

Thin Film Precision Chip Resistor

Type	Product Series	Power	TCR (ppm/°C)	Size (inch)	Tolerance (E-24&E-96)	Max. Working Voltage	Max. Overload Voltage	Resistance Range	Operating Temp. Range (°C)	Qty 7" Reel
RT Standard	RT03	1/32W	D ±25 E ±50	0201	D ±.5% F ±1%	15V	30V	1Ω~3MΩ	-55 ~ +155	10K
	RT06	1/16W	S ±5 B ±10 D ±25 E ±50	0402	L ±.01% A ±.05% B ±.1% C ±.25% D ±.5% F ±1%	25V	50V			10K
	RT06	1/16W		0603		50V	100V			5K
	RT10	1/10W		0805		100V	200V			5K
	RT12	1/8W		1206		150V	300V			5K
	RT20	1/5W		1210						5K
	RT25	1/4W		2010		150V	300V			4K
	RT50	1/2W		2512						4K
RTW High Power	RTW10	1/10W	S ±5 B ±10 C ±15 D ±25 E ±50	0603	L ±.01% A ±.05% B ±.1% C ±.25% D ±.5%	75V	150V	4.7Ω~1MΩ	-55 ~ +155	5K
	RTW16	1/6W		0805		100V	150V			5K
	RTW12	1/8W				150V	300V			5K
	RTW25	1/4W		1206		200V	400V			5K
	RTW25	1/4W								4K
	RTW30	1/3W								1210
	RTW30	1/3W								
* Prefer choice:Tolerance @0.1% & TCR @±25; Tolerance @0.5% & TCR @±25/±50; Tolerance @1% & TCR @±25/±50										

* Prefer choice: Tolerance @0.1% & TCR @±25; Tolerance @0.5% & TCR @±25/±50; Tolerance @1% & TCR @±25/±50

How to Order - Selection and Guide

RT	12	D	1206	B	1002	-XX	-RG70
							Packing: RG70: Tape in 7" Reel, RoHS/ Halogen Free
							Factory Location
							Resistance(Ω): 1002:10KΩ; 1R00: 1Ω;
							See below for E-24&E-96 Table
							Tolerance Code: L=±.01%; A=±.05%; B=±.1%; C=±.25%; D=±.5%; F=±1%
							Body Size in inch(mm): 0201(1005); 0402(1005); 0603(1608); 0805(2012); 1206(3216); 1210(3225); 2512(6425);
							TCR(PPM°C): S=±5; B=±10; C=±15; D=±25; E=±50;
							Power Code: 03:1/32W; 06:1/16W; 10:1/10W; 12:1/8W; 16:1/6W; 20:1/5W; 25:1/4W; 50:1/2W
Thin Film Precision Chip Resistor							

RTW	16	D	0603	D	1002	-XX	-RG70	
								Packing: RG70: Tape in 7" Reel, RoHS/ Halogen Free
								Factory Location
								Resistance(Ω): 1002:10K Ω ; 1R00: 1 Ω ;
								See below for E-24&E-96 Table
								ToleranceCode: L=±.01%; A=±.05%; B=±.1%; C=±.25%; D=±.5%; F=±1%
								Body Size in inch(mm): 0603(1608); 0805(2012); 1206(3216); 1210(3225);
								TCR(PPM°C): S=±5; B=±10; C=±15; D=±25; E=±50;
								Power Code: 10:1/10W; 12:1/8W; 16:1/6W; 25:1/4W; 30:1/3W;
								Thin Film Precision Chip Resistor - High Power

Marking Code

Marking Code (Table1)	Marking Code (Table 1)	Marking Code (Table 1)	Marking Code (Table 1)
 Marking:±1%,E96,E24 1001=100x10 ¹ =1K Ω	 Marking:±5%,E24 471=47x10 ¹ =470 Ω	 Marking:±5%,E24 (0805~2512) R011=0.011 Ω	 Marking:±5%,E24 (0603) R11=0.11 Ω
Marking Code (Table 1)	Marking Code (Table 1)	Marking Code (Table 2)	
 Marking:±5%,E24 206=20x10 ⁶ =20M Ω	 Marking:±5%,E24 000=Jumper(<50m Ω)	 Marking:±1%,0603,E96 47X=301x10 ⁻¹ =30.1 Ω	

*Size=0402 or 0201: No marking;
 Table1: Standard code for E24&E96 series
 Table2:special code for 0603size,±1%,E96 series

Table 1 IEC Standard Value - E-24&E-96

E-24 Series

xxx (C0de)	Ω	xxx (C0de)	Ω	xxx (C0de)	Ω	xxx (C0de)	Ω	xxx (C0de)	Ω	xxx (C0de)	Ω	xxx (C0de)	Ω	xxx (C0de)	Ω	xxx (C0de)	Ω	xxx (C0de)	Ω
R010	0.01	R011	0.011	R012	0.012	R013	0.013	R015	0.015	R016	0.016	R018	0.018	R020	0.02	R022	0.022	R024	0.024
R027	0.027	R030	0.03	R033	0.033	R036	0.036	R039	0.039	R043	0.043	R047	0.047	R051	0.051	R056	0.056	R062	0.062
R068	0.068	R075	0.075	R082	0.082	R091	0.091	R10	0.10	R11	0.11	R12	0.12	R13	0.13	R15	0.15	R16	0.16
R18	0.18	R20	0.20	R22	0.22	R24	0.24	R27	0.27	R30	0.30	R33	0.33	R36	0.36	R39	0.39	R43	0.43
R47	0.47	R51	0.51	R56	0.56	R62	0.62	R68	0.68	R75	0.75	R82	0.82	R91	0.91				
000	<0.05	1R0	1.0	1R1	1.1	1R2	1.2	1R3	1.3	1R5	1.5	1R6	1.6	1R8	1.8	2R0	2.0	2R2	2.2
2R4	2.4	2R7	2.7	3R0	3.0	3R3	3.3	3R6	3.6	3R9	3.9	4R3	4.3	4R7	4.7	5R1	5.1	5R6	5.6
6R2	6.2	6R8	6.8	7R5	7.5	8R2	8.2	9R1	9.1	100	10	110	11	120	12	130	13	150	15
160	16	180	18	200	20	220	22	240	24	270	27	300	30	330	33	360	36	390	39
430	43	470	47	510	51	560	56	620	62	680	68	750	75	820	82	910	91	101	100
111	110	121	120	131	130	151	150	161	160	181	180	201	200	221	220	241	240	271	270
301	300	331	330	361	360	391	390	431	430	471	470	511	510	561	560	621	620	681	680
751	750	821	820	911	910	102	1.0K	112	1.1K	122	1.2K	132	1.3K	152	1.5K	162	1.6K	182	1.8K
202	2.0K	222	2.2K	242	2.4K	272	2.7K	302	3.0K	332	3.3K	362	3.6K	392	3.9K	432	4.3K	472	4.7K
512	5.1K	562	5.6K	622	6.2K	682	6.8K	752	7.5K	822	8.2K	912	9.1K	103	10K	113	11K	123	12K

133	13K	153	15K	163	16K	183	18K	203	20K	223	22K	243	24K	273	27K	303	30K	333	33K
363	36K	393	39K	433	43K	473	47K	513	51K	563	56K	623	62K	683	68K	753	75K	823	82K
913	91K	104	100K	114	110K	124	120K	134	130K	154	150K	164	160K	184	180K	204	200K	224	220K
244	240K	274	270K	304	300K	334	330K	364	360K	394	390K	434	430K	474	470K	514	510K	564	560K
624	620K	684	680K	754	750K	824	820K	914	910K	105	1.0M	115	1.1M	125	1.2M	135	1.3M	155	1.5M
165	1.6M	185	1.8M	205	2.0M	225	2.2M	245	2.4M	275	2.7M	305	3.0M	335	3.3M	365	3.6M	395	3.9M
435	4.3M	475	4.7M	515	5.1M	565	5.6M	625	6.2M	685	6.8M	755	7.5M	825	8.2M	915	9.1M	106	10M
116	11M	126	12M	136	13M	156	15M	166	16M	186	18M	206	20M	226	22M	246	24M	276	27M
306	30M	336	33M	366	36M	396	39M	436	43M	476	47M	516	51M	566	56M	626	62M	686	68M
756	75M	826	82M	916	91M	107	100M												

E-96 Series

xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω
1R00	1.00	1R02	1.02	1R05	1.05	1R07	1.07	1R10	1.10	1R13	1.13	1R15	1.15	1R18	1.18	1R21	1.21	1R24	1.24
1R27	1.27	1R30	1.30	1R33	1.33	1R37	1.37	1R40	1.40	1R43	1.43	1R47	1.47	1R50	1.50	1R54	1.54	1R58	1.58
1R62	1.62	1R65	1.65	1R69	1.69	1R74	1.74	1R78	1.78	1R82	1.82	1R87	1.87	1R91	1.91	1R96	1.96	2R00	2.00
2R05	2.05	2R10	2.10	2R15	2.15	2R21	2.21	2R26	2.26	2R32	2.32	2R37	2.37	2R43	2.43	2R49	2.49	2R55	2.55
2R61	2.61	2R67	2.67	2R74	2.74	2R80	2.80	2R87	2.87	2R94	2.94	3R01	3.01	3R09	3.09	3R16	3.16	3R24	3.24
3R32	3.32	3R40	3.40	3R48	3.48	3R57	3.57	3R65	3.65	3R74	3.74	3R83	3.83	3R92	3.92	4R02	4.02	4R12	4.12
4R22	4.22	4R32	4.32	4R42	4.42	4R53	4.53	4R64	4.64	4R75	4.75	4R87	4.87	4R99	4.99	5R11	5.11	5R23	5.23
5R36	5.36	5R49	5.49	5R62	5.62	5R76	5.76	5R90	5.90	6R04	6.04	6R19	6.19	6R34	6.34	6R49	6.49	6R65	6.65
6R81	6.81	6R98	6.98	7R15	7.15	7R32	7.32	7R50	7.50	7R68	7.68	7R87	7.87	8R06	8.06	8R25	8.25	8R45	8.45
8R66	8.66	8R87	8.87	9R09	9.09	9R31	9.31	9R53	9.53	9R76	9.76	10R0	10.0	10R2	10.2	10R5	10.5	10R7	10.7
11R0	11.0	11R3	11.3	11R5	11.5	11R8	11.8	12R1	12.1	12R4	12.4	12R7	12.7	13R0	13.0	13R3	13.3	13R7	13.7
14R0	14.0	14R3	14.3	14R7	14.7	15R0	15.0	15R4	15.4	15R8	15.8	16R2	16.2	16R5	16.5	16R9	16.9	17R4	17.4
17R8	17.8	18R2	18.2	18R7	18.7	19R1	19.1	19R6	19.6	20R0	20.0	20R5	20.5	21R0	21.0	21R5	21.5	22R1	22.1
22R6	22.6	23R2	23.2	23R7	23.7	24R3	24.3	24R9	24.9	25R5	25.5	26R1	26.1	26R7	26.7	27R4	27.4	28R0	28.0
28R7	28.7	29R4	29.4	30R1	30.1	30R9	30.9	31R6	31.6	32R4	32.4	33R2	33.2	34R0	34.0	34R8	34.8	35R7	35.7
36R5	36.5	37R4	37.4	38R3	38.3	39R2	39.2	40R2	40.2	41R2	41.2	42R2	42.2	43R2	43.2	44R2	44.2	45R3	45.3
46R4	46.4	47R5	47.5	48R7	48.7	49R9	49.9	51R1	51.1	52R3	52.3	53R6	53.6	54R9	54.9	56R2	56.2	57R6	57.6
59R0	59.0	60R4	60.4	61R9	61.9	63R4	63.4	64R9	64.9	66R5	66.5	68R1	68.1	69R8	69.8	71R5	71.5	73R2	73.2
75R0	75.0	76R8	76.8	78R7	78.7	80R6	80.6	82R5	82.5	84R5	84.5	86R6	86.6	88R7	88.7	90R9	90.9	93R1	93.1
95R3	95.3	97R6	97.6	1000	100	1020	102	1050	105	1070	107	1100	110	1130	113	1150	115	1180	118
1210	121	1240	124	1270	127	1300	130	1330	133	1370	137	1400	140	1430	143	1470	147	1500	150
1540	154	1580	158	1620	162	1650	165	1690	169	1740	174	1780	178	1820	182	1870	187	1910	191
1960	196	2000	200	2050	205	2100	210	2150	215	2210	221	2260	226	2320	232	2370	237	2430	243
2490	249	2550	255	2610	261	2670	267	2740	274	2800	280	2870	287	2940	294	3010	301	3090	309
3160	316	3240	324	3320	332	3400	340	3480	348	3570	357	3650	365	3740	374	3830	383	3920	392
4020	402	4120	412	4220	422	4320	432	4420	442	4530	453	4640	464	4750	475	4870	487	4990	499
5110	511	5230	523	5360	536	5490	549	5620	562	5760	576	5900	590	6040	604	6190	619	6340	634
6490	649	6650	665	6810	681	6980	698	7150	715	7320	732	7500	750	7680	768	7870	787	8060	806
8250	825	8450	845	8660	866	8870	887	9090	909	9310	931	9530	953	9760	976	1001	1.00K	1021	1.02K
1051	1.05K	1071	1.07K	1101	1.10K	1131	1.13K	1151	1.15K	1181	1.18K	1211	1.21K	1241	1.24K	1271	1.27K	1301	1.30K
1331	1.33K	1371	1.37K	1401	1.40K	1431	1.43K	1471	1.47K	1501	1.50K	1541	1.54K	1581	1.58K	1621	1.62K	1651	1.65K
1691	1.69K	1741	1.74K	1781	1.78K	1821	1.82K	1871	1.87K	1911	1.91K	1961	1.96K	2001	2.00K	2051	2.05K	2101	2.10K
2151	2.15K	2211	2.21K	2261	2.26K	2321	2.32K	2371	2.37K	2431	2.43K	2491	2.49K	2551	2.55K	2611	2.61K	2671	2.67K
2741	2.74K	2801	2.80K	2871	2.87K	2941	2.94K	3011	3.01K	3091	3.09K	3161	3.16K	3241	3.24K	3321	3.32K	3401	3.40K
3481	3.48K	3571	3.57K	3651	3.65K	3741	3.74K	3831	3.83K	3921	3.92K	4021	4.02K	4121	4.12K	4221	4.22K	4321	4.32K
4421	4.42K	4531	4.53K	4641	4.64K	4751	4.75K	4871	4.87K	4991	4.99K	5111	5.11K	5231	5.23K	5361	5.36K	5491	5.49K
5621	5.62K	5761	5.76K	5901	5.90K	6041	6.04K	6191	6.19K	6341	6.34K	6491	6.49K	6651	6.65K	6811	6.81K	6981	6.98K
7151	7.15K	7321	7.32K	7501	7.50K	7681	7.68K	7871	7.87K	8061	8.06K	8251	8.25K	8451	8.45K	8661	8.66K	8871	8.87K
9091	9.09K	9311	9.31K	9531	9.53K	9761	9.76K	1002	10.0K	1022	10.2K	1052	10.5K	1072	10.7K	1102	11.0K	1132	11.3K
1152	11.5K	1182	11.8K	1212	12.1K	1242	12.4K	1272	12.7K	1302	13.0K	1332	13.3K	1372	13.7K	1402	14.0K	1432	14.3K
1472	14.7K	1502	15.0K	1542	15.4K	1582	15.8K	1622	16.2K	1652	16.5K	1692	16.9K	1742	17.4K	1782	17.8K	1822	18.2K
1872	18.7K	1912	19.1K	1962	19.6K	2002	20.0K	2052	20.5K	2102	21.0K	2152	21.5K	2212	22.1K	2262	22.6K	2322	23.2K
2372	23.7K	2432	24.3K	2492	24.9K	2552	25.5K	2612	26.1K	2672	26.7K	2742	27.4K	2802	28.0K	2872	28.7K	2942	29.4K
3012	30.1K	3092	30.9K	3162	31.6K	3242	32.4K	3322	33.2K	3402	34.0K	3482	34.8K	3572	35.7K	3652	36.5K	3742	37.4K
3832	38.3K	3922	39.2K	4022	40.2K	4122	41.2K	4222	42.2K	4322	43.2K	4422	44.2K	4532	45.3K	4642	46.4K	4752	47.5K
4872	48.7K	4992	49.9K	5112	51.1K	5232	52.3K	5362	53.6K	5492	54.9K	5622	56.2K	5762	57.6K	5902	59.0K	6042	60.4K

xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω	xxxx (Code)	Ω
6192	61.9K	6342	63.4K	6492	64.9K	6652	66.5K	6812	68.1K	6982	69.8K	7152	71.5K	7322	73.2K	7502	75.0K	7682	76.8K
7872	78.7K	8062	80.6K	8252	82.5K	8452	84.5K	8662	86.6K	8872	88.7K	9092	90.9K	9312	93.1K	9532	95.3K	9762	97.6K
1003	100K	1023	102K	1053	105K	1073	107K	1103	110K	1133	113K	1153	115K	1183	118K	1213	121K	1243	124K
1273	127K	1303	130K	1333	133K	1373	137K	1403	140K	1433	143K	1473	147K	1503	150K	1543	154K	1583	158K
1623	162K	1653	165K	1693	169K	1743	174K	1783	178K	1823	182K	1873	187K	1913	191K	1963	196K	2003	200K
2053	205K	2103	210K	2153	215K	2213	221K	2263	226K	2323	232K	2373	237K	2433	243K	2493	249K	2553	255K
2613	261K	2673	267K	2743	274K	2803	280K	2873	287K	2943	294K	3013	301K	3093	309K	3163	316K	3243	324K
3323	332K	3403	340K	3483	348K	3573	357K	3653	365K	3743	374K	3833	383K	3923	392K	4023	402K	4123	412K
4223	422K	4323	432K	4423	442K	4533	453K	4643	464K	4753	475K	4873	487K	4993	499K	5113	511K	5233	523K
5363	536K	5493	549K	5623	562K	5763	576K	5903	590K	6043	604K	6193	619K	6343	634K	6493	649K	6653	665K
6813	681K	6983	698K	7153	715K	7323	732K	7503	750K	7683	768K	7873	787K	8063	806K	8253	825K	8453	845K
8663	866K	8873	887K	9093	909K	9313	931K	9533	953K	9763	976K	1004	1.00M	1024	1.02M	1054	1.05M	1074	1.07M
1104	1.10M	1134	1.30M	1154	1.15M	1184	1.18M	1214	1.21M	1244	1.24M	1274	1.27M	1304	1.30M	1334	1.33M	1374	1.37M
1404	1.40M	1434	1.43M	1474	1.47M	1504	1.50M	1544	1.54M	1584	1.58M	1624	1.62M	1654	1.65M	1694	1.69M	1744	1.74M
1784	1.78M	1824	1.82M	1874	1.87M	1914	1.91M	1964	1.96M	2004	2.00M	2054	2.05M	2104	2.10M	2154	2.15M	2214	2.21M
2264	2.26M	2324	2.32M	2374	2.37M	2424	2.42M	2494	2.49M	2554	2.55M	2614	2.61M	2674	2.67M	2744	2.74M	2804	2.80M
2874	2.87M	2944	2.94M	3014	3.01M	3094	3.09M	3164	3.16M	3244	3.24M	3324	3.32M	3404	3.40M	3484	3.48M	3574	3.57M
3654	3.65M	3744	3.74M	3834	3.83M	3924	3.92M	4024	4.02M	4124	4.12M	4224	4.22M	4324	4.32M	4424	4.42M	4534	4.53M
4644	4.64M	4754	4.75M	4874	4.87M	4994	4.99M	5114	5.11M	5234	5.23M	5364	5.36M	5494	5.49M	5624	5.62M	5764	5.76M
5904	5.90M	6044	6.04M	6194	6.19M	6344	6.34M	6494	6.49M	6654	6.65M	6814	6.81M	6984	6.98M	7154	7.15M	7324	7.32M
7504	7.50M	7684	7.68M	7874	7.87M	8064	8.06M	8254	8.25M	8454	8.45M	8664	8.66M	8874	8.87M	9094	9.09M	9314	9.31M
9534	9.53M	9764	9.76M	1005	10.0M														

Table 2 E-96 Series (0603, ±1%)

xxx (Code)	Ω	xxx (Code)	Ω	xxx (Code)	Ω	xxx (Code)	Ω	xxx (Code)	Ω	xxx (Code)	Ω	xxx (Code)	Ω	xxx (Code)	Ω	xxx (Code)	Ω	xxx (Code)	Ω
01	100	11	127	21	162	31	205	41	261	51	332	61	422	71	536	81	681	91	866
02	102	12	130	22	165	32	210	42	267	52	340	62	432	72	549	82	698	92	887
03	105	13	133	23	169	33	215	43	274	53	348	63	442	73	562	83	715	93	909
04	107	14	137	24	174	34	221	44	280	54	357	64	453	74	576	84	732	94	931
05	110	15	140	25	178	35	226	45	287	55	365	65	464	75	590	85	750	95	953
06	113	16	143	26	182	36	232	46	294	56	374	66	475	76	604	86	768	96	976
07	115	17	147	27	187	37	237	47	301	57	383	67	487	77	619	87	787		
08	118	18	150	28	191	38	243	48	309	58	392	68	499	78	634	88	806		
09	121	19	154	29	196	39	249	49	316	59	402	69	511	79	649	89	825		
10	124	20	158	30	200	40	255	50	324	60	412	70	523	80	665	90	845		

This table shows the first two digits for the three-digits EIA-96 part marking scheme.

The third character is the letter of multiplier:

Y=10⁻² X=10⁻¹ A=10⁰ B=10¹ C=10² D=10³ E=10⁴ F=10⁵