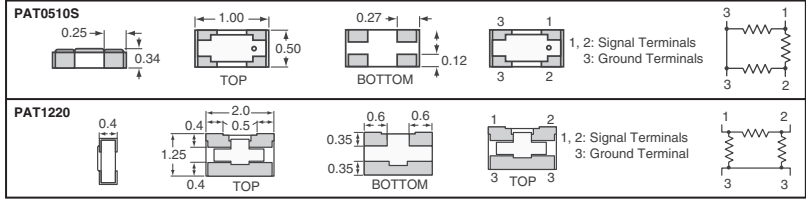


**Thin Film Fixed SMD Attenuators  
PAT0510S and PAT1220 Series**

**Specifications:** • Attenuation: 0 – 10dB • VSWR: 1.3 or less • Frequency Range: DC – 10GHz • Operating Temperature: -55°C – 125°C • Impedance: 50Ω • Rated Ambient Temperature: 70°

**Materials:** • Resistor: Nichrome Thin Film • Protection Film: Epoxy Resin • Substrate: Alumina • Marking: White Ink • Terminals: Sn Plate (Sn is free from lead)

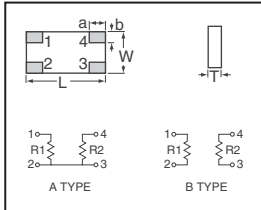


Type	Attenuation Value (dB)	Attenuation Tolerance	Rated Input Power	Impedance Tolerance	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Susumu Part No.
						1	10	50		Qty.	Pricing	
PAT0510S	0	±0.3dB	32mW	±20% @ DC	PAT05S0CT-ND	.47	2.52	7.23	PAT05S0TR-ND	10,000	45.00/M	PAT0510S-C-0DB-T10
	1				PAT05S1CT-ND	.47	2.52	7.23	PAT05S1TR-ND	10,000	45.00/M	PAT0510S-C-1DB-T10
	2				PAT05S2CT-ND	.47	2.52	7.23	PAT05S2TR-ND	10,000	45.00/M	PAT0510S-C-2DB-T10
	3				PAT05S3CT-ND	.47	2.52	7.23	PAT05S3TR-ND	10,000	45.00/M	PAT0510S-C-3DB-T10
	4	±0.5dB	32mW	±20% @ DC	PAT05S4CT-ND	.47	2.52	7.23	PAT05S4TR-ND	10,000	45.00/M	PAT0510S-C-4DB-T10
	5				PAT05S5CT-ND	.47	2.52	7.23	PAT05S5TR-ND	10,000	45.00/M	PAT0510S-C-5DB-T10
	6				PAT05S6CT-ND	.47	2.52	7.23	PAT05S6TR-ND	10,000	45.00/M	PAT0510S-C-6DB-T10
	7				PAT05S7CT-ND	.47	2.52	7.23	PAT05S7TR-ND	10,000	45.00/M	PAT0510S-C-7DB-T10
	8	±0.7dB	32mW	±20% @ DC	PAT05S8CT-ND	.47	2.52	7.23	PAT05S8TR-ND	10,000	45.00/M	PAT0510S-C-8DB-T10
	9				PAT05S9CT-ND	.47	2.52	7.23	PAT05S9TR-ND	10,000	45.00/M	PAT0510S-C-9DB-T10
10	PAT05S10CT-ND				.47	2.52	7.23	PAT05S10TR-ND	10,000	45.00/M	PAT0510S-C-10DB-T10	
PAT1220	0	±0.3dB	100mW	±7% @ DC	PAT120CT-ND	1.29	6.96	19.98	PAT120TR-ND	5,000	144.00/M	PAT1220-C-0DB-T5
	1				PAT121CT-ND	1.29	6.96	19.98	PAT121TR-ND	5,000	144.00/M	PAT1220-C-1DB-T5
	2				PAT122CT-ND	1.29	6.96	19.98	PAT122TR-ND	5,000	144.00/M	PAT1220-C-2DB-T5
	3				PAT123CT-ND	1.29	6.96	19.98	PAT123TR-ND	5,000	144.00/M	PAT1220-C-3DB-T5
	4				PAT124CT-ND	1.29	6.96	19.98	PAT124TR-ND	5,000	144.00/M	PAT1220-C-4DB-T5
	5				PAT125CT-ND	1.29	6.96	19.98	PAT125TR-ND	5,000	144.00/M	PAT1220-C-5DB-T5
	6				PAT126CT-ND	1.29	6.96	19.98	PAT126TR-ND	5,000	144.00/M	PAT1220-C-6DB-T5
	7				PAT127CT-ND	1.29	6.96	19.98	PAT127TR-ND	5,000	144.00/M	PAT1220-C-7DB-T5
	8				PAT128CT-ND	1.29	6.96	19.98	PAT128TR-ND	5,000	144.00/M	PAT1220-C-8DB-T5
	9				PAT129CT-ND	1.29	6.96	19.98	PAT129TR-ND	5,000	144.00/M	PAT1220-C-9DB-T5
10	PAT1210CT-ND	1.29	6.96	19.98	PAT1210TR-ND	5,000	144.00/M	PAT1220-C-10DB-T5				

**G**

**RM Series Metal Film Chip Resistor Networks  
0805, 1206, .1% Voltage Divider or Isolated Configurations**

**Specifications:**  
 • Resistance Tolerance: ±0.1%  
 • Resistance Tracking Tolerance: ±0.05%  
 • TCR ppm/°C: ±25ppm  
 • PCR Tracking ppm/°C: ±5ppm



Dimension (mm)	RM2012 (0805)	RM3216 (1206)
L	2.0 ±0.2	3.2 ±0.2
W	1.25 ±0.2	1.6 ±0.2
T	0.4 ±0.1	0.4 ±0.1
a	0.6 ±0.2	1.0 ±0.2
b	0.35 ±0.2	0.4 ±0.2

Resistor Value (Ratio) Chart RM2012 and RM3216

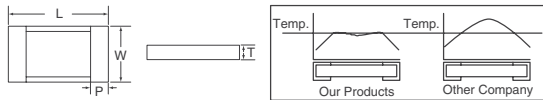
Value (Ratio)	Value (Ratio)	Value (Ratio)	Value (Ratio)	Value (Ratio)
1.0K/1.0K (1:1)	1.0K/9.0K (1:9)	2.0K/10K (1:5)	5.0K/100K (1:20)	10K/60K (1:6)
1.0K/2.0K (1:2)	1.0K/10K (1:10)	2.0K/20K (1:10)	10K/10K (1:1)	10K/90K (1:9)
1.0K/3.0K (1:3)	1.0K/20K (1:20)	2.0K/40K (1:20)	10K/20K (1:2)	10K/100K (1:10)
1.0K/4.0K (1:4)	1.0K/25K (1:25)	2.0K/50K (1:25)	10K/30K (1:3)	100K/100K (1:1)
1.0K/5.0K (1:5)	1.0K/50K (1:50)	2.0K/100K (1:50)	10K/40K (1:4)	100K/200K (1:2)‡
1.0K/6.0K (1:6)	1.0K/100K (1:100)	2.0K/200K (1:100)‡	10K/50K (1:5)	100K/300K (1:3)‡

‡ Available only in RM3216 Series

Description	Circuit Type	Element Power (W)	Package Power (W)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	T&R Pricing 1,000	Susumu Part No.
0.1%, 0805	(A) Voltage Divider	.05	.10	RM20A(Value)PCT-ND	8.00	14.00	110.00	RM20A(Value)PTR-ND	800.00	RM2012A-(Value)-PBVW10
0.1%, 0805	(B) Isolated	.05	.10	RM20B(Value)PCT-ND	8.00	14.00	110.00	RM20B(Value)PTR-ND	800.00	RM2012B-(Value)-PBVW10
0.1%, 1206	(A) Voltage Divider	.063	.125	RM32A(Value)PCT-ND	8.00	14.00	110.00	RM32A(Value)PTR-ND	800.00	RM3216A-(Value)-PBVW10
0.1%, 1206	(B) Isolated	.063	.125	RM32B(Value)PCT-ND	8.00	14.00	110.00	RM32B(Value)PTR-ND	800.00	RM3216B-(Value)-PBVW10

**0402 / 0603 / 0805 SMD 1% High Power Thin Film Chip Resistors  
RP Series — 1/3, 1/5, 1/6 Watt**

Susumu's RP series current sensing resistors provide excellent heat dissipation which allows higher power handling in smaller package sizes. Their patented structure will not create "hot spots" and evenly distribute heat across the total surface area of the resistor.  
**Operating Temperature:** -40°C – 125°C  
**Maximum Operating Voltage:** √P×R



Resistor Values									
.10	.22	.47	1.0	2.2	4.7	10	22	47	100
.12	.27	.56	1.2	2.7	5.6	12	27	56	
.15	.33	.68	1.5	3.3	6.8	15	33	68	
.18	.39	.82	1.8	3.9	8.2	18	39	82	

Description	Value Range (Ω)	TCR ppm/°C	Resistance Tolerance	Dimensions (mm)				Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Susumu Part No.
				L	W	P	T		10	50	200		Qty.	Pricing	
1%, 0402, 1/6W	.10 – 47	0 – 200	±1%	1.00	0.50	0.20	0.35	RP10S(Value)FCT-ND	9.63	25.90	59.50	RP10S(Value)FTR-ND	10,000	105.60/M	RP1005S-xxx-F
1%, 0603, 1/5W	.10 – 68	0 – 200	±1%	1.60	0.80	0.30	0.40	RP16S(Value)FCT-ND	6.88	18.50	42.50	RP16S(Value)FTR-ND	5,000	78.20/M	RP1608S-xxx-F
1%, 0805, 1/3W	.10 – 10	0 – 200	±1%	2.00	1.25	0.40	0.40	RP20T(Value)FCT-ND	5.36	14.43	33.15	RP20T(Value)FTR-ND	5,000	59.50/M	RP2012T-xxx-F
1%, 0805, 1/3W	12 – 100	0 – 200	±1%	2.00	1.25	0.40	0.40	RP20S(Value)FCT-ND	5.36	14.43	33.15	RP20S(Value)FTR-ND	5,000	59.50/M	RP2012S-xxx-F

**1% SMD Resistors Digi-Key® Assortment Kits**

Digi-Key® 0402, 1%, 1/6W, RP Series, SMD Resistor Kits  
 RP1005SF-1-KIT-ND 10 each of values .10Ω – 47Ω ..... \$59.95

Digi-Key® 0603, 1%, 1/5W, RP Series, SMD Resistor Kits  
 RP1608SF-1-KIT-ND 10 each of values .10Ω – 68Ω ..... \$49.95

Digi-Key® 0805, 1%, 1/3W, RP Series, SMD Resistor Kits  
 RP2012SF-1-KIT-ND 10 each of values 12Ω – 100Ω ..... \$13.95

Digi-Key® 0805, 1%, 1/3W, RP Series, SMD Resistor Kits  
 RP2012TF-1-KIT-ND 10 each of values .10Ω – 10Ω ..... \$29.95

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.

**More Product Available Online: [www.digikey.com](http://www.digikey.com)**

**0402 / 0603 / 0805 SMD 0.1%, 0.02%, 0.05%, 0.5% Thin Film Chip Resistors**  
**Ultra Precision / Ultra Reliable RG Series - 1/16, 1/10, 1/8 RGH Series - 1/4 Watt**



Using the conventional properties of Thin Film Resistors, SSM has successfully achieved the environmental, resistance stability and sustained durability issues that are encountered while operating at higher temperatures. We call this "RG" and "RGH" Series (Resistor Great). Higher reliability parts are indispensable in the Automotive, Measurement and Medical Industries as quality requirements increase. Susumu provides a solution with the RG and RGH Series thin film chip resistors. The RG and RGH series provides excellent TCR, Low Current Noise, and Linearity specifications needed in high frequency applications. Tight tolerance allows for circuit simplification and the elimination of trim pots which leads to cost savings.

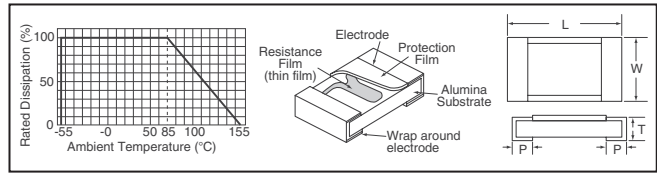
**SPECIFICATIONS:** Performance: Inorganic protective coating assures high reliability, durability and protection against heat and moisture.

**Operating Temperature:** -55°C ~ 155°C (RG 100% Power at 85°C, RGH 100% Power at 70°C)

**Thermal Derating:** The RG series is able to dissipate 100% of rated power at 85°C, RGH Series is 70°C. For applications operating above 85°C, the user must derate the resistors in accordance with the derating curve listed.

**Applications:** Suitable for automotive, measurement devices and any application where accuracy and reliability are required.

Items	Test Conditions	Performance of High Reliability	
		Maximum	Typical
Short Time Overload	2.5 times of Rated Load X 5 seconds	±0.05%	±0.01%
Load Life	85°C Rated Load 90 minutes on/ 30 minutes off Cycle 1000h	±0.1%	±0.01%
Temperature Humidity Bias	85°C, 85%RH 1/10 power loaded 90 min. on/ 30 minutes off Cycle 1000h	±0.1%	±0.05%
A/A Thermal Shock	-55°C (30 minutes)/ Room Temp. (2 minutes)/ 125°C (30 minutes)/ Room Temp. (2 minutes)/ Room Temp. (2 min.) no Load 1000 Cycles	±0.1%	±0.01%
High Temperature	155°C no Load 1000h	±0.1%	±0.01%



**0.02%, 0402 Series, 1/16W — Resistor Values**

100	120	150	220	330	510	680	1.0K	1.2K	1.5K	2.2K
110	130	180	270	390	560	820	1.1K	1.3K	1.8K	2.7K

**0.02%, 0603 Series, 1/16W — Resistor Values**

100	120	180	270	390	560	820	1.2K	1.8K	2.7K	3.9K
110	150	220	330	470	680	1.0K	1.5K	2.2K	3.3K	4.7K

**0.02%, 0805 Series, 1/10W — Resistor Values**

100	150	220	270	390	560	750	1.0K	1.2K	1.8K	2.7K	3.9K	5.6K	7.5K	10K
120	180	240	330	470	680	820	1.1K	1.5K	2.2K	3.3K	4.7K	6.8K	8.2K	

**0.05%, 0603 Series, 1/16 Watt — Resistor Values**

47	91	180	360	680	1.3K	2.7K	5.1K	10.0K	20.0K	39.0K	75.0K	150K
51	100	200	390	750	1.5K	3.0K	5.6K	11.0K	22.0K	43.0K	82.0K	160K
56	110	220	430	820	1.6K	3.3K	6.2K	12.0K	24.0K	47.0K	91.0K	180K
62	120	240	470	910	1.8K	3.6K	6.8K	13.0K	27.0K	51.0K	100K	200K
68	130	270	510	1.0K	2.0K	3.9K	7.5K	15.0K	30.0K	56.0K	110K	220K
75	150	300	560	1.1K	2.2K	4.3K	8.2K	16.0K	33.0K	62.0K	120K	240K
82	160	330	620	1.2K	2.4K	4.7K	9.1K	18.0K	36.0K	68.0K	130K	270K

**0.05%, 0805 Series, 1/10 Watt and 0.1%, 0805 Series, 1/4 Watt — Resistor Values**

47	91	180	360	680	1.3K	2.7K	5.1K	10.0K	20.0K	39.0K	75.0K	150K	300K
51	100	200	390	750	1.5K	3.0K	5.6K	11.0K	22.0K	43.0K	82.0K	160K	330K
56	110	220	430	820	1.6K	3.3K	6.2K	12.0K	24.0K	47.0K	91.0K	180K	360K
62	120	240	470	910	1.8K	3.6K	6.8K	13.0K	27.0K	51.0K	100K	200K	390K
68	130	270	510	1.0K	2.0K	3.9K	7.5K	15.0K	30.0K	56.0K	110K	220K	430K
75	150	300	560	1.1K	2.2K	4.3K	8.2K	16.0K	33.0K	62.0K	120K	240K	470K
82	160	330	620	1.2K	2.4K	4.7K	9.1K	18.0K	36.0K	68.0K	130K	270K	

**0.1%, 0402 Series, 1/16 Watt — Resistor Values**

47	110	200	360	604	1.0K	1.78K	3.16K	5.6K	8.87K	15K	27K	49.9K	76.8K
49.9	120	210	374	620	1.05K	1.8K	3.3K	5.9K	9.1K	16K	29K	51K	80.6K
51	124	220	390	649	1.1K	2.0K	3.6K	6.04K	9.76K	16.5K	30K	54.9K	82K
56	130	240	402	680	1.2K	2.1K	3.74K	6.2K	10K	17.8K	31.6K	56K	88.7K
62	137	249	430	681	1.24K	2.2K	3.9K	6.49K	10.5K	18K	33K	59K	91K
68	140	261	470	750	1.3K	2.4K	4.02K	6.8K	11K	20K	36K	64K	97.6K
75	150	270	499	768	1.37K	2.49K	4.3K	6.81K	12K	21K	37.4K	62K	100K
82	160	280	510	806	1.4K	2.61K	4.7K	7.5K	12.4K	22K	39K	64.9K	
91	165	300	549	820	1.5K	2.7K	4.99K	7.68K	13K	24K	40.2K	68K	
100	178	316	560	887	1.6K	2.8K	5.1K	8.06K	13.7K	24.9K	43K	68.1K	
105	180	330	590	910	1.65K	3.0K	5.49K	8.2K	14K	26.1K	47K	75K	

**0.1%, 0603 Series, 1/10W — Resistor Values**

47.0	200	475	1.15K	2.1K	3.24K	4.7K	7.87K	12.1K	24.0K	39.2K	68.0K	124K	301K
51.0	220	499	1.18K	2.15K	3.3K	4.75K	8.06K	12.4K	24.9K	40.2K	68.1K	124K	309K
56.0	221	510	1.2K	2.2K	3.32K	4.87K	8.2K	12.7K	25.5K	41.2K	73.2K	127K	330K
62.0	240	523	1.21K	2.21K	3.4K	4.99K	8.25K	13.0K	27.0K	42.2K	75.0K	130K	332K
68.0	249	560	1.24K	2.26K	3.48K	5.1K	8.45K	13.7K	27.4K	43.0K	76.8K	140K	
75.0	261	620	1.3K	2.32K	3.57K	5.11K	9.09K	14.7K	30.0K	43.2K	80.6K	150K	
82.0	270	604	1.4K	2.37K	3.6K	5.6K	9.1K	15.0K	30.1K	47.0K	82.0K	160K	
91.0	300	680	1.5K	2.4K	3.65K	5.62K	9.31K	15.4K	30.9K	47.5K	84.5K	180K	
100	301	750	1.54K	2.43K	3.74K	5.9K	9.53K	16.0K	31.6K	49.9K	86.6K	200K	
110	330	820	1.58K	2.49K	3.83K	6.04K	9.76K	16.5K	32.4K	51.0K	90.9K	220K	
120	360	825	1.6K	2.55K	3.9K	6.19K	10.0K	17.4K	33.0K	51.1K	91.0K	221K	
130	390	887	1.65K	2.61K	3.92K	6.2K	10.2K	18.0K	33.2K	53.6K	93.1K	226K	
133	402	910	1.69K	2.67K	4.02K	6.8K	10.5K	18.7K	34.8K	56.0K	100K	232K	
150	422	1.0K	1.8K	2.7K	4.12K	6.81K	10.7K	20.0K	35.7K	56.2K	102K	240K	
160	430	1.05K	1.82K	2.8K	4.3K	7.15K	11.0K	22.0K	36.0K	57.6K	105K	249K	
162	453	1.07K	1.91K	2.87K	4.32K	7.5K	11.3K	22.1K	38.3K	60.4K	110K	270K	
180	470	1.1K	2.0K	3.0K	4.64K	7.68K	12.0K	23.2K	39.0K	62.0K	113K	300K	

**0.1%, 0805 Series, 1/8W — Resistor Values**

47.0	180	475	953	2.0K	3.32K	5.49K	10.0K	16.5K	28.7K	47.5K	82.0K	169K	430K
51.0	200	499	1.0K	2.05K	3.74K	5.62K	10.2K	17.8K	30.0K	48.7K	82.5K	180K	470K
56.0	220	510	1.02K	2.2K	3.9K	5.76K	10.5K	18.0K	30.1K	49.9K	86.6K	182K	499K
62.0	240	511	1.05K	2.21K	3.9K	6.04K	11.0K	19.1K	31.6K	51.0K	88.7K	191K	510K
68.0	249	560	1.10K	2.32K	3.92K	6.2K	11.3K	20.0K	33.0K	51.1K	90.9K	196K	560K
75.0	270	562	1.2K	2.4K	4.02K	6.8K	12.0K	21.0K	33.2K	53.6K	91.0K	200K	620K
82.0	300	620	1.21K	2.49K	4.22K	7.15K	12.1K	22K	34.8K	56.0K	100K	220K	680K
91.0	316	649	1.3K	2.55K	4.3K	7.5K	13.0K	22.1K	36.0K	56.2K	102K	240K	750K
100	330	680	1.33K	2.61K	4.32K	7.87K	13.3K	23.2K	38.3K	60.4K	110K	249K	820K
110	360	698	1.5K	2.7K	4.64K	8.2K	13.7K	24.0K	39.0K	62.0K	115K	270K	910K
120	374	732	1.54K	2.74K	4.7K	8.25K	14.3K	24.3K	39.2K	64.9K	120K	280K	1.0M
124	390	750	1.6K	2.94K	4.75K	8.66K	15.0K	24.9K	40.2K	66.5K	124K	300K	
130	392	820	1.62K	3.0K	4.87K	8.87K	15.4K	25.5K	43.0K	68.0K	130K	301K	
140	430	845	1.69K	3.01K	4.99K	9.09K	15.8K	26.7K	45.3K	68.1K	140K	330K	
150	453	909	1.8K	3.09K	5.1K	9.1K	16.0K	27.0K	46.4K	75.0K	150K	360K	
160	470	910	1.82K	3.3K	5.11K	9.53K	16.2K	27.4K	47.0K	80.6K	160K	390K	

**0.5%, 0402 Series, 1/16 Watt — Resistor Values**

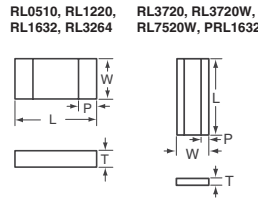
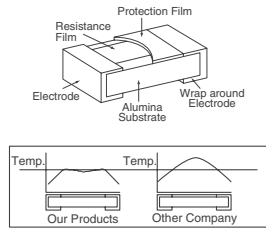
10.0	20.0	39.0	75.0	150	300	560	1.10K	2.20K	4.30K	8.20K	16.0K	33.0K	62.0K
11.0	22.0	43.0	82.0	160	330	620	1.20K	2.40K	4.70K	9.10K	18.0K	36.0K	68.0K
12.0	24.0	47.0	91.0	180	360	680	1.30K	2.70K	5.10K	10.0K	20.0K	39.0K	75.0K
13.0	27.0	51.0	100	200	390	750	1.50K	3.00K	5.60K	11.0K	22.0K	43.0K	82.0K
15.0	30.0	56.0	110	220	430	820	1.60K	3.30K	6.20K	12.0K	24.0K	47.0K	91.0K
16.0	33.0	62.0	120	240	470	910	1.80K	3.60K	6.80K	13.0K	27.0K	51.0K	100K
18.0	36.0	68.0	130	270	510	1.00K	2.00K	3.90K	7.50K	15.0K	30.0K	56.0K	

Description	Value Range (Ω)	TCR ppm/°C	Max. Oper. Volt.	Dimensions (mm)				Digi-Key Part No. \$	Cut Tape Pricing			Digi-Key Part No. \$	Tape and Reel		Susumu Part No.	
				L	W	P	T		10	50	200		Qty.	Pricing		
<b>RG Series</b>																
0.02%, 0402, 1/16W	100 - 2.7K	±5 (V)	25	1.0	0.5	0.25	0.35	RG1005V(Value)PCT-ND	106.43	286.38	657.90	RG1005V(Value)PTR-ND	1,000	1232.00	RG1005V-xxx-P-T1	
0.02%, 0603, 1/16W	100 - 4.7K	±5 (V)	75	1.6	0.8	0.3	0.4	RG1608V(Value)PCT-ND	106.43	286.38	657.90	RG1608V(Value)PTR-ND	1,000	1232.00	RG1608V-xxx-P-T1	
0.02%, 0805, 1/10W	100 - 10K</															

**Thin Film Low Resistance Chip Resistors Series**  
 0402/0805/0815/0830/1206/2512 SMD, 1%, 2% and 5% – 1/8, 1/4, 1/2, 1 and 2 Watt

Susumu's Thin Film Low Resistance series current sensing resistors provide excellent heat dissipation which allows higher power handling in smaller package sizes. Their patented structure will not create "hot spots" and evenly distribute heat across the total surface area of the resistor.

A specially designed construction assures small dimensions and repressed surface temperature increase due to heat radiation and thermal conduction. This construction also minimizes the thermal effects on peripheral areas. Patent 2963671.



**1%, 0402 Series, 1/8 Watt — RL0510S Series Resistor Values**

.15	.22	1.0	1.5	2.2	3.3	4.7
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**2%, 0402 Series, 1/8 Watt — RL0510S Series Resistor Values**

.15	.22	1.0	2.2
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**1%, 0805 Series, 1/4 Watt — RL1220S Series Resistor Values**

.10	.16	.27	.43	.62	1.00	1.6	2.70	4.3	6.8
.11	.18	.30	.47	.68	1.1	1.80	3.00	4.70	7.5
.12	.20	.33	.50	.75	1.2	2.0	3.30	5.1	8.2
.13	.22	.36	.51	.82	1.30	2.20	3.6	5.6	9.1
.15	.24	.39	.56	.91	1.50	2.4	3.9	6.2	10.0

**2%, 0805 Series, 1/4 Watt — RL1220T/S Series Resistor Values**

.022	.05	.082	.18	.30	.68	1.50	3.30
.033	.056	.10	.20	.33	.82	1.80	4.70
.039	.068	.12	.22	.36	1.00	2.20	10.0
.047	.075	.15	.24	.47	1.30	2.70	

**5%, 0805 Series, 1/4 Watt — RL1220T Series Resistor Values**

.010	.013	.018	.024	.030	.039	.05	.062	.082
.011	.015	.020	.025	.033	.043	.051	.068	.091
.012	.016	.022	.027	.036	.047	.056	.075	

**1%, 0815 Series, 1/2 Watt — RL3720T/S Series Resistor Values**

.018	.022	.047	.10
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**1%, 0815 Series, 1 Watt — RL3720WT/S Series Resistor Values**

.004	.012	.016	.03	.047	.10	.33	.56
.008	.013	.022	.033	.05	.15	.43	.68
.01	.015	.028	.036	.068	.22	.47	1.00

**2%, 0815 Series, 1/2 Watt — RL3720T/S Series Resistor Values**

.018	.02	.022	.04	.047	.10
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**2%, 0815 Series, 1 Watt — RL3720WT Series Resistor Values**

.01	.015	.022	.030	.047
.011	.018	.025	.033	.05
.012	.02	.028	.04	.068

**5%, 0815 Series, 1 Watt — RL3720WT Series Resistor Values**

.004	.005	.008
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**1%, 0830 Series, 2 Watt — RL7520WT/S Series Resistor Values**

.01	.02	.050	.15	.33
.015	.047	.10	.22	.47

**2%, 0830 Series, 2 Watt — RL7520WT Series Resistor Values**

.009	.012	.02	.033	.047	.068
.01	.015	.022	.039	.050	

**5%, 0830 Series, 2 Watt — RL7520WT Series Resistor Values**

.001	.002	.003	.004	.005	.006	.009
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**1%, 1206 Series, 1/2 Watt — RL1632T/S/R Series Resistor Values**

.027	.051	.10	.20	.39	.75	1.5	3.0
.030	.056	.11	.22	.43	.82	1.6	3.3
.033	.062	.12	.24	.47	.91	1.8	3.6
.036	.068	.13	.27	.51	1.0	2.0	3.9
.039	.075	.15	.30	.56	1.1	2.2	4.3
.043	.082	.16	.33	.62	1.2	2.4	4.7
.047	.091	.18	.36	.68	1.3	2.7	

**2%, 1206 Series, 1/2 Watt — RL1632T Series Resistor Values**

.010	.012	.015	.018	.022
.011	.013	.016	.020	.024

**1%, 2512 Series, 1 Watt — RL3264T/S/R Series Resistor Values**

.027	.047	.082	.15	.27	.47
.033	.056	.10	.18	.33	
.039	.068	.12	.22	.39	

**2%, 2512 Series, 1 Watt — RL3264T Series Resistor Values**

.010	.012	.015	.018	.022
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**1%, 2512 Series, 2 Watt — RL3264SW4 Series Resistor Values**

.001	.003	.005	.007	.009
.002	.004	.006	.008	.010

**1%, 2512 Series, 1 Watt — RL3264L4 Series Resistor Values**

.003	.007	.015	.033	.056	.150	.390
.004	.008	.018	.039	.068	.180	.500
.005	.010	.022	.047	.082	.220	
.006	.012	.027	.050	.100	.270	

**1%, 1206 Series, 1 Watt — PRL1632 Series Resistor Values**

.005	.011	.020	.036	.056	.100
.006	.012	.022	.039	.062	
.007	.013	.024	.043	.068	
.008	.015	.027	.047	.075	
.009	.016	.030	.050	.082	
.010	.018	.033	.051	.091	



Description	Value Range (Ω)	TCR ppm/°C	Dimensions (mm)				Digi-Key Part No. \$	Cut Tape Pricing			Digi-Key Part No. \$	Tape and Reel		Susumu Part No.
			L	W	P	T		10	50	200		Qty.	Pricing	
1%, 0402, 1/8W	.15 - 4.7	0-200	1.00	0.50	0.20	0.35	RL05S(Value)FCT-ND	5.91	15.91	36.55	RL05S(Value)FTR-ND	10,000	62.40/M	RL0510S-xxx-F
2%, 0402, 1/8W	.15 - 2.2	0-200	1.00	0.50	0.20	0.35	RL05S(Value)GCT-ND	5.64	15.17	34.85	RL05S(Value)GTR-ND	10,000	59.20/M	RL0510S-xxx-G
1%, 0805, 1/4W	.10 - 10.0	0-200	2.00	1.25	0.40	0.40	RL12S(Value)FCT-ND	3.44	9.25	21.25	RL12S(Value)FTR-ND	5,000	35.70/M	RL1220S-xxx-F
2%, 0805, 1/4W	.022 - .082	0-350	2.00	1.25	0.40	0.40	RL12T(Value)GCT-ND	5.36	14.43	33.15	RL12T(Value)GTR-ND	5,000	59.50/M	RL1220T-xxx-G
5%, 0805, 1/4W	.10 - 10.0	0-200	2.00	1.25	0.40	0.40	RL12S(Value)GCT-ND	3.44	9.25	21.25	RL12S(Value)GTR-ND	5,000	35.70/M	RL1220S-xxx-G
1%, 0815, 1/2W	.018 - .047	0-350	3.75	2.00	0.40	0.40	RL12T(Value)JCT-ND	4.13	11.10	25.50	RL12T(Value)JTR-ND	5,000	44.20/M	RL1220T-xxx-J
2%, 0815, 1W	.004 - .068	0-350	3.75	2.00	0.40	0.40	RL37T(Value)FCT-ND	13.54	36.45	83.73	RL37T(Value)FTR-ND	4,000	151.20/M	RL3720T-xxx-F
5%, 0815, 1/2W	.018 - .047	0-350	3.75	2.00	0.40	0.40	RL37S.10FCT-ND	13.61	36.63	84.15	RL37S.10FTR-ND	4,000	151.20/M	RL3720S-xxx-F
1%, 0815, 1W	.004 - .068	0-350	3.75	2.00	0.40	0.40	RL37WT(Value)FCT-ND	17.88	48.10	110.50	RL37WT(Value)FTR-ND	4,000	201.60/M	RL3720WT-xxx-F
2%, 0815, 1/2W	.018 - .047	0-350	3.75	2.00	0.40	0.40	RL37WS(Value)FCT-ND	17.88	48.10	110.50	RL37WS(Value)FTR-ND	4,000	201.60/M	RL3720WS-xxx-F
5%, 0815, 1W	.004 - .068	0-350	3.75	2.00	0.40	0.40	RL37T(Value)GCT-ND	11.83	31.82	73.10	RL37T(Value)GTR-ND	4,000	137.60/M	RL3720T-xxx-G
2%, 0815, 1/2W	.018 - .047	0-350	3.75	2.00	0.40	0.40	RL37S.10GCT-ND	12.38	33.30	76.50	RL37S.10GTR-ND	4,000	138.00/M	RL3720S-xxx-G
1%, 0815, 1W	.01 - .068	0-350	3.75	2.00	0.40	0.40	RL37WT(Value)GCT-ND	16.50	44.40	102.00	RL37WT(Value)GTR-ND	4,000	185.60/M	RL3720WT-xxx-G
5%, 0815, 1W	.004 - .068	0-350	3.75	2.00	0.40	0.40	RL37WT(Value)JCT-ND	19.80	53.28	122.40	RL37WT(Value)JTR-ND	4,000	224.00/M	RL3720WT-xxx-J
1%, 0830, 2W	.01 - .050	0-350	7.50	2.00	0.40	0.40	RL75WT(Value)FCT-ND	18.77	50.51	116.03	RL75WT(Value)FTR-ND	4,000	218.40/M	RL7520WT-xxx-F
2%, 0830, 2W	.009 - .068	0-350	7.50	2.00	0.40	0.40	RL75WS(Value)FCT-ND	19.32	51.99	119.43	RL75WS(Value)FTR-ND	4,000	218.40/M	RL7520WS-xxx-F
5%, 0830, 2W	.001 - .009	0-350	7.50	2.00	0.40	0.40	RL75WT(Value)GCT-ND	18.56	49.95	114.75	RL75WT(Value)GTR-ND	4,000	209.60/M	RL7520WT-xxx-G
1%, 1206, 1/2W	.027 - .030	0-200	3.20	1.60	1.00	0.50	RL16T(Value)FCT-ND	21.18	56.98	130.90	RL16T(Value)FTR-ND	4,000	240.00/M	RL7520WT-xxx-J
2%, 1206, 1/2W	.033 - .051	0-350	3.20	1.60	1.00	0.50	RL16S(Value)FCT-ND	11.55	31.08	71.40	RL16S(Value)FTR-ND	5,000	136.00/M	RL1632T-xxx-F
5%, 1206, 1/2W	.056 - 4.7	±100	3.20	1.60	1.00	0.50	RL16R(Value)FCT-ND	11.55	31.08	71.40	RL16R(Value)FTR-ND	5,000	136.00/M	RL1632R-xxx-F
1%, 2512, 1W	.027	0-350	6.40	3.20	2.00	0.50	RL16T(Value)GCT-ND	11.55	31.08	71.40	RL16T(Value)GTR-ND	5,000	136.00/M	RL1632T-xxx-G
2%, 2512, 1W	.033 - .047	0-200	6.40	3.20	2.00	0.50	RL32T.027FCT-ND	28.05	75.48	173.40	RL32T.027FTR-ND	5,000	340.00/M	RL3264T-xxx-F
5%, 2512, 1W	.056 - .47	±100	6.40	3.20	2.00	0.50	RL32S(Value)FCT-ND	28.05	75.48	173.40	RL32S(Value)FTR-ND	5,000	340.00/M	RL3264S-xxx-F
1%, 2512, 2W	.010 - .024	0-350	6.40	3.20	2.00	0.50	RL32R(Value)FCT-ND	28.05	75.48	173.40	RL32R(Value)FTR-ND	5,000	340.00/M	RL3264R-xxx-F
2%, 2512, 2W	.022	0-350	6.40	3.20	2.00	0.50	RL32T(Value)GCT-ND	28.05	75.48	173.40	RL32T(Value)GTR-ND	5,000	340.00/M	RL3264T-xxx-G
5%, 2512, 2W	.001	±300	6.40	3.20	2.70	0.50	RL32SW4.001FCT-ND	44.70	128.35	350.32	RL32SW4.001FTR-ND	5,000	1020.00/M	RL3264SW4-001M-F-T5
1%, 2512, 1W	.002 - .004	±200	6.40	3.20	2.70	0.50	RL32SW4(Value)FCT-ND	44.70	128.35	350.32	RL32SW4(Value)FTR-ND	5,000	1020.00/M	RL3264SW4-xxxM-F-T5
2%, 2512, 1W	.005 - .010	±100	6.40	3.20	2.70	0.50	RL32SW4(Value)FCT-ND	44.70	128.35	350.32	RL32SW4(Value)FTR-ND	5,000	1020.00/M	RL3264SW4-xxxM-F-T5
1%, 2512, 1W	.003 - .005	±100	6.40	3.20	0.60	0.50	RL32L4(Value)FCT-ND	37.30	107.10	292.32	RL32L4(Value)FTR-ND	5,000	850.00/M	RL3264L4-Rxxx-F
2%, 2512, 1W	.006 - .500	±50	6.40	3.20	0.60	0.50	RL32L4(Value)FCT-ND	37.30	107.10	292.32	RL32L4(Value)FTR-ND	5,000	850.00/M	RL3264L4-Rxxx-F
1%, 1206, 1W	.005 - .009	0-350	3.20	1.60	0.45	0.50	PRL1632(Value)FCT-ND	9.04	26.06	62.55	PRL1632(Value)FTR-ND	1,000	216.00	PRL1632-xxx-F-T1

\$ For complete part number, substitute corresponding value from the Resistance Value Chart ◆ RoHS Compliant

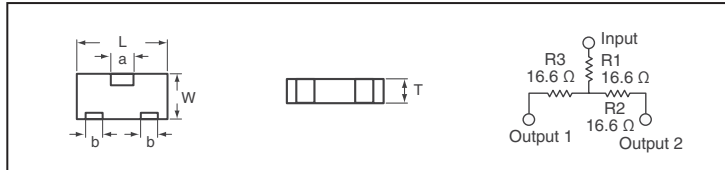
**1%, 2 and 5% SMD Resistors — Digi-Key® Assortment Kits**

Digi-Key® 1%, 0805, 1/4W, RL Series SMD Chip Resistor Kit RL1220SF-1-KIT-ND ◆ 10 each of values .10Ω - 10.0Ω	\$19.95
Digi-Key® 2%, 0805, 1/4W, RL Series SMD Chip Resistor Kit RL1220SG-1-KIT-ND ◆ 10 each of values .022Ω - 10.0Ω	\$15.95
Digi-Key® 1, 2 and 5% 0805, 1/4W, RL Series SMD Thin Film Resistor Kit SSM1220-KIT-ND 40 each of 31 values ◆	\$109.15

**SMD Power Dividers** **Digi-Reel®** **RoHS COMPLIANT**

Operating Temperature: -40°C ~ 125°C  
Excellent high frequency characteristics from DC ~ 20GHz

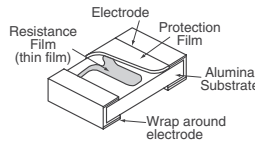
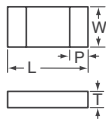
Type	Dimensions - mm				
	L	W	a	b	T
PS1608 (G)	1.6	0.8	0.4	0.3	0.4
PS2012 (G)	2.0	1.25	0.4	0.3	0.4
PS3216 (G)	3.2	1.6	0.3	0.35	0.4



Type	Frequency Range	Distribution Deviation	Input or Output VSWR		Attenuation Tolerance		Input Power		Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	T&R Pricing 5,000	Susumu Part No.
			1.3 or Less	1.5 or Less	6±0.5dB	6±1.0dB	Typ.	Max.		1	10	100			
PS1608	DC ~ 20GHz	Within 0.3dB	DC < 10GHz	10 ~ 20GHz	DC < 10GHz	10 ~ 20GHz	100mW	200mW	408-1093-1-ND	2.28	19.50	130.00	408-1093-2-ND	780.00/M	PS1608GT2-R50-T5
PS2012	DC ~ 17.5GHz	Within 0.3dB	DC < 10GHz	10 ~ 17.5GHz	DC < 10GHz	10 ~ 17.5GHz	125mW	250mW	408-1094-1-ND	3.85	33.00	220.00	408-1094-2-ND	1320.00/M	PS2012GT2-R50-T5
PS3216	DC ~ 15GHz	Within 0.3dB	DC < 10GHz	10 ~ 15GHz	DC < 10GHz	10 ~ 15GHz	250mW	500mW	408-1095-1-ND	5.95	51.00	340.00	408-1095-2-ND	2040.00/M	PS3216GT2-R50-T5

**0201 / 0402 / 0603 / 0805 SMD .1% and .5% Thin Film Chip Resistors – High Precision RR Series - 1/10, 1/16, 1/20 Watt**

Susumu has been manufacturing thin film resistors since 1986 and is the primary thin film supplier in the world. Susumu's Number One status in thin film resistors can be attributed to the sales of the RR series thin film chip resistors. The RR series offers excellent TCR tolerances, Linearity specifications and Low Current Noise. These specifications contribute to circuit simplification, and cost savings as they eliminate the need for trimmer pots in the circuit for adjustment.



**Current Noise Comparison**  
**RR Series Thin Film vs. Thick Film**  
**Why RR Series has lower current noise Specifications**

Resistance material of RR Series Ni-Cr Alloy	Resistance material of Thick Film Metal and Insulator Composite
Current flow is practically even	Current flow is not even

**.1%, 1/16 Watt - Series 0603 — Resistor Values**

107	232	432	825	1.3K	2.67K	4.22K	7.68K	17.4K	42.2K	60.4K	127K
110	261	470	845	1.6K	2.7K	4.3K	7.87K	27.0K	43.0K	68.1K	130K
120	267	475	887	1.82K	3.6K	4.32K	8.45K	30.9K	43.2K	76.8K	215K
147	270	523	1.07K	2.1K	3.65K	4.75K	9.1K	31.6K	47.0K	82.0K	221K
150	300	549	1.15K	2.26K	3.74K	5.11K	9.76K	32.4K	47.5K	90.9K	270K
162	348	560	1.18K	2.37K	3.83K	5.9K	11.0K	34.8K	51.0K	95.3K	
180	357	562	1.2K	2.4K	3.9K	6.04K	12.4K	35.7K	51.1K	113K	
220	422	604	1.21K	2.55K	3.92K	6.8K	14.3K	36.0K	53.6K	120K	
221	430	820	1.24K	2.61K	4.12K	7.5K	16.0K	39.0K	56.0K	124K	

**.1%, 1/10 Watt - Series 0805 — Resistor Values**

102	300	562	1.69K	3.57K	6.2K	13.7K	24.0K	47K	102K	680K
1104	301	698	1.8K	3.6K	7.15K	14.3K	25.5K	47.5K	110K	
124	316	732	1.82K	3.9K	7.87K	15.4K	26.7K	51.0K	124K	
127	324	750	1.91K	3.92K	8.25K	15.8K	27.0K	51.1K	169K	
140	330	909	2.05K	4.3K	8.66K	16.0K	28.7K	62.0K	182K	
150	392	1.07K	2.15K	4.32K	9.1K	16.2K	33.0K	66.5K	191K	
162	470	1.15K	2.21K	4.64K	9.53K	17.4K	34.8K	68.0K	196K	
180	475	1.21K	2.55K	4.75K	10.2K	18.0K	36.0K	68.1K	301K	
196	499	1.3K	2.7K	4.87K	10.5K	19.1K	36.5K	75.0K	390K	
240	511	1.6K	2.94K	5.49K	11.0K	21.5K	38.3K	82.0K	430K	
267	549	1.62K	3.09K	6.04K	11.3K	22K	46.4K	86.6K	649K	

**.5%, 1/20 Watt - Series 0201 — Resistor Values**

47	100	130	470	3.3K	8.2K
82	120	220	560	3.9K	4.7K
				4.3K	5.6K
				4.7K	6.8K

**.5%, 1/16 Watt - Series 0402 — Resistor Values**

10	51	150	330	680	1.62K	2.87K	4.99K	8.06K	13.0K	23.2K	40.2K	64.9K
15	56	160	332	750	1.8K	3.0K	5.1K	8.2K	13.7K	24.0K	43.0K	68.0K
20	56.2	169	360	820	1.87K	3.16K	5.36K	8.45K	14.7K	24.9K	45.3K	75.0K
22	62	180	390	825	1.9K	3.3K	5.49K	9.09K	15.0K	25.5K	47.0K	82.0K
24	68	200	402	910	2.0K	3.32K	5.6K	9.1K	15.4K	27.0K	49.9K	86.6K
27	75	220	430	1.0K	2.1K	3.6K	5.62K	10.0K	16.0K	28.7K	51.0K	90.9K
30	82	240	470	1.1K	2.2K	3.74K	5.76K	10.5K	18.0K	30.0K	56.0K	100K
33	100	249	499	1.2K	2.31K	3.9K	6.04K	10.7K	18.2K	33.0K	56.2K	
36	110	255	510	1.21K	2.4K	4.02K	6.2K	11.3K	18.7K	33.2K	57.6K	
39	120	270	560	1.3K	2.49K	4.3K	6.49K	12.0K	20.0K	36.0K	59K	
47	130	287	620	1.5K	2.55K	4.53K	6.8K	12.1K	21K	36.5K	60.4K	
49.9	137	300	649	1.6K	2.7K	4.7K	7.5K	12.4K	22.0K	39.0K	62.0K	

**.5%, 1/16 Watt - Series 0603 — Resistor Values**

10	27	51.1	133	274	470	820	1.4K	2.32K	3.4K	4.99K	6.98K	10.5K	16.2K	24.0K	36.0K	56.2K	100K	220K
11	30	54.9	147	280	475	825	1.47K	2.37K	3.48K	5.1K	7.15K	10.7K	16.5K	24.3K	36.5K	59.0K	102K	221K
11.8	33	56	150	300	499	845	1.5K	2.4K	3.57K	5.11K	7.32K	11.0K	16.9K	24.9K	37.4K	60.4K	107K	240K
12	33.2	56.2	154	301	510	910	1.54K	2.43K	3.6K	5.23K	7.5K	11.5K	17.4K	25.1K	39.0K	61.9K	110K	243K
12.1	34	60.4	160	330	560	976	1.6K	2.49K	3.65K	5.36K	7.87K	11.5K	17.8K	25.0K	40.2K	62.0K	113K	249K
12.1	35.7	62	165	332	562	1.0K	1.62K	2.55K	3.74K	5.49K	8.06K	12.0K	18.0K	27.4K	43.2K	66.5K	118K	255K
13	36	68	180	340	590	1.02K	1.68K	2.61K	3.9K	5.6K	8.2K	12.1K	18.2K	28.0K	43.2K	68.0K	120K	284K
15	37.4	68.1	182	348	604	1.07K	1.78K	2.87K	3.92K	5.62K	8.25K	12.4K	18.7K	28.7K	44.2K	69.8K	130K	300K
16	39.3	75	200	357	619	1.1K	1.8K	2.7K	4.02K	5.76K	8.45K	12.7K	19.1K	29.4K	47.0K	69.8K	130K	300K
16.3	39	75	210	360	620	1.13K	1.82K	2.74K	4.12K	5.9K	8.66K	13.0K	19.6K	30.0K	47.5K	73.2K	140K	301K
18	39.2	82.5	215	365	634	1.15K	1.87K	2.80K	4.22K	6.04K	8.87K	13.3K	20.0K	30.1K	48.7K	75.0K	147K	309K
20	40.2	91	220	390	649	1.18K	1.96K	2.87K	4.3K	6.19K	9.09K	13.7K	20.5K	30.9K	49.9K	75.0K	147K	309K
20.5	41.2	100	221	392	680	1.2K	2.0K	3.0K	4.42K	6.2K	9.1K	14.0K	21.0K	31.6K	51.0K	80.6K	160K	330K
21.5	45	110	226	402	681	1.21K	2.1K	3.01K	4.53K	6.34K	9.31K	14.3K	21.5K	32.4K	51.1K	82.0K	165K	332K
22	47	120	232	422	698	1.24K	2.15K	3.09K	4.64K	6.49K	9.53K	14.7K	22.0K	33.0K	52.3K	84.5K	178K	357K
22.1	47.5	121	240	430	715	1.27K	2.2K	3.15K	4.7K	6.65K	9.76K	15.0K	22.1K	33.2K	53.6K	90.9K	180K	360K
24	49.9	124	267	432	750	1.3K	2.21K	3.3K	4.75K	6.8K	10.0K	15.8K	22.6K	34.0K	54.9K	91.0K	200K	
24.9	51	130	270	464	806	1.37K	2.26K	3.32K	4.87K	6.81K	10.2K	16.0K	23.2K	34.8K	56.0K	95.3K	210K	

◆ RoHS Compliant † Not available in assortment kits

(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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**.5%, 1/10 Watt - Series 0805 — Resistor Values**

10	30	82.5	220	560	1.58K	3.0K	5.11K	10.2K	19.6K	36.5K	71.5K	187K	499K
11	30.1	86.6	226	576	1.6K	3.01K	5.36K	10.5K	20.0K	37.4K	73.2K	191K	510K
11.5	30.9	88.7	232	590	1.65K	3.09K	5.49K	11.0K	21.0K	39.0K	75.0K	200K	549K
12	32.4	91	240	604	1.69K	3.16K	5.6K	11.3K	21.5K	39.2K	80.6K	205K	560K
12.4	33	100	249	620	1.78K	3.24K	5.62K	11.5K	22.0K	40.2K	82.0K	210K	604K
13	34.8	107	255	649	1.8K	3.3K	5.76K	11.8K	22.1K	41.2K	82.5K	220K	620K
13.3	35.7	110	267	680	1.82K	3.32K	5.9K	12.0K	23.2K	43.0K	84.5K	226K	665K
14.3	36	120	270	681	1.87K	3.4K	6.04K	12.1K	23.7K	44.2K	86.6K	232K	680K
14.7	39	121	280	750	1.91K	3.48K	6.19K	12.4K	24.0K	45.3K	88.7K	240K	715K
15	40.2	124	287	820	1.96K	3.6K	6.2K	12.7K	24.3K	47.0K	90.9K	249K	750K
16	41.2	127	300	887	2.0K	3.65K	6.65K	13.0K	24.9K	47.5K	91.0K	255K	820K
16.5	43	130	309	910	2.05K	3.74K	6.8K	13.3K	25.5K	48.7K	95.3K	270K	887K
17.4	47	133	316	976	2.1K	3.83K	6.81K	13.7K	26.1K	49.9K	100K	280K	910K
17.8	47.5	140	330	1.0K	2.15K	3.9K	6.98K	14.0K	26.7K	51.0K	102K	300K	931K
18	49.9	143	332	1.1K	2.2K	3.92K	7.15K	14.3K	27.0K	51.1K	105K	301K	1.0M
19.6	51	147	360	1.13K	2.21K	4.02K	7.5K	14.7K	27.4K	53.6K	110K	330K	
20	54.9	150	365	1.15K	2.26K	4.12K	7.87K	15.0K	28.7K	54.9K	115K	332K	
20.5	56	160	390	1.18K	2.32K	4.3K	8.06K	15.4K	30.0K	56.0K	118K	357K	
21.5	56.2	162	392	1.2K	2.37K	4.32K	8.2K	15.8K	30.1K	56.2K	120K	360K	
22	60.4	165	412	1.21K	2.4K	4.42K	8.25K	16.0K	30.9K	57.6K	121K	365K	
22.6	61.9	174	430	1.27K	2.43K	4.53K	8.45K	16.2K	31.6K	59.0K	130K	374K	
24	62	178	470	1.3K	2.49K	4.64K	8.87K	16.5K	32.4K	60.4K	140K	390K	
24.9	68	180	475	1.33K	2.56K	4.7K	9.09K	16.9K	33.0K	62.0K	143K	402K	
25.5	69.8	182	499	1.37K	2.61K	4.75K	9.1K	17.4K	33.2K	64.9K	150K	412K	
27	75	200	510	1.40K	2.7K	4.87K	9.53K	18.0K	34.8K	66.5K	160K	430K	
27.4	80.6	205	523	1.5K	2.8K	4.99K	9.76K	18.7K	35.7K	68.0K	178K	470K	
29.4	82	215	549	1.54K	2.94K	5.1K	10.0K	19.1K	36.0K	68.1K	180K	475K	

Description	Value Range (Ω)	TCR ppm/°C	Maximum Operating Voltage (V)	Dimensions (mm)				Digi-Key Part No.†	Cut Tape Pricing			Digi-Key Part No.†	Tape and Reel		Susumu Part No.
				L	W	P	T		10	50	200		Qty.	Pricing	
.1%, 0603, 1/16W	107 – 270K	±25	75	1.60	0.80	0.30	0.40	RR08P(Value)BCT-ND	5.78	15.54	35.70	RR08P(Value)BTR-ND	5,000	64.60/M	RR0816P-xxx-B
.1%, 0805, 1/10W	102 – 680K	±25	100	2.00	1.25	0.40	0.40	RR12P(Value)BCT-ND	5.78	15.54	35.70	RR12P(Value)BTR-ND	5,000	64.60/M	RR1220P-xxx-B
.5%, 0201, 1/20W	47 – 8.2K	±25	15	0.06	0.30	0.12	0.23	RR03P(Value)DCT-ND	3.03	8.14	18.70	RR03P(Value)DTR-ND	5,000	30.60/M	RR0306P-xxx-D
.5%, 0402 1/16W	10 – 82	±100	25	1.00	0.50	0.20	0.35	RR05R(Value)DCT-ND	1.20	3.22	7.40	RR05R(Value)DTR-ND	10,000	8.82/M	RR0510R-xxx-D
	100 – 100K	±25						RR05P(Value)DCT-ND	1.20	3.22	7.40	RR05P(Value)DTR-ND	10,000	8.82/M	RR0510P-xxx-D
.5%, 0603, 1/16W	10 – 91	±50	75	1.60	0.80	0.30	0.40	RR08Q(Value)DCT-ND	1.40	3.77	8.67	RR08Q(Value)DTR-ND	5,000	11.16/M	RR0816Q-xxx-D
	100 – 360K	±25						RR08P(Value)DCT-ND	1.40	3.77	8.67	RR08P(Value)DTR-ND	5,000	11.16/M	RR0816P-xxx-D
.5%, 0805, 1/10W	10 – 91	±50	100	2.00	1.25	0.40	0.40	RR12Q(Value)DCT-ND	1.40	3.77	8.67	RR12Q(Value)DTR-ND	5,000	11.16/M	RR1220Q-xxx-D
	100 – 1.0M	±25						RR12P(Value)DCT-ND	1.40	3.77	8.67	RR12P(Value)DTR-ND	5,000	11.16/M	RR1220P-xxx-D

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

**.1% and .5% SMD Resistors Digi-Key® Assortment Kits – RoHS Compliant**

**Digi-Key® .1%, 0603, 1/16W, RR Series, SMD Resistor Kits**

**RR0816PB-4-KIT-ND** 10 each of values 15.4KΩ – 75.0KΩ ..... \$59.95

**RR0816PB-5-KIT-ND** 10 each of values 76.8KΩ – 332KΩ ..... \$49.95

**Digi-Key® .5%, 0201, 1/20W, RR Series, SMD Resistor Kits**

**RR0306PD-1-KIT-ND** 10 each of values 47Ω – 8.2KΩ ..... \$9.95

**Digi-Key® .5%, 0402, 1/16W, RR Series, SMD Resistor Kits**

**RR0510RD-1-KIT-ND** 10 each of values 10.0Ω – 82.0Ω ..... \$4.95

**RR0510PD-1-KIT-ND** 10 each of values 100Ω – 4.3KΩ ..... \$9.95

**RR0510PD-2-KIT-ND** 10 each of values 4.7KΩ – 100KΩ ..... \$7.95

**Digi-Key® .5%, 0603, 1/16W, RR Series, SMD Resistor Kits**

**RR0816QD-1-KIT-ND** 10 each of values 10Ω – 91.0Ω ..... \$13.95

**RR0816PD-1-KIT-ND** 10 each of values 100Ω – 806Ω ..... \$15.95

**RR0816PD-2-KIT-ND** 10 each of values 820Ω – 4.75KΩ ..... \$15.95

**RR0816PD-3-KIT-ND** 10 each of values 4.87KΩ – 18.0KΩ ..... \$15.95

**RR0816PD-4-KIT-ND** 10 each of values 18.2KΩ – 68.1KΩ ..... \$15.95

**RR0816PD-5-KIT-ND** 10 each of values 69.8KΩ – 360KΩ ..... \$12.95

**SSM0816PD-KIT-ND** 60 each of 125 values ..... \$183.15

**Digi-Key® .5%, 0805, 1/10W, RR Series, SMD Resistor Kits**

**RR1220QD-1-KIT-ND** 10 each of values 10Ω – 91.0Ω ..... \$12.95

**RR1220PD-1-KIT-ND** 10 each of values 100Ω – 1.6KΩ ..... \$15.95

**RR1220PD-2-KIT-ND** 10 each of values 1.65KΩ – 5.9KΩ ..... \$15.95

**RR1220PD-3-KIT-ND** 10 each of values 6.04KΩ – 24.3KΩ ..... \$15.95

**RR1220PD-4-KIT-ND** 10 each of values 24.9KΩ – 110KΩ ..... \$15.95

**RR1220PD-5-KIT-ND** 10 each of values 115KΩ – 1.0MΩ ..... \$9.95

**SSM1220PD-KIT-ND** 60 each of 161 values ..... \$183.15

▲ Please see Digi-Key website for a complete list of values included in kit.



**High Frequency Surface Mount Thin Film Chip Resistors (up to 20GHz)**

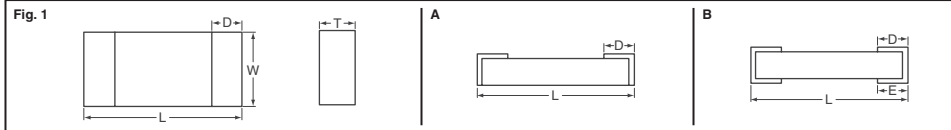


FC Series Chip Resistors are designed with low internal reactance. They function as almost pure resistors on a very high range of frequencies. The specialized laser edge trimming allows for precision tolerances of 0.1%.

**Features:** • Excellent frequency response up to 20GHz  
• Edge-trimmed block resistors • Small internal reactance (<10mΩ) • Low TCR of ± 25ppm/°C

**Applications:** • Low-noise amplifiers • High-speed routers  
• Attenuation circuitry • High-frequency line termination

**Specifications:** • TCR: 25ppm/°C • Tolerance: ± 0.1%  
• Stability: 50ppm; 2000H @ 70 °C • Operating Temperature Range: -55°C – 125°C • Resistive Element: Passivated Nichrome • Substrate Material: High Purity Alumina (99.6%)



Case Size	Dimensions – mm				
	Length (L)	Width (W)	Thickness (T)	Top Pad (D)	Bottom Pad (Wraparound Only) (E)
0402	1.016	0.508	0.381	0.305	0.381
0603	1.626	0.813	0.381	0.305	0.381

Fig.	Description	Resistance (Ω)	Rated Voltage (V)	Rated Power Max. @ 70°C	Termination	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel		Vishay Thin Film Part No.
							1	25	100		Qty.	Pricing	
1A	0.1%, 0402	50	30	50mW	Top Sided Lead (Flip Chip)	FC0402-50BFCT-ND	2.94	2.28	2.10	FC0402-50BFTR-ND	1,000	910.00	FC0402E50R0BTBST1
1B	0.1%, 0402	50	30	50mW	Wraparound Lead	FC0402-50BWCT-ND	2.94	2.28	2.10	FC0402-50BWTR-ND	1,000	910.00	FC0402E50R0BST1
1A	0.1%, 0402	100	30	50mW	Top Sided Lead (Flip Chip)	FC0402-100BFCT-ND	2.94	2.28	2.10	FC0402-100BFTR-ND	1,000	910.00	FC0402E100R0BTBST1
1B	0.1%, 0402	100	30	50mW	Wraparound Lead	FC0402-100BWCT-ND	2.94	2.28	2.10	FC0402-100BWTR-ND	1,000	910.00	FC0402E100R0BST1
1A	0.1%, 0603	50	50	125mW	Top Sided Lead (Flip Chip)	FC0603-50BFCT-ND	2.94	2.28	2.10	FC0603-50BFTR-ND	1,000	910.00	FC0603E50R0BTBST1
1B	0.1%, 0603	50	50	125mW	Wraparound Lead	FC0603-50BWCT-ND	2.94	2.28	2.10	FC0603-50BWTR-ND	1,000	910.00	FC0603E50R0BST1
1A	0.1%, 0603	100	50	125mW	Top Sided Lead (Flip Chip)	FC0603-100BFCT-ND	2.94	2.28	2.10	FC0603-100BFTR-ND	1,000	910.00	FC0603E100R0BTBST1
1B	0.1%, 0603	100	50	125mW	Wraparound Lead	FC0603-100BWCT-ND	2.94	2.28	2.10	FC0603-100BWTR-ND	1,000	910.00	FC0603E100R0BST1

**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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