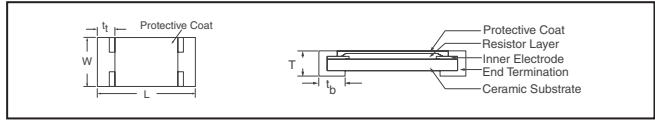


Innovative Service Around the Globe **YAGEO**

Surface Mount 1% & 5% Thick Film Chip Resistors



Description: The resistors are constructed on a high grade ceramic body (aluminum oxide). Internal metal electrodes are added at each end and connected by a resistive paste which is applied to the top surface of the substrate. The composition of the paste is adjusted to give the approximate resistance required and the value is trimmed to within tolerance, by laser cutting of the resistive layer. The resistive layer is covered with a protective coat. Finally, the two external end terminations are added. For ease of soldering the outer layer of these end terminations is a lead/tin alloy. End terminations on RoHS Compliant parts are pure tin.



Size	Power Rating @ 70°	Working Voltage (Max.)	Dimensions - mm					Tolerance Rating	Temperature Coefficient
			L	W	T	tt	tb		
01005	1/32	15V	0.40	0.20	0.13	0.10	0.10	5% 1%	±250ppm/°C ±250ppm/°C
0201	1/20W	25V	0.60	0.30	0.23	0.10	0.15	5% 1%	10 ≤ R ≤ 100: -100/+350ppm/°C 100 < R ≤ 10MΩ ±200 ppm/°C
0402	1/16W	50V	1.00	0.50	0.35	0.20	0.25	5% 1%	10Ω < R ≤ 10MΩ ±100ppm/°C 1Ω < R ≤ 10MΩ ±200ppm/°C
0603	1/10W	50V	1.60	0.80	0.45	0.25	0.25	5% 1%	10Ω < R ≤ 10MΩ ±100ppm/°C R ≤ 10Ω; R > 10MΩ ±200ppm/°C
0805	1/8W	150V	2.00	1.25	0.50	0.35	0.35	5% 1%	10Ω < R ≤ 10MΩ ±100ppm/°C R ≤ 10Ω; R > 10MΩ ±200ppm/°C
1206	1/4 W	200V	3.10	1.60	0.55	0.45	0.40	5% 1%	10Ω < R ≤ 10MΩ ±100ppm/°C R ≤ 10Ω; R > 10MΩ ±200ppm/°C

1% 1/32 Watt — 01005 Series

Resistor Values

4.2	20	33	43.2	100	169	680	2.2K	6.34K	34K	49.9K	100K	150K	200K	221K	470K	1.0M
10	22	33.2	44.2	150	200	1.0K	4.7K	24.9K	47.5K	66.5K	121K	165K	220K	390K	475K	

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	
RoHS Compliant								
4.2 - 1.0M	311-(Value)DGCT-ND	5.13	13.81	31.72	311-(Value)DGTR-ND	20,000	85.54/M	RC0100FR-07xxxxL

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

5% 1/32 Watt — 01005 Series

Resistor Values

0.0	22	47	180	220	1.5K	3.9K	4.7K	10K	20K	330K	390K	470K	1.0M
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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	
RoHS Compliant								
0.0 - 1.0M	311-(Value)DHCT-ND	2.80	7.56	17.36	311-(Value)DHTR-ND	20,000	39.92/M	RC0100JR-07xxxxL

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

1% 1/20 Watt — 0201 Series

Resistor Values

0.0	10.2	10.7	12.1	12.7	33.0	100	105	120	124	4.70K	10.0K	10.5K	12.0K	12.4K	18.0K	100K	105K	120K	124K
10.0	10.5	12.0	12.4	15.0	56.2	102	107	121	127	5.90K	10.2K	10.7K	12.1K	12.7K	51.0K	102K	107K	121K	127K

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	
RoHS Compliant								
0.0 - 127K	311-(Value)MCT-ND	1.66	4.46	10.26	311-(Value)MTR-ND	10,000	16.90/M	RC0201FR-07xxxxL

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

5% 1/20 Watt — 0201 Series

Resistor Values

0.0	12	24	47	110	160	220	300	470	1K	1.3K	1.8K	3K	4.3K	10K	15K	22K	30K	51K	110K	220K	330K
10	20	30	51	120	180	240	330	560	1.1K	1.5K	2K	3.3K	4.7K	11K	18K	24K	33K	68K	120K	240K	470K
11	22	33	100	150	200	270	390	680	1.2K	1.6K	2.2K	3.9K	5.6K	12K	20K	27K	47K	100K	200K	300K	1M

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	
RoHS Compliant								
0.0 - 1M	311-(Value)NCT-ND	1.30	3.49	8.03	311-(Value)NTR-ND	10,000	9.86/M	RC0201JR-07xxxxL

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

1%, 1/16 Watt — 0402 Series

Resistor Values

1.00	22.0	39.0	68.1	180	332	511	1.00K	1.82K	3.01K	4.64K	6.49K	8.87K	11.3K	15.0K	20.0K	27.0K	36.0K	45.3K	51.1K	64.9K	88.7K	110K	180K	240K	332K	510K	1.00M
1.50	24.9	49.9	75.0	220	430	560	1.10K	1.96K	3.30K	5.10K	6.80K	9.10K	11.5K	16.0K	21.0K	28.0K	39.0K	46.4K	53.6K	68.0K	90.9K	120K	187K	249K	360K	560K	3.30M
2.20	26.1	51.0	100	280	464	620	1.20K	2.20K	3.74K	5.36K	7.50K	9.53K	12.0K	16.2K	22.0K	30.0K	39.2K	47.0K	56.0K	78.7K	91.0K	121K	200K	261K	430K	562K	3.60M
3.30	28.0	56.0	120	300	470	680	1.21K	2.21K	3.90K	5.49K	7.87K	10.0K	12.1K	17.4K	22.1K	30.1K	40.2K	47.5K	60.4K	80.6K	95.3K	124K	210K	270K	442K	620K	
4.70	33.0	62.0	150	300	470	680	1.21K	2.21K	3.92K	5.62K	8.06K	10.7K	13.0K	18.0K	24.9K	33.0K	42.2K	49.9K	61.9K	82.0K	97.6K	127K	220K	300K	470K	649K	
10.0	36.0	68.0	160	330	510	910	1.80K	2.70K	4.30K	6.20K	8.20K	11.0K	14.0K	19.1K	26.1K	35.7K	43.0K	51.0K	62.0K	82.5K	100K	150K	226K	301K	499K	768K	

Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Price	
26.1 - 768K	311-(Value)LCT-ND	.94	2.55	5.87	—	—	—	9C04021AxxxxLHF3
RoHS Compliant								
1.00 - 3.60M	311-(Value)LRCT-ND	.94	2.55	5.87	311-(Value)LRTR-ND	10,000	3.43/M	RC0402FR-07xxxxL

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

Digi-Key® Assortment Kits 0402 Series	
1% Thick Film Chip Resistor Kits - 1/16 Watt — RoHS Compliant	
PHL1-KIT-ND	50 each of values 1.00Ω - 75.0Ω, 17 values (850 total pieces) 29.50
PHL2-KIT-ND	50 each of values 100Ω - 910Ω, 22 values (1,100 total pieces) 36.54
PHL3-KIT-ND	50 each of values 1.00KΩ - 9.53KΩ, 33 values (1,650 total pieces) 50.62
PHL4-KIT-ND	50 each of values 10.0KΩ - 97.6KΩ, 56 values (2,800 total pieces) 84.41
PHL5-KIT-ND	50 each of values 100KΩ - 1.00MΩ, 32 values (1,600 total pieces) 56.25

5%, 1/16 Watt — 0402 Series

Resistor Values

0.0	2.2	4.3	8.2	18	30	43	68	100	200	300	430	620	1.0K	2.0K	3.0K	4.3K	6.2K	10K	18K	30K	47K	82K	150K	270K	470K	1.5M
1.0	3.0	4.7	10	20	33	47	75	150	220	330	470	680	1.2K	2.2K	3.3K	4.7K	6.8K	11K	22K	33K	56K	100K	180K	300K	560K	3.0M
1.1	3.3	5.1	12	22	36	51	82	160	240	360	510	820	1.5K	2.4K	3.6K	5.1K	7.5K	12K	24K	39K	62K	110K	200K	330K	680K	3.3M
2.0	3.9	5.6	15	27	39	56	91	180	270	390	560	910	1.8K	2.7K	3.9K	5.6K	8.2K	15K	27K	43K	68K	120K	220K	430K	1.0M	

Value Range Ω	Digi-Key† Part No.	Cut Tape Pricing			Digi-Key† Part No.	Tape and Reel		Yageo Part No.
		10	50	200		Qty.	Price	
1.0 - 3.3M	311-(Value)JCT-ND	1.13	3.03	6.94	—	—	—	9C04021AxxxxLHF3
RoHS Compliant								
0.0 - 3.3M	311-(Value)JRCT-ND	.93	2.49	5.73	311-(Value)JRTR-ND	10,000	3.01/M	RC0402JR-07xxxxL

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

Digi-Key® Assortment Kits 0402 Series	
5% Thick Film Chip Resistor Kits - 1/16 Watt — RoHS Compliant	
PHJ1A-KIT-ND	50 each of every other value from 1.0, 2.0, 3.0, 3.9, etc. - 1.0MΩ 52 values (2,600 total pcs.) 64.70
PHJ1-KIT-ND	200 each of every other value from 1.0, 2.0, 3.0, 3.9, etc. - 1.0MΩ 52 values (10,400 total pcs.) 121.02
PHJ2A-KIT-ND	50 each of every other value from 1.1, 2.2, 3.3, 4.3, etc. - 680KΩ 51 values (2,550 total pcs.) 64.70
PHJ2-KIT-ND	200 each of every other value from 1.1, 2.2, 3.3, 4.3, etc. - 680KΩ 51 values (10,200 total pcs.) 121.02

(Continued)

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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