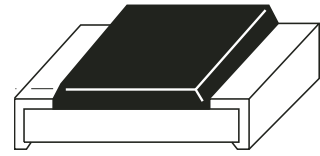


THICK FILM CHIP RESISTOR - GENERAL

Features

- Miniature, Light-weight
- Ideal for reflow and wave flow solder
- Low assembly cost, suit for automatic SMT equipment
- Stable properties, high reliability
- Superior mechanical and frequency characteristics
- RoHS Compliant



How to Order

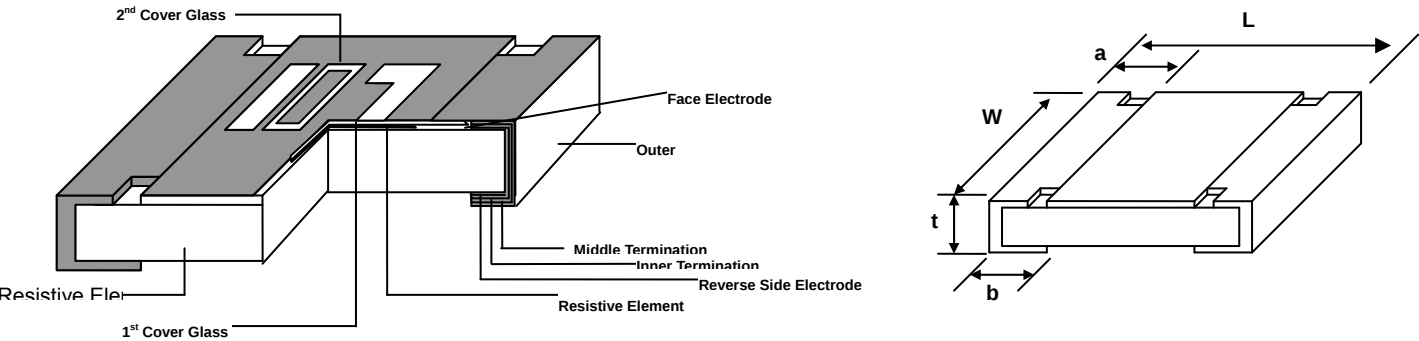
R	S	05	K	103	J	T	
A	B	C	D	E	F	G	
A	B		C		D		E
Product Code	Power Rating Series Code		Size Code		Resistance Temperature Coefficient		Resistance Value
Thick Film Chip Fixed Resistor	Code	Power Rating Series	Code	Size	Code	Type	T.C.R.
	C	Normal Series	02	0402	0201	W	±200ppm/°C
	S	Upgrade Series	03	0603	0402	U	±400ppm/°C
			05	0805	0603	K	±100ppm/°C
			06	1206	0805		
			1210	1210	1206		
			1812	1812	1210		
			10	2010	1812	L	±250ppm/°C
			12	2512	2010		
					2512		
F		G					E96 Series - expressed in 4 digits First 3 digit are significant figures, the fourth digit denotes the number of zeros Decimal place is expressed by "R". In this scenario all
Tolerance		Packaging Style					
Code	Tolerance	Code	Style				
D	±0.5%	T	Tape & Reel				
F	±1%	B	Bulk case				
G	±2%						
J	±5%						
K	±10%						

Standard Resistance Series

E-24 Series											
1.0	1.1	1.2	1.3	1.6	1.8	2.0	2.2	2.4	2.7	3.0	
3.3	3.6	3.9	4.3	5.1	5.6	6.2	6.8	7.5	8.2	9.1	
E-96 Series											
1.00	1.02	1.05	1.07	1.10	1.13	1.15	1.18	1.21	1.24	1.27	1.30
1.33	1.37	1.40	1.43	1.47	1.51	1.54	1.58	1.62	1.65	1.69	1.74
1.78	1.82	1.87	1.91	1.96	2.00	2.05	2.10	2.15	2.21	2.26	2.32
2.37	2.43	2.49	2.55	2.61	2.67	2.74	2.80	2.87	2.94	3.01	3.09
3.16	3.24	3.32	3.40	3.48	3.57	3.65	3.74	3.83	3.92	4.02	4.12
4.22	4.32	4.42	4.53	4.64	4.75	4.87	4.99	5.11	5.23	5.36	5.49
5.62	5.76	5.90	6.04	6.19	6.34	6.49	6.65	6.81	6.98	7.15	7.32
7.50	7.68	7.87	8.06	8.25	8.45	8.66	8.87	9.09	9.31	9.53	9.76

THICK FILM CHIP RESISTOR - GENERAL

Construction and Dimensions



Type	Dimensions(mm)				
	L	W	a	b	f
0402	1.0±0.10	0.5±0.10	0.2±0.1	0.25±0.1	0.30±0.10
0603	1.6±0.15	0.8±0.15	0.3±0.15	0.30±0.20	0.40±0.1
0805	2.0±0.15	1.25±0.15	0.4±0.20	0.4±0.20	0.5±0.1
1206	3.1±0.15	1.6±0.15	0.5±0.20	0.50±0.20	0.60±0.1

Rated Power

Item		0402	0603	0805	1206
Rated power	Normal Series	1/16W	1/16W	1/10W	1/8W
	Upgrade Series	N/A	1/10W	1/8W	1/4W
Max. Operating Voltage		50V	50V	150V	200V
Max. Over Load Voltage		100V	100V	300V	400V
Resistance Tolerance		±1%(F) ±2%(G) ±5%(J)			
Resistance Range		E-24,E-96 Series			
Jumper Rated Current		1A	1A	2A	2A
Jumper Resistance Value		50mΩ Max			
Operating Temperature Range		-55°C ~+125°C			
Temperature Coefficient		±250ppm/ °C/±100ppm/°C/			
Rated temperature		+70°C			

Characteristics

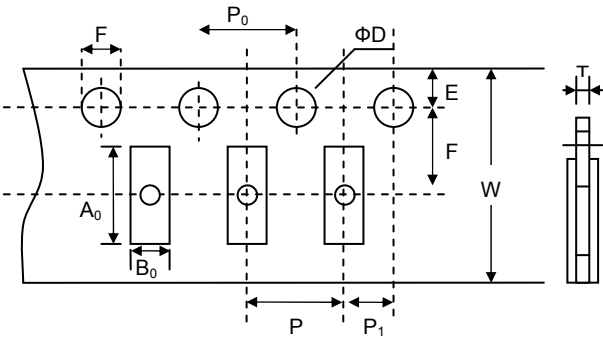
Item	Specifications	Test Methods (JIs c 5202)
Temperature Cycling	$\Delta R \leq \pm(1.0\%R+0.05\Omega)$	-55°C ~ +125°C for 5 cycles
Short Time Over Load	$\Delta R \leq \pm(2\%R+0.1\Omega)$	Rated Voltage x2.5 for 5 seconds
Resistance To Soldering Heat	$\Delta R \leq \pm(1.0\%R+0.05\Omega)$	260°C ±5°C for 10 seconds
Load Life	$\Delta R \leq \pm(3\%R+0.1\Omega)$	70°C±2°C,1000h at RcwV 1.5Hrs ON,0.5Hrs OFF
Solderability	≥ 95% Coverage	235°C ±5°C 3 seconds
Bending Strength	$\Delta R \leq \pm(1.0\%R+0.05\Omega)$	3mm Bending Distance: 3mm (10 seconds)
T.C.R.	Within specified T.C.R.	Measure between -55°C ~ + 125°C
Steady State Humidity	$\Delta R \leq \pm(3.0\%R+0.1\Omega)$	40°C±2°C 90%~95%RH at 1000h
Upper Temperature Endurance	$\Delta R \leq \pm(3.0\%R+0.1\Omega)$	125°C±2°C at 1000h
Resistance to Solvent	$\Delta R \leq \pm(1.0\%R+0.05\Omega)$	Submerge in chloroethylene(氯乙 烯)for 10h±1h
Adhesion	No visible damage on surface	Apply 5N force for 10s±1s
Insulation Resistance	1000MΩ Min	Check insulation resistance, after applying DC 100V between substrate and termination for 1 minute

THICK FILM CHIP RESISTOR - GENERAL

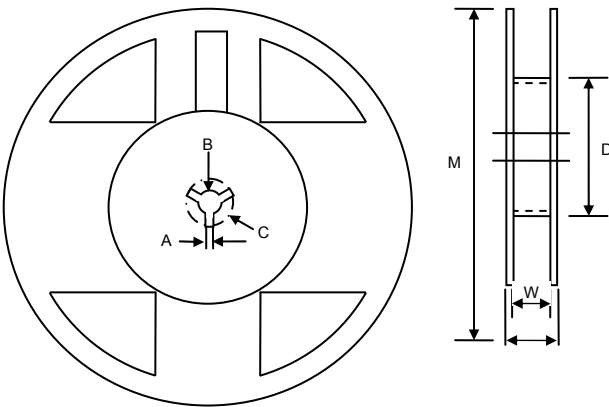
Packaging

Tape and Reel

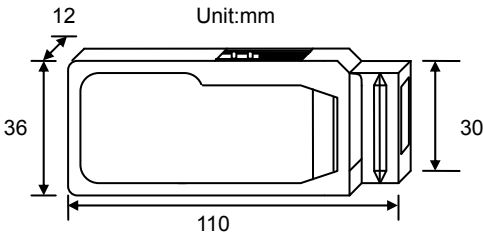
Type	A	B	W	F	E	P	P1	P0	D0	T
0402	1.2±0.1	0.7±0.1	0.8±0.20	3.5±0.05	1.75±0.1	2.0±0.01	2.0±0.05	4.0±0.05	1.5±0.10	0.6max
0603	1.85±0.10	1.10±0.10	0.8±0.20	3.5±0.05	1.75±0.1	4.0±0.10	2.0±0.05	4.0±0.05	1.5±0.10	0.6±0.1
0805	2.35±0.15	1.65±0.20	0.8±0.20	3.5±0.05	1.75±0.1	4.0±0.10	2.0±0.05	4.0±0.05	1.5±0.10	0.75±0.1
1206	3.50±0.15	1.90±0.20	0.8±0.20	3.5±0.05	1.75±0.1	4.0±0.10	2.0±0.05	4.0±0.05	1.5±0.10	0.75±0.1



Type	W	M	A	B	C	D
0402						
0603						
0805	12.5±0.5	178±2.0	2.0±0.5	13.5±0.5	21.0±0.5	80.0±2.0
1206						



Bulk Case



Packaging Quantity

(Pcs/Reel)Tape & Reel		(Pcs/case)			
0402	0603, 0805, 1206	0402	0603	0805	1206
10000	5000	50000	25000	10000	5000