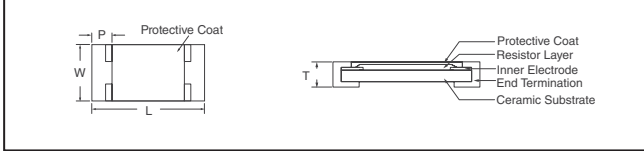


Surface Mount Thin Film Chip Resistors



Description:

The resistors are constructed out of a high-grade ceramic body. Internal metal electrodes are added at each end and connected by a resistive material. The composition of the resistive material is adjusted to give the approximate required resistance and laser cutting of this resistive layer that achieves tolerance trims the value. The resistive layer is covered with a protective coat and printed with the resistance value. Finally, the two external terminations (matte tin) are added.



Series	Power Rating @ 70°	Dimensions - mm				Tolerance Rating	Temperature Coefficient
		L	W	P	T		
RT0603	1/10 Watt	1.6±0.10	.80±0.10	.25±0.15	.45±0.10	0.50%	±25ppm/°C
RT0805	1/8 Watt	2.00±0.10	1.25±0.10	.35±0.20	.50±0.10	0.50%	±50ppm/°C
RT0402	1/16 Watt	1.00±0.10	.50±0.50	.20±0.10	.35±0.05	0.50%	±50ppm/°C
RJ0805	1/10 Watt	2.00±0.10	1.25±0.10	.35±0.20	.50±0.10	1%	±50ppm/°C
RJ1206	1/8 Watt	3.10±0.10	1.60±0.10	.45±0.20	.55±0.10	1%	±50ppm/°C
RL0402	1/16 Watt	1.00±0.10	.50±0.05	.20±0.10	.35±0.05	1%	.10Ω ~ .82Ω ±800ppm/°C
RL0603	1/10 Watt	1.60±0.10	.80±0.10	.25±0.15	.45±0.10	1%	.10Ω ~ .47Ω ±800ppm/°C .56Ω ~ .82Ω ±300ppm/°C
RL0805	1/8 Watt	2.00±0.10	1.25±0.10	.35±0.20	.50±0.10	1%	.10Ω ~ .33Ω ±600ppm/°C .36Ω ~ .47Ω ±300ppm/°C .50Ω ~ .91Ω ±200ppm/°C
RL2512	1 Watt	6.35±0.10	3.20±0.15	.60±0.20	.55±0.10	1%	.01Ω ~ .015Ω ±1500ppm/°C .018Ω ~ .039Ω ±1200ppm/°C .047Ω ±800ppm/°C

1% 1/16 Watt —

0402 Series, Low Ohmic

Resistor Values

.10	.15	.22	.33	.47	.68
.12	.18	.27	.39	.56	.82

Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Pricing	
.10	311-10PCT-ND	8.61	23.16	53.21	311-10PTR-ND	10,000	158.00/M	RL0402FR-07xxxxL
.12 ~ .47	311-(Value)PCT-ND	6.38	17.17	39.45	311-(Value)PTR-ND	10,000	115.00/M	RL0402FR-07xxxxL
.56 ~ .82	311-(Value)PCT-ND	3.47	9.34	21.46	311-(Value)PTR-ND	10,000	57.00/M	RL0402FR-07xxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

.5% 1/16 Watt — 0402 Series

Resistor Values

10	20	30	36	47	51	56.2	68
15	27	33	39	49.9	56	62	82

Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Pricing	
.10 ~ .82	311-(Value)UCT-ND	1.59	4.27	9.81	311-(Value)UTR-ND	10,000	20.00/M	RT0402DRE07xxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

1% 1/10 Watt —

0603 Series, Low Ohmic

Resistor Values

.10	.15	.22	.33	.47	.68
.12	.18	.27	.39	.56	.82

Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Pricing	
.10	311-10QCT-ND	8.61	23.16	53.21	311-10QTR-ND	5,000	176.00/M	RL0603FR-07xxxxL
.12 ~ .47	311-(Value)QCT-ND	6.38	17.17	39.45	311-(Value)QTR-ND	5,000	127.00/M	RL0603FR-07xxxxL
.56 ~ .82	311-(Value)QCT-ND	3.47	9.34	21.46	311-(Value)QTR-ND	5,000	64.00/M	RL0603FR-07xxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

.5% 1/10 Watt — 0603 Series

Resistor Values

100	182	348	510	806	1.4K	2.21K	3.16K	4.87K	6.8K	9.1K	14K	20K	27.4K	37.4K	53.6K	78.7K	140K	249K
110	200	360	560	820	1.47K	2.4K	3.32K	4.99K	6.81K	9.31K	15K	20.5K	28K	39K	56K	80.6K	147K	255K
120	210	390	582	825	1.5K	2.43K	3.4K	5.1K	6.98K	10K	15.8K	21K	28.7K	40.2K	56.2K	82K	150K	270K
121	220	392	590	845	1.6K	2.49K	3.57K	5.11K	7.15K	10.2K	16K	21.5K	29.4K	43K	59K	84.5K	160K	300K
124	221	402	604	910	1.62K	2.55K	3.6K	5.36K	7.5K	10.5K	16.2K	22K	30K	43.2K	60.4K	90.9K	165K	301K
130	240	422	619	1.0K	1.69K	2.67K	3.9K	5.49K	8.06K	11K	16.5K	22.1K	30.1K	44.2K	61.9K	91K	178K	309K
147	267	430	620	1.1K	1.78K	2.7K	3.92K	5.6K	8.2K	11.5K	17.4K	22.6K	32.4K	47K	62K	100K	190K	324K
150	274	432	649	1.2K	1.8K	2.74K	4.02K	5.62K	8.25K	12K	17.8K	23.2K	33K	47.5K	66.5K	107K	200K	330K
154	300	464	680	1.21K	1.96K	2.87K	4.22K	5.9K	8.45K	12.1K	18K	24K	33.2K	48.7K	68K	110K	220K	332K
160	301	470	681	1.24K	2.0K	3.0K	4.3K	6.04K	8.66K	12.4K	18.2K	24.3K	34K	51K	68.1K	120K	221K	
165	330	475	715	1.3K	2.1K	3.01K	4.7K	6.2K	8.87K	13K	18.7K	24.9K	34.8K	51.1K	69.8K	124K	240K	
180	332	499	750	1.37K	2.2K	3.09K	4.75K	6.34K	9.09K	13.3K	19.6K	27K	36K	52.3K	75K	130K	243K	

Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Pricing	
100 ~ 332K	311-(Value)DCT-ND	1.69	4.56	10.47	311-(Value)DTR-ND	5,000	25.00/M	RT0603DRD07xxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

1% 1/10 Watt —

0805 Series

Resistor Values

3.0	5.1	5.6	6.2	6.8	7.5	8.2	9.1	10
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Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Pricing	
3.0 ~ 10	311-(Value)VCT-ND	1.10	2.95	6.77	311-(Value)VTR-ND	5,000	12.00/M	RJ0805FRExxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

1% 1/8 Watt — 0805 Series, Low Ohmic

Resistor Values

.10	.13	.18	.24	.33	.43	.51	.68	.91
.11	.15	.20	.27	.36	.47	.56	.75	
.12	.16	.22	.30	.39	.50	.62	.82	

Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Pricing	
.10, .51 ~ .91	311-(Value)SCT-ND	8.61	23.16	53.21	311-(Value)STR-ND	5,000	176.00/M	RL0805FR-07xxxxL
.11 ~ .50	311-(Value)SCT-ND	6.38	17.17	39.45	311-(Value)STR-ND	5,000	127.00/M	RL0805FR-07xxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

.5% 1/8 Watt — 0805 Series

Resistor Values

10	12.4	16	20	22.6	27	30.1	36	43	49.9	61.9	75	82.5
11	13	18	21.5	24	27.4	32.4	39	47	51	62	80.6	91
12	15	19.6	22	24.9	30	33	40.2	47.5	56	68	82	

Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Pricing	
10 ~ 91	311-(Value)BCT-ND	1.62	4.37	10.03	311-(Value)BTR-ND	5,000	23.00/M	RT0805DRE07xxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

1% 1/8 Watt —

1206 Series

Resistor Values

3.0	3.3	3.9
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Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Yageo Part No.
		10	50	200	
3.0 ~ 3.9	311-(Value)NCT-ND	1.22	3.29	7.55	RJ1206FRExxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

1% 1 Watt —

2512 Series, Low Ohmic

Resistor Values

.010	.015	.018	.022	.027	.033	.039	.047
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Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Pricing	
.010	311-010TCT-ND	5.03	17.80	58.63	311-010TTR-ND	4,000	140.00/M	RL2512FK-07xxxxL
.015 ~ .047	311-(Value)TCT-ND	5.03	17.80	58.63	311-(Value)TTR-ND	4,000	140.00/M	RL2512FK-07xxxxL

† For complete part number, substitute the corresponding value from the Resistor Value Chart.

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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