# **Standard Nominal Resistance Values:**

The below chart shows the nominal resistance value for each series. The values in the chart have been in this order using the approximate values that are based on the common ratios given in the following table:

Series	Common Ratio	Remarks
E-6	<sup>6</sup> √10 (1.46)	
E-12	<sup>12</sup> /10 (1.21)	Rounded off to a 2-digit figure
E-24	<sup>24</sup> √10 (1.10)	
E-96	<sup>96</sup> √10 (1.02)	Rounded off to a 3-digit figure

E-6	E-12	E-24	E-96	E-6	E-12	E-24	E-96	E-6	E-12	E-24	E-96							
			1.00				2.15				4.64							
		1.0	1.02			2.2	2.21			4.7	4.75							
		1.0	1.05				2.26				4.87							
	1.0		1.07		2.2		2.32		4.7		4.99							
	1.0		1.10		2.2		2.37		7.7		5.11							
		1.1	1.13			2.4	2.43			5.1	5.23							
		1.1	1.15			2.7	2.49			5.1	5.36							
1.0			1.18	2.2			2.55	4.7			5.49							
1.0			1.21	2.2			2.61	7.7			5.62							
		1.2	1.24			2.7	2.67			5.6	5.76							
		1.2	1.27			2.7	2.74			3.0	5.90							
	1.2		1.30		2.7		2.80		5.6		6.04							
	1.2		1.33		2.7		2.87			6.2	6.19							
		1.3	1.37			3.0	2.94				6.34							
		1.5	1.40				3.01				6.49							
			1.43				3.09				6.65							
			1.47		3.3		3.16				6.81							
		1.5	1.50					3.3	3.24			6.8	6.98					
		1.5	1.54			0.0	3.32			0.0	7.15							
	1.5		1.58				3.40		6.8		7.32							
	1.0		1.62		0.0		3.48				7.50							
		1.6			3.6	3.57			7.5	7.68								
		1.0	1.69										0.0	3.65			7.5	7.87
1.5			1.74	3.3			3.74	6.8			8.06							
1.0			1.78	0.0			3.83	0.0			8.25							
		1.8	1.82			3.9	3.92			8.2	8.45							
		1.0	1.87			0.0	4.02			0.2	8.66							
	1.8		1.91		3.9		4.12		8.2		8.87							
	1.0		1.96		0.0		4.22		0.2		9.09							
		2.0	2.00			4.3	4.32			9.1	9.31							
		2.0	2.05			7.0	4.42			9.1	9.53							
			2.10				4.53				9.76							

## **Standard Nominal Resistance Values:**

### E-24 series standard resistance values & the codes to be used in the part No. system (4 digits):

VALUE	CODE	VALUE	CODE	VALUE	CODE	VALUE	CODE	VALUE	CODE	VALUE	CODE	VALUE	CODE
1.0T	010J	10T	0100	100T	0101	1.0KT	0102	10KT	0103	100KT	0104	1.0MT	0105
1.1T	011J	11T	0110	110T	0111	1.1KT	0112	11KT	0113	110KT	0114	1.1MT	0115
1.2T	012J	12T	0120	120T	0121	1.2KT	0122	12KT	0123	120KT	0124	1.2MT	0125
1.3T	013J	13T	0130	130T	0131	1.3KT	0132	13KT	0133	130KT	0134	1.3MT	0135
1.5T	015J	15T	0150	150T	0151	1.5KT	0152	15KT	0153	150KT	0154	1.5MT	0155
1.6T	016J	16T	0160	160T	0161	1.6KT	0162	16KT	0163	160KT	0164	1.6MT	0165
1.8T	018J	18T	0180	180T	0181	1.8KT	0182	18KT	0183	180KT	0184	1.8MT	0185
2.0T	020J	20T	0200	200T	0201	2.0KT	0202	20KT	0203	200KT	0204	2.0MT	0205
2.2T	022J	22T	0220	220T	0221	2.2KT	0222	22KT	0223	220KT	0224	2.2MT	0225
2.4T	024J	24T	0240	240T	0241	2.4KT	0242	24KT	0243	240KT	0244	2.4MT	0245
2.7T	027J	27T	0270	270T	0271	2.7KT	0272	27KT	0273	270KT	0274	2.7MT	0275
3.0T	030J	30T	0300	300T	0301	3.0KT	0302	30KT	0303	300KT	0304	3.0MT	0305
3.3T	033J	33T	0330	330T	0331	3.3KT	0332	33KT	0333	330KT	0334	3.3MT	0335
3.6T	036J	<b>36</b> T	0360	360T	0361	3.6KT	0362	36KT	0363	360KT	0364	3.6MT	0365
3.9T	039J	39T	0390	390T	0391	3.9KT	0392	39KT	0393	390KT	0394	3.9MT	0395
4.3T	043J	43T	0430	430T	0431	4.3KT	0432	43KT	0433	430KT	0434	4.3MT	0435
4.7T	047J	47T	0470	470T	0471	4.7KT	0472	47KT	0473	470KT	0474	4.7MT	0475
5.1T	051J	51T	0510	510T	0511	5.1KT	0512	51KT	0513	510KT	0514	5.1MT	0515
5.6T	056J	56T	0560	560T	0561	5.6KT	0562	56KT	0563	560KT	0564	5.6MT	0565
6.2T	062J	62T	0620	620T	0621	6.2KT	0622	62KT	0623	620KT	0624	6.2MT	0625
6.8T	068J	68T	0680	680T	0681	6.8KT	0682	68KT	0683	680KT	0684	6.8MT	0685
7.5T	075J	<b>75</b> T	0750	750T	0751	7.5KT	0752	75KT	0753	750KT	0754	7.5MT	0755
8.2T	082J	82T	0820	820T	0821	8.2KT	0822	82KT	0823	820KT	0824	8.2MT	0825
9.1T	091J	91T	0910	910T	0911	9.1KT	0912	91KT	0913	910KT	0914	9.1MT	0915
												10MT	0106

### E-96 series standard resistance values & the codes to be used in the part No. system (4 digits):

VALUE	CODE														
10.0T	100J	17.8T	178J	31.6T	316J	56.2T	562J	100T	1000	178T	1780	316T	3160	562T	5620
10.2T	102J	18.2T	182J	32.4T	324J	57.6T	576J	102T	1020	182T	1820	324T	3240	576T	5760
10.5T	105J	18.7T	187J	33.2T	332J	59.0T	590J	105T	1050	187T	1870	332T	3320	590T	5900
10.7T	107J	19.1T	191J	34.0T	340J	60.4T	604J	107T	1070	191T	1910	340T	3400	604T	6040
11.0T	110J	19.6T	196J	34.8T	348J	61.9T	619J	110T	1100	196T	1960	348T	3480	619T	6190
11.3T	113J	20.0T	200J	35.7T	357J	63.4T	634J	113T	1130	200T	2000	357T	3570	634T	6340
11.5T	115J	20.5T	205J	36.5T	365J	64.9T	649J	115T	1150	205T	2050	365T	3650	649T	6490
11.8T	118J	21.0T	210J	37.4T	374J	66.5T	665J	118T	1180	210T	2100	374T	3740	665T	6650
12.1T	121J	21.5T	215J	38.3T	383J	68.1T	681J	121T	1210	215T	2150	383T	3830	681T	6810
12.4T	124J	22.1T	221J	39.2T	392J	69.8T	698J	124T	1240	221T	2210	392T	3920	698T	6980
12.7T	127J	22.6T	226J	40.2T	402J	71.5T	715J	127T	1270	226T	2260	402T	4020	715T	7150
13.0T	130J	23.2T	232J	41.2T	412J	73.2T	732J	130T	1300	232T	2320	412T	4120	732T	7320
13.3T	133J	23.7T	237J	42.2T	422J	75.0T	750J	133T	1330	237T	2370	422T	4220	750T	7500
13.7T	137J	24.3T	243J	43.2T	432J	76.8T	768J	137T	1370	243T	2430	432T	4320	768T	7680
14.0T	140J	24.9T	249J	44.2T	442J	78.7T	787J	140T	1400	249T	2490	442T	4420	787T	7870
14.3T	143J	25.5T	255J	45.3T	453J	80.6T	806J	143T	1430	255T	2550	453T	4530	806T	8060
14.7T	147J	26.1T	261J	46.4T	464J	82.5T	825J	147T	1470	261T	2610	464T	4640	825T	8250
15.0T	150J	26.7T	267J	47.5T	475J	84.5T	845J	150T	1500	267T	2670	475T	4750	845T	8450
15.4T	154J	27.4T	274J	48.7T	487J	86.6T	866J	154T	1540	274T	2740	487T	4870	866T	8660
15.8T	158J	28.0T	280J	49.9T	499J	88.7T	887J	158T	1580	280T	2800	499T	4990	887T	8870
16.2T	162J	28.7T	287J	51.1T	511J	90.9T	909J	162T	1620	287T	2870	511T	5110	909T	9090
16.5T	165J	29.4T	294J	52.3T	523J	93.1T	931J	165T	1650	294T	2940	523T	5230	931T	9310
16.9T	169J	30.1T	301J	53.6T	536J	95.3T	953J	169T	1690	301T	3010	536T	5360	953T	9530
17.4T	174J	30.9T	309J	54.9T	549J	97.6T	976J	174T	1740	309T	3090	549T	5490	976T	9760

# **Standard Nominal Resistance Values:**

VALUE	CODE														
1.00K	1001	2.37K	2371	5.62K	5621	13.3K	1332	31.6K	3162	75.0K	7502	178K	1783	422K	4223
1.02K	1021	2.43K	2431	5.76K	5761	13.7K	1372	32.4K	3242	76.8K	7682	182K	1823	432K	4323
1.05K	1051	2.49K	2491	5.90K	5901	14.0K	1402	33.2K	3322	78.7K	7872	187K	1873	442K	4423
1.07K	1071	2.55K	2551	6.04K	6041	14.3K	1432	34.0K	3402	80.6K	8062	191K	1913	453K	4533
1.10K	1101	2.61K	2611	6.19K	6191	14.7K	1472	34.8K	3482	82.5K	8252	196K	1963	464K	4643
1.13K	1131	2.67K	2671	6.34K	6341	15.0K	1502	35.7K	3572	84.5K	8452	200K	2003	475K	4753
1.15K	1151	2.74K	2741	6.49K	6491	15.4K	1542	36.5K	3652	86.6K	8662	205K	2053	487K	4873
1.18K	1181	2.80K	2801	6.65K	6651	15.8K	1582	37.4K	3742	88.7K	8872	210K	2103	499K	4993
1.21K	1211	2.87K	2871	6.81K	6811	16.2K	1622	38.3K	3832	90.9K	9092	215K	2153	511K	5113
1.24K	1241	2.94K	2941	6.98K	6981	16.5K	1652	39.2K	3922	93.1K	9312	221K	2213	523K	5233
1.27K	1271	3.01K	3011	7.15K	7151	16.9K	1692	40.2K	4022	95.3K	9532	226K	2263	536K	5363
1.30K	1301	3.09K	3091	7.32K	7321	17.4K	1742	41.2K	4122	97.6K	9762	232K	2323	549K	5493
1.33K	1331	3.16K	3161	7.50K	7501	17.8K	1782	42.2K	4222	100K	1003	237K	2373	562K	5623
1.37K	1371	3.24K	3241	7.68K	7681	18.2K	1822	43.2K	4322	102K	1023	243K	2433	576K	5763
1.40K	1401	3.32K	3321	7.87K	7871	18.7K	1872	44.2K	4422	105K	1053	249K	2493	590K	5903
1.43K	1431	3.40K	3401	8.06K	8061	19.1K	1912	45.3K	4532	107K	1073	255K	2553	604K	6043
1.47K	1471	3.48K	3481	8.25K	8251	19.6K	1962	46.4K	4642	110K	1103	261K	2613	619K	6193
1.50K	1501	3.57K	3571	8.45K	8451	20.0K	2002	47.5K	4752	113K	1133	267K	2673	634K	6343
1.54K	1541	3.65K	3651	8.66K	8661	20.5K	2052	48.7K	4872	115K	1153	274K	2743	649K	6493
1.58K	1581	3.74K	3741	8.87K	8871	21.0K	2102	49.9K	4992	118K	1183	280K	2803	665K	6653
1.62K	1621	3.83K	3831	9.09K	9091	21.5K	2152	51.1K	5112	121K	1213	287K	2873	681K	6813
1.65K	1651	3.92K	3921	9.31K	9311	22.1K	2212	52.3K	5232	124K	1243	294K	2943	698K	6983
1.69K	1691	4.02K	4021	9.53K	9531	22.6K	2262	53.6K	5362	127K	1273	301K	3013	715K	7153
1.74K	1741	4.12K	4121	9.76K	9761	23.2K	2322	54.9K	5492	130K	1303	309K	3093	732K	7323
1.78K	1781	4.22K	4221	10.0K	1002	23.7K	2372	56.2K	5622	133K	1333	316K	3163	750K	7503
1.82K	1821	4.32K	4321	10.2K	1022	24.3K	2432	57.6K	5762	137K	1373	324K	3243	768K	7683
1.87K	1871	4.42K	4421	10.5K	1052	24.9K	2492	59.0K	5902	140K	1403	332K	3323	787K	7873
1.91K	1911	4.53K	4531	10.7K	1072	25.5K	2552	60.4K	6042	143K	1433	340K	3403	806K	8063
1.96K	1961	4.64K	4641	11.0K	1102	26.1K	2612	61.9K	6192	147K	1473	348K	3483	825K	8253
2.00K	2001	4.75K	4751	11.3K	1132	26.7K	2672	63.4K	6342	150K	1503	357K	3573	845K	8453
2.05K	2051	4.87K	4871	11.5K	1152	27.4K	2742	64.9K	6492	154K	1543	365K	3653	866K	8663
2.10K	2101	4.99K	4991	11.8K	1182	28.0K	2802	66.5K	6652	158K	1583	374K	3743	887K	8873
2.15K	2151	5.11K	5111	12.1K	1212	28.7K	2872	68.1K	6812	162K	1623	383K	3833	909K	9093
2.21K	2211	5.23K	5231	12.4K	1242	29.4K	2942	69.8K	6982	165K	1653	392K	3923	931K	9313
2.26K	2261	5.36K	5361	12.7K	1272	30.1K	3012	71.5K	7152	169K	1693	402K	4023	953K	9533
2.32K	2321	5.49K	5491	13.0K	1302	30.9K	3092	73.2K	7322	174K	1743	412K	4123	976K	9763
														1M	1004

# Standard Color Code System:

#### **Four Band Color Code**



 4th Band

 Red
 =  $\pm 2\%$  

 Gold
 =  $\pm 5\%$  

 Silver
 =  $\pm 10\%$ 

#### 1234

1 <sup>st</sup> Band	
Black	= 0
Brown	= 1
Red	= 2
Orange	= 3
Yellow	= 4
Green	= 5
Blue	= 6
Violet	= 7
Grey	= 8
White	= 9





### **Five Band Color Code**



12345

5 <sup>th</sup> Band	
Violet	$= \pm 0.1\%$
Blue	$= \pm 0.25\%$
Green	$= \pm 0.5\%$
Brown	= ±1%

1 <sup>st</sup> Band	
Black	= 0
Brown	= 1
Red	= 2
Orange	= 3
Yellow	= 4
Green	= 5
Blue	= 6
Violet	= 7
Grey	= 8
White	= 9



3 <sup>rd</sup> Band	
Black	= 0
Brown	= 1
Red	= 2
Orange	= 3
Yellow	= 4
Green	= 5
Blue	= 6
Violet	= 7
Grey	= 8
White	= 9
	•

4 <sup>th</sup> Band	
Black	= Multiply by 1 (10°)
Brown	= Multiply by 10 (10¹)
Red	= Multiply by 100 (10 <sup>2</sup> )
Orange	= Multiply by 1,000 (10 <sup>3</sup> )
Yellow	= Multiply by 10,000 (10 <sup>4</sup> )
Green	= Multiply by 100,000 (10 <sup>5</sup> )
Blue	= Multiply by 1,000,000 (10 <sup>6</sup> )
Violet	= Multiply by $10,000,000 (10^7)$
Gold	= Multiply by 0.1 (10 <sup>-1</sup> )
Silver	= Multiply by 0.01 (10 <sup>-2</sup> )