1%, 5K1, ± 100 PPM/°C, 1/5W, 0603	MP001334
Chip Resistor, Thick Film, ±1%, 5K6, ± 100 PPM/°C, 1/5W, 0603	MP001335
Chip Resistor, Thick Film, ±1%, 6K2, ± 100 PPM/°C, 1/5W, 0603	MP001336
Chip Resistor, Thick Film, ±1%, 6K8, ± 100 PPM/°C, 1/5W, 0603	MP001337
Chip Resistor, Thick Film, ±1%, 7K5, ± 100 PPM/°C, 1/5W, 0603	MP001338
Chip Resistor, Thick Film, ±1%, 8K2, ± 100 PPM/°C, 1/5W, 0603	MP001339
Chip Resistor, Thick Film, ±1%, 9K1, ± 100 PPM/°C, 1/5W, 0603	MP001340
Chip Resistor, Thick Film, ±1%, 10K, ± 100 PPM/°C, 1/5W, 0603	MP001341
Chip Resistor, Thick Film, ±1%, 11K, ± 100 PPM/°C, 1/5W, 0603	MP001342
Chip Resistor, Thick Film, ±1%, 12K, ± 100 PPM/°C, 1/5W, 0603	MP001343
Chip Resistor, Thick Film, ±1%, 13K, ± 100 PPM/°C, 1/5W, 0603	MP001344
Chip Resistor, Thick Film, ±1%, 15K, ± 100 PPM/°C, 1/5W, 0603	MP001345
Chip Resistor, Thick Film, ±1%, 16K, ± 100 PPM/°C, 1/5W, 0603	MP001346
Chip Resistor, Thick Film, ±1%, 18K, ± 100 PPM/°C, 1/5W, 0603	MP001347
Chip Resistor, Thick Film, ±1%, 20K, ± 100 PPM/°C, 1/5W, 0603	MP001348
Chip Resistor, Thick Film, ±1%, 22K, ± 100 PPM/°C, 1/5W, 0603	MP001349
Chip Resistor, Thick Film, ±1%, 24K, ± 100 PPM/°C, 1/5W, 0603	MP001350
Chip Resistor, Thick Film, ±1%, 27K, ± 100 PPM/°C, 1/5W, 0603	MP001351
Chip Resistor, Thick Film, ±1%, 30K, ± 100 PPM/°C, 1/5W, 0603	MP001352
Chip Resistor, Thick Film, ±1%, 33K, ± 100 PPM/°C, 1/5W, 0603	MP001353
Chip Resistor, Thick Film, ±1%, 36K, ± 100 PPM/°C, 1/5W, 0603	MP001354
Chip Resistor, Thick Film, ±1%, 39K, ± 100 PPM/°C, 1/5W, 0603	MP001355
Chip Resistor, Thick Film, ±1%, 43K, ± 100 PPM/°C, 1/5W, 0603	MP001356
Chip Resistor, Thick Film, ±1%, 47K, ± 100 PPM/°C, 1/5W, 0603	MP001357
Chip Resistor, Thick Film, ±1%, 51K, ± 100 PPM/°C, 1/5W, 0603	MP001358
Chip Resistor, Thick Film, ±1%, 56K, ± 100 PPM/°C, 1/5W, 0603	MP001359
Chip Resistor, Thick Film, ±1%, 62K, ± 100 PPM/°C, 1/5W, 0603	MP001360
Chip Resistor, Thick Film, ±1%, 68K, ± 100 PPM/°C, 1/5W, 0603	MP001361
Chip Resistor, Thick Film, ±1%, 75K, ± 100 PPM/°C, 1/5W, 0603	MP001362
Chip Resistor, Thick Film, ±1%, 82K, ± 100 PPM/°C, 1/5W, 0603	MP001363
Chip Resistor, Thick Film, ±1%, 91K, ± 100 PPM/°C, 1/5W, 0603	MP001364
Chip Resistor, Thick Film, ±1%, 100K, ± 100 PPM/°C, 1/5W, 0603	MP001365
Chip Resistor, Thick Film, ±1%, 110K, ± 100 PPM/°C, 1/5W, 0603	MP001366
Chip Resistor, Thick Film, ±1%, 120K, ± 100 PPM/°C, 1/5W, 0603	MP001367
Chip Resistor, Thick Film, ±1%, 130K, ± 100 PPM/°C, 1/5W, 0603	MP001368
Chip Resistor, Thick Film, ±1%, 150K, ± 100 PPM/°C, 1/5W, 0603	MP001369
Chip Resistor, Thick Film, ±1%, 160K, ± 100 PPM/°C, 1/5W, 0603	MP001370
Chip Resistor, Thick Film, ±1%, 180K, ± 100 PPM/°C, 1/5W, 0603	MP001371





Description	Part Number
Chip Resistor, Thick Film, ±1%, 200K, ± 100 PPM/°C, 1/5W, 0603	MP001372
Chip Resistor, Thick Film, ±1%, 220K, ± 100 PPM/°C, 1/5W, 0603	MP001373
Chip Resistor, Thick Film, ±1%, 240K, ± 100 PPM/°C, 1/5W, 0603	MP001374
Chip Resistor, Thick Film, ±1%, 270K, ± 100 PPM/°C, 1/5W, 0603	MP001375
Chip Resistor, Thick Film, ±1%, 300K, ± 100 PPM/°C, 1/5W, 0603	MP001376
Chip Resistor, Thick Film, ±1%, 330K, ± 100 PPM/°C, 1/5W, 0603	MP001377
Chip Resistor, Thick Film, ±1%, 360K, ± 100 PPM/°C, 1/5W, 0603	MP001378
Chip Resistor, Thick Film, ±1%, 390K, ± 100 PPM/°C, 1/5W, 0603	MP001379
Chip Resistor, Thick Film, ±1%, 430K, ± 100 PPM/°C, 1/5W, 0603	MP001380
Chip Resistor, Thick Film, ±1%, 470K, ± 100 PPM/°C, 1/5W, 0603	MP001381
Chip Resistor, Thick Film, ±1%, 510K, ± 100 PPM/°C, 1/5W, 0603	MP001382
Chip Resistor, Thick Film, ±1%, 560K, ± 100 PPM/°C, 1/5W, 0603	MP001383
Chip Resistor, Thick Film, ±1%, 620K, ± 100 PPM/°C, 1/5W, 0603	MP001384
Chip Resistor, Thick Film, ±1%, 680K, ± 100 PPM/°C, 1/5W, 0603	MP001385
Chip Resistor, Thick Film, ±1%, 750K, ± 100 PPM/°C, 1/5W, 0603	MP001386
Chip Resistor, Thick Film, ±1%, 820K, ± 100 PPM/°C, 1/5W, 0603	MP001387
Chip Resistor, Thick Film, ±1%, 910K, ± 100 PPM/°C, 1/5W, 0603	MP001388
Chip Resistor, Thick Film, ±1%, 1M, ± 100 PPM/°C, 1/5W, 0603	MP001389
Chip Resistor, Thick Film, ±1%, 0R, 1/3W, 0805	MP001390
Chip Resistor, Thick Film, ±1%, 10R, ± 100 PPM/°C, 1/3W, 0805	MP001391
Chip Resistor, Thick Film, ±1%, 11R, ± 100 PPM/°C, 1/3W, 0805	MP001392
Chip Resistor, Thick Film, ±1%, 12R, ± 100 PPM/°C, 1/3W, 0805	MP001393
Chip Resistor, Thick Film, ±1%, 15R, ± 100 PPM/°C, 1/3W, 0805	MP001394
Chip Resistor, Thick Film, ±1%, 16R, ± 100 PPM/°C, 1/3W, 0805	MP001395
Chip Resistor, Thick Film, ±1%, 18R, ± 100 PPM/°C, 1/3W, 0805	MP001396
Chip Resistor, Thick Film, ±1%, 20R, ± 100 PPM/°C, 1/3W, 0805	MP001397
Chip Resistor, Thick Film, ±1%, 22R, ± 100 PPM/°C, 1/3W, 0805	MP001398
Chip Resistor, Thick Film, ±1%, 24R, ± 100 PPM/°C, 1/3W, 0805	MP001399
Chip Resistor, Thick Film, ±1%, 27R, ± 100 PPM/°C, 1/3W, 0805	MP001400
Chip Resistor, Thick Film, ±1%, 30R, ± 100 PPM/°C, 1/3W, 0805	MP001401
Chip Resistor, Thick Film, ±1%, 33R, ± 100 PPM/°C, 1/3W, 0805	MP001402
Chip Resistor, Thick Film, ±1%, 36R, ± 100 PPM/°C, 1/3W, 0805	MP001403
Chip Resistor, Thick Film, ±1%, 39R, ± 100 PPM/°C, 1/3W, 0805	MP001404
Chip Resistor, Thick Film, ±1%, 43R, ± 100 PPM/°C, 1/3W, 0805	MP001405
Chip Resistor, Thick Film, ±1%, 47R, ± 100 PPM/°C, 1/3W, 0805	MP001406
Chip Resistor, Thick Film, ±1%, 51R, ± 100 PPM/°C, 1/3W, 0805	MP001407
Chip Resistor, Thick Film, ±1%, 56R, ± 100 PPM/°C, 1/3W, 0805	MP001408
Chip Resistor, Thick Film, ±1%, 62R, ± 100 PPM/°C, 1/3W, 0805	MP001409
Chip Resistor, Thick Film, ±1%, 68R, ± 100 PPM/°C, 1/3W, 0805	MP001410





Description	Part Number
Chip Resistor, Thick Film, ±1%, 75R, ± 100 PPM/°C, 1/3W, 0805	MP001411
Chip Resistor, Thick Film, ±1%, 82R, ± 100 PPM/°C, 1/3W, 0805	MP001412
Chip Resistor, Thick Film, ±1%, 91R, ± 100 PPM/°C, 1/3W, 0805	MP001413
Chip Resistor, Thick Film, ±1%, 100R, ± 100 PPM/°C, 1/3W, 0805	MP001414
Chip Resistor, Thick Film, ±1%, 110R, ± 100 PPM/°C, 1/3W, 0805	MP001415
Chip Resistor, Thick Film, ±1%, 120R, ± 100 PPM/°C, 1/3W, 0805	MP001416
Chip Resistor, Thick Film, ±1%, 130R, ± 100 PPM/°C, 1/3W, 0805	MP001417
Chip Resistor, Thick Film, ±1%, 150R, ± 100 PPM/°C, 1/3W, 0805	MP001418
Chip Resistor, Thick Film, ±1%, 160R, ± 100 PPM/°C, 1/3W, 0805	MP001419
Chip Resistor, Thick Film, ±1%, 180R, ± 100 PPM/°C, 1/3W, 0805	MP001420
Chip Resistor, Thick Film, ±1%, 200R, ± 100 PPM/°C, 1/3W, 0805	MP001421
Chip Resistor, Thick Film, ±1%, 220R, ± 100 PPM/°C, 1/3W, 0805	MP001422
Chip Resistor, Thick Film, ±1%, 240R, ± 100 PPM/°C, 1/3W, 0805	MP001423
Chip Resistor, Thick Film, ±1%, 270R, ± 100 PPM/°C, 1/3W, 0805	MP001424
Chip Resistor, Thick Film, ±1%, 300R, ± 100 PPM/°C, 1/3W, 0805	MP001425
Chip Resistor, Thick Film, ±1%, 330R, ± 100 PPM/°C, 1/3W, 0805	MP001426
Chip Resistor, Thick Film, ±1%, 360R, ± 100 PPM/°C, 1/3W, 0805	MP001427
Chip Resistor, Thick Film, ±1%, 390R, ± 100 PPM/°C, 1/3W, 0805	MP001428
Chip Resistor, Thick Film, ±1%, 430R, ± 100 PPM/°C, 1/3W, 0805	MP001429
Chip Resistor, Thick Film, ±1%, 470R, ± 100 PPM/°C, 1/3W, 0805	MP001430
Chip Resistor, Thick Film, ±1%, 510R, ± 100 PPM/°C, 1/3W, 0805	MP001431
Chip Resistor, Thick Film, ±1%, 560R, ± 100 PPM/°C, 1/3W, 0805	MP001432
Chip Resistor, Thick Film, ±1%, 620R, ± 100 PPM/°C, 1/3W, 0805	MP001433
Chip Resistor, Thick Film, ±1%, 680R, ± 100 PPM/°C, 1/3W, 0805	MP001434
Chip Resistor, Thick Film, ±1%, 750R, ± 100 PPM/°C, 1/3W, 0805	MP001435
Chip Resistor, Thick Film, ±1%, 820R, ± 100 PPM/°C, 1/3W, 0805	MP001436
Chip Resistor, Thick Film, ±1%, 910R, ± 100 PPM/°C, 1/3W, 0805	MP001437
Chip Resistor, Thick Film, ±1%, 1K, ± 100 PPM/°C, 1/3W, 0805	MP001438
Chip Resistor, Thick Film, ±1%, 1K1, ± 100 PPM/°C, 1/3W, 0805	MP001439
Chip Resistor, Thick Film, ±1%, 1K2, ± 100 PPM/°C, 1/3W, 0805	MP001440
Chip Resistor, Thick Film, ±1%, 1K3, ± 100 PPM/°C, 1/3W, 0805	MP001441
Chip Resistor, Thick Film, ±1%, 1K5, ± 100 PPM/°C, 1/3W, 0805	MP001442
Chip Resistor, Thick Film, ±1%, 1K6, ± 100 PPM/°C, 1/3W, 0805	MP001443
Chip Resistor, Thick Film, ±1%, 1K8, ± 100 PPM/°C, 1/3W, 0805	MP001444
Chip Resistor, Thick Film, ±1%, 2K, ± 100 PPM/°C, 1/3W, 0805	MP001445
Chip Resistor, Thick Film, ±1%, 2K2, ± 100 PPM/°C, 1/3W, 0805	MP001446
Chip Resistor, Thick Film, ±1%, 2K4, ± 100 PPM/°C, 1/3W, 0805	MP001447
Chip Resistor, Thick Film, ±1%, 2K7, ± 100 PPM/°C, 1/3W, 0805	MP001448
Chip Resistor, Thick Film, ±1%, 3K, ± 100 PPM/°C, 1/3W, 0805	MP001449





Description	Part Number
Chip Resistor, Thick Film, ±1%, 3K3, ± 100 PPM/°C, 1/3W, 0805	MP001450
Chip Resistor, Thick Film, ±1%, 3K6, ± 100 PPM/°C, 1/3W, 0805	MP001451
Chip Resistor, Thick Film, ±1%, 3K9, ± 100 PPM/°C, 1/3W, 0805	MP001452
Chip Resistor, Thick Film, ±1%, 4K3, ± 100 PPM/°C, 1/3W, 0805	MP001453
Chip Resistor, Thick Film, ±1%, 4K7, ± 100 PPM/°C, 1/3W, 0805	MP001454
Chip Resistor, Thick Film, ±1%, 5K1, ± 100 PPM/°C, 1/3W, 0805	MP001455
Chip Resistor, Thick Film, ±1%, 5K6, ± 100 PPM/°C, 1/3W, 0805	MP001456
Chip Resistor, Thick Film, ±1%, 6K2, ± 100 PPM/°C, 1/3W, 0805	MP001457
Chip Resistor, Thick Film, ±1%, 6K8, ± 100 PPM/°C, 1/3W, 0805	MP001458
Chip Resistor, Thick Film, ±1%, 7K5, ± 100 PPM/°C, 1/3W, 0805	MP001459
Chip Resistor, Thick Film, ±1%, 8K2, ± 100 PPM/°C, 1/3W, 0805	MP001460
Chip Resistor, Thick Film, ±1%, 9K1, ± 100 PPM/°C, 1/3W, 0805	MP001461
Chip Resistor, Thick Film, ±1%, 10K, ± 100 PPM/°C, 1/3W, 0805	MP001462
Chip Resistor, Thick Film, ±1%, 11K, ± 100 PPM/°C, 1/3W, 0805	MP001463
Chip Resistor, Thick Film, ±1%, 12K, ± 100 PPM/°C, 1/3W, 0805	MP001464
Chip Resistor, Thick Film, ±1%, 13K, ± 100 PPM/°C, 1/3W, 0805	MP001465
Chip Resistor, Thick Film, ±1%, 15K, ± 100 PPM/°C, 1/3W, 0805	MP001466
Chip Resistor, Thick Film, ±1%, 16K, ± 100 PPM/°C, 1/3W, 0805	MP001467
Chip Resistor, Thick Film, ±1%, 18K, ± 100 PPM/°C, 1/3W, 0805	MP001468
Chip Resistor, Thick Film, ±1%, 20K, ± 100 PPM/°C, 1/3W, 0805	MP001469
Chip Resistor, Thick Film, ±1%, 22K, ± 100 PPM/°C, 1/3W, 0805	MP001470
Chip Resistor, Thick Film, ±1%, 24K, ± 100 PPM/°C, 1/3W, 0805	MP001471
Chip Resistor, Thick Film, ±1%, 27K, ± 100 PPM/°C, 1/3W, 0805	MP001472
Chip Resistor, Thick Film, ±1%, 30K, ± 100 PPM/°C, 1/3W, 0805	MP001473
Chip Resistor, Thick Film, ±1%, 33K, ± 100 PPM/°C, 1/3W, 0805	MP001474
Chip Resistor, Thick Film, ±1%, 36K, ± 100 PPM/°C, 1/3W, 0805	MP001475
Chip Resistor, Thick Film, ±1%, 39K, ± 100 PPM/°C, 1/3W, 0805	MP001476
Chip Resistor, Thick Film, ±1%, 43K, ± 100 PPM/°C, 1/3W, 0805	MP001477
Chip Resistor, Thick Film, ±1%, 47K, ± 100 PPM/°C, 1/3W, 0805	MP001478
Chip Resistor, Thick Film, ±1%, 51K, ± 100 PPM/°C, 1/3W, 0805	MP001479
Chip Resistor, Thick Film, ±1%, 56K, ± 100 PPM/°C, 1/3W, 0805	MP001480
Chip Resistor, Thick Film, ±1%, 62K, ± 100 PPM/°C, 1/3W, 0805	MP001481
Chip Resistor, Thick Film, ±1%, 68K, ± 100 PPM/°C, 1/3W, 0805	MP001482
Chip Resistor, Thick Film, ±1%, 75K, ± 100 PPM/°C, 1/3W, 0805	MP001483
Chip Resistor, Thick Film, ±1%, 82K, ± 100 PPM/°C, 1/3W, 0805	MP001484
Chip Resistor, Thick Film, ±1%, 91K, ± 100 PPM/°C, 1/3W, 0805	MP001485
Chip Resistor, Thick Film, ±1%, 100K, ± 100 PPM/°C, 1/3W, 0805	MP001486
Chip Resistor, Thick Film, ±1%, 110K, ± 100 PPM/°C, 1/3W, 0805	MP001487
Chip Resistor, Thick Film, ±1%, 120K, ± 100 PPM/°C, 1/3W, 0805	MP001488





Description	Part Number
Chip Resistor, Thick Film, ±1%, 130K, ± 100 PPM/°C, 1/3W, 0805	MP001489
Chip Resistor, Thick Film, ±1%, 150K, ± 100 PPM/°C, 1/3W, 0805	MP001490
Chip Resistor, Thick Film, ±1%, 160K, ± 100 PPM/°C, 1/3W, 0805	MP001491
Chip Resistor, Thick Film, ±1%, 180K, ± 100 PPM/°C, 1/3W, 0805	MP001492
Chip Resistor, Thick Film, ±1%, 200K, ± 100 PPM/°C, 1/3W, 0805	MP001493
Chip Resistor, Thick Film, ±1%, 220K, ± 100 PPM/°C, 1/3W, 0805	MP001494
Chip Resistor, Thick Film, ±1%, 240K, ± 100 PPM/°C, 1/3W, 0805	MP001495
Chip Resistor, Thick Film, ±1%, 270K, ± 100 PPM/°C, 1/3W, 0805	MP001496
Chip Resistor, Thick Film, ±1%, 300K, ± 100 PPM/°C, 1/3W, 0805	MP001497
Chip Resistor, Thick Film, ±1%, 330K, ± 100 PPM/°C, 1/3W, 0805	MP001498
Chip Resistor, Thick Film, ±1%, 360K, ± 100 PPM/°C, 1/3W, 0805	MP001499
Chip Resistor, Thick Film, ±1%, 390K, ± 100 PPM/°C, 1/3W, 0805	MP001500
Chip Resistor, Thick Film, ±1%, 430K, ± 100 PPM/°C, 1/3W, 0805	MP001501
Chip Resistor, Thick Film, ±1%, 470K, ± 100 PPM/°C, 1/3W, 0805	MP001502
Chip Resistor, Thick Film, ±1%, 510K, ± 100 PPM/°C, 1/3W, 0805	MP001503
Chip Resistor, Thick Film, ±1%, 560K, ± 100 PPM/°C, 1/3W, 0805	MP001504
Chip Resistor, Thick Film, ±1%, 620K, ± 100 PPM/°C, 1/3W, 0805	MP001505
Chip Resistor, Thick Film, ±1%, 680K, ± 100 PPM/°C, 1/3W, 0805	MP001506
Chip Resistor, Thick Film, ±1%, 750K, ± 100 PPM/°C, 1/3W, 0805	MP001507
Chip Resistor, Thick Film, ±1%, 820K, ± 100 PPM/°C, 1/3W, 0805	MP001508
Chip Resistor, Thick Film, ±1%, 910K, ± 100 PPM/°C, 1/3W, 0805	MP001509
Chip Resistor, Thick Film, ±1%, 1M, ± 100 PPM/°C, 1/3W, 0805	MP001510
Chip Resistor, Thick Film, ±1%, 0R, 1/2W, 1206	MP001511
Chip Resistor, Thick Film, ±1%, 10R, ± 100 PPM/°C, 1/2W, 1206	MP001512
Chip Resistor, Thick Film, ±1%, 11R, ± 100 PPM/°C, 1/2W, 1206	MP001513
Chip Resistor, Thick Film, ±1%, 16R, ± 100 PPM/°C, 1/2W, 1206	MP001514
Chip Resistor, Thick Film, ±1%, 20R, ± 100 PPM/°C, 1/2W, 1206	MP001515
Chip Resistor, Thick Film, ±1%, 24R, ± 100 PPM/°C, 1/2W, 1206	MP001516
Chip Resistor, Thick Film, ±1%, 30R, ± 100 PPM/°C, 1/2W, 1206	MP001517
Chip Resistor, Thick Film, ±1%, 36R, ± 100 PPM/°C, 1/2W, 1206	MP001518
Chip Resistor, Thick Film, ±1%, 43R, ± 100 PPM/°C, 1/2W, 1206	MP001519
Chip Resistor, Thick Film, ±1%, 51R, ± 100 PPM/°C, 1/2W, 1206	MP001520
Chip Resistor, Thick Film, ±1%, 62R, ± 100 PPM/°C, 1/2W, 1206	MP001521
Chip Resistor, Thick Film, ±1%, 75R, ± 100 PPM/°C, 1/2W, 1206	MP001522
Chip Resistor, Thick Film, ±1%, 91R, ± 100 PPM/°C, 1/2W, 1206	MP001523
Chip Resistor, Thick Film, ±1%, 110R, ± 100 PPM/°C, 1/2W, 1206	MP001524
Chip Resistor, Thick Film, ±1%, 130R, ± 100 PPM/°C, 1/2W, 1206	MP001525
Chip Resistor, Thick Film, ±1%, 160R, ± 100 PPM/°C, 1/2W, 1206	MP001526
Chip Resistor, Thick Film, ±1%, 200R, ± 100 PPM/°C, 1/2W, 1206	MP001527





Description	Part Number
Chip Resistor, Thick Film, ±1%, 240R, ± 100 PPM/°C, 1/2W, 1206	MP001528
Chip Resistor, Thick Film, ±1%, 300R, ± 100 PPM/°C, 1/2W, 1206	MP001529
Chip Resistor, Thick Film, ±1%, 360R, ± 100 PPM/°C, 1/2W, 1206	MP001530
Chip Resistor, Thick Film, ±1%, 430R, ± 100 PPM/°C, 1/2W, 1206	MP001531
Chip Resistor, Thick Film, ±1%, 510R, ± 100 PPM/°C, 1/2W, 1206	MP001532
Chip Resistor, Thick Film, ±1%, 620R, ± 100 PPM/°C, 1/2W, 1206	MP001533
Chip Resistor, Thick Film, ±1%, 750R, ± 100 PPM/°C, 1/2W, 1206	MP001534
Chip Resistor, Thick Film, ±1%, 910R, ± 100 PPM/°C, 1/2W, 1206	MP001535
Chip Resistor, Thick Film, ±1%, 1K1, ± 100 PPM/°C, 1/2W, 1206	MP001536
Chip Resistor, Thick Film, ±1%, 1K3, ± 100 PPM/°C, 1/2W, 1206	MP001537
Chip Resistor, Thick Film, ±1%, 1K6, ± 100 PPM/°C, 1/2W, 1206	MP001538
Chip Resistor, Thick Film, ±1%, 2K, ± 100 PPM/°C, 1/2W, 1206	MP001539
Chip Resistor, Thick Film, ±1%, 2K4, ± 100 PPM/°C, 1/2W, 1206	MP001540
Chip Resistor, Thick Film, ±1%, 3K, ± 100 PPM/°C, 1/2W, 1206	MP001541
Chip Resistor, Thick Film, ±1%, 3K6, ± 100 PPM/°C, 1/2W, 1206	MP001542
Chip Resistor, Thick Film, ±1%, 4K3, ± 100 PPM/°C, 1/2W, 1206	MP001543
Chip Resistor, Thick Film, ±1%, 5K1, ± 100 PPM/°C, 1/2W, 1206	MP001544
Chip Resistor, Thick Film, ±1%, 6K2, ± 100 PPM/°C, 1/2W, 1206	MP001545
Chip Resistor, Thick Film, ±1%, 7K5, ± 100 PPM/°C, 1/2W, 1206	MP001546
Chip Resistor, Thick Film, ±1%, 9K1, ± 100 PPM/°C, 1/2W, 1206	MP001547
Chip Resistor, Thick Film, ±1%, 11K, ± 100 PPM/°C, 1/2W, 1206	MP001548
Chip Resistor, Thick Film, $\pm 1\%$, $13K$, ± 100 PPM/°C, $1/2W$, 1206	MP001549
Chip Resistor, Thick Film, ±1%, 16K, ± 100 PPM/°C, 1/2W, 1206	MP001550
Chip Resistor, Thick Film, ±1%, 20K, ± 100 PPM/°C, 1/2W, 1206	MP001551
Chip Resistor, Thick Film, ±1%, 24K, ± 100 PPM/°C, 1/2W, 1206	MP001552
Chip Resistor, Thick Film, ±1%, 30K, ± 100 PPM/°C, 1/2W, 1206	MP001553
Chip Resistor, Thick Film, ±1%, 36K, ± 100 PPM/°C, 1/2W, 1206	MP001554
Chip Resistor, Thick Film, ±1%, 43K, ± 100 PPM/°C, 1/2W, 1206	MP001555
Chip Resistor, Thick Film, ±1%, 51K, ± 100 PPM/°C, 1/2W, 1206	MP001556
Chip Resistor, Thick Film, ±1%, 62K, ± 100 PPM/°C, 1/2W, 1206	MP001557
Chip Resistor, Thick Film, ±1%, 75K, ± 100 PPM/°C, 1/2W, 1206	MP001558
Chip Resistor, Thick Film, ±1%, 91K, ± 100 PPM/°C, 1/2W, 1206	MP001559
Chip Resistor, Thick Film, $\pm 1\%$, 110 K, ± 100 PPM/°C, $1/2$ W, 1206	MP001560
Chip Resistor, Thick Film, $\pm 1\%$, $130K$, ± 100 PPM/°C, $1/2W$, 1206	MP001561
Chip Resistor, Thick Film, $\pm 1\%$, $160K$, ± 100 PPM/°C, $1/2W$, 1206	MP001562
Chip Resistor, Thick Film, $\pm 1\%$, 200K, ± 100 PPM/°C, 1/2W, 1206	MP001563
Chip Resistor, Thick Film, $\pm 1\%$, 240K, ± 100 PPM/°C, 1/2W, 1206	MP001564
Chip Resistor, Thick Film, $\pm 1\%$, 300K, \pm 100 PPM/°C, 1/2W, 1206	MP001565
Chip Resistor, Thick Film, $\pm 1\%$, 360K, \pm 100 PPM/°C, 1/2W, 1206	MP001566





Description	Part Number
Chip Resistor, Thick Film, ±1%, 430K, ± 100 PPM/°C, 1/2W, 1206	MP001567
Chip Resistor, Thick Film, ±1%, 510K, ± 100 PPM/°C, 1/2W, 1206	MP001568
Chip Resistor, Thick Film, ±1%, 620K, ± 100 PPM/°C, 1/2W, 1206	MP001569
Chip Resistor, Thick Film, ±1%, 750K, ± 100 PPM/°C, 1/2W, 1206	MP001570
Chip Resistor, Thick Film, ±1%, 910K, ± 100 PPM/°C, 1/2W, 1206	MP001571
Chip Resistor, Thick Film, ±1%, 0R, 2W, 2512	MP001572
Chip Resistor, Thick Film, ±1%, 560R, ± 75 PPM/°C, 2W, 2512	MP001573
Chip Resistor, Thick Film, ±1%, 2K2, ± 75 PPM/°C, 2W, 2512	MP001574
Chip Resistor, Thick Film, ±1%, 2K4, ± 75 PPM/°C, 2W, 2512	MP001575
Chip Resistor, Thick Film, ±1%, 30K, ± 75 PPM/°C, 2W, 2512	MP001576
Chip Resistor, Thick Film, ±1%, 36K, ± 75 PPM/°C, 2W, 2512	MP001577
Chip Resistor, Thick Film, ±1%, 270K, ± 75 PPM/°C, 2W, 2512	MP001578

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