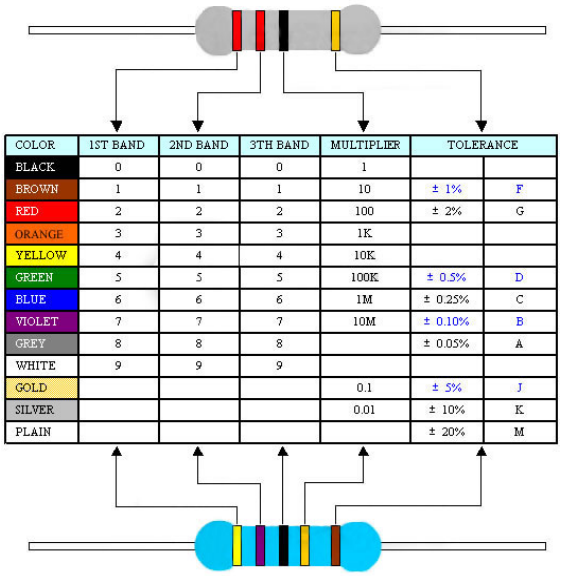
GENERAL SPECIFICATION OF RESISTORS

FROM RESISTOR COLOR CODE



E6, E12, E24

COLOR	1ST BAND	2ND BAND	3TH BAND	MULTIPLIER	TOLERANCE	
BLACK	0	0	0	1		
BROWN	1	1	1	10	± 1%	F
RED	2	2	2	100	± 2%	G
ORANGE	3	3	3	1K		
YELLOW	4	4	4	10K		
GREEN	5	5	5	100K	± 0.5%	D
BLUE	6	6	6	1M	± 0.25%	C
VIOLET	7	7	7	10M	± 0.10%	B
GREY	8	8	8		± 0.05%	A
WHITE	9	9	9			
GOLD				0.1	± 5%	J
SILVER				0.01	± 10%	K
PLAIN					± 20%	M

E24, E96

Temperature Coefficent

Unit: ppm/° C

Symbo1	S	T	H	E	C	K	J	L
T.C.R.	±5	±10	±15	±25	±50	±100	±150	±200

Resistance Tolerance

Unit: %

Symbo1	T	O	A	B	C	D	F	G	J	K	M
Resistance Tolerance	±0.01	±0.02	±0.05	±0.1	±0.25	±0.5	±1	±2	±5	±10	±20

HOW TO APPLY RESISTORS CORRECTLY

1. The characteristics of resistor have relations to Temperature Moisture and Voltage.
2. The rating of resistor is specified on the basis of Temperature.
3. The power rating of resistor is all specified with a Direct-Current (D.C.) continuous working voitage or Sine-Wave root-mean-square (r m s) continuous working voitage at commercial-line frequency.
4. The tests regarding characteristics of resistor. Is principally specified on the basis of moisture.
5. Maximum rated voltage and maximum overload voltage are limited for each stvle of resistor.
   (1) Generally, Rated Voltage E= $\sqrt{P.R}$ Where, E=Volt, P=Watt,R= ohm.
   (2) Generally, Overload Voltage Et= E= $\sqrt{P.R}$ X2.5 ,Application time= 5 Secs.
   Note: Max. rated and Max. overload voltage are specified in each specification, so if the voltage value computed, is over than specified voltage value the specified value should be applied to resistor.
6. In the complicated or high density circuit, it is recommended that the wattage or ohmic values of resistor should have a large redundancy form a view point of reliability.
7. It is necessary that the handling or wiring of resistor to the circuit,is carefully and please do not inflict any stress to resistor with over,heating application.
8. To rise the reliability of resistor, it is better to prefer resistor with uniform quality than taking resistor met with severe specification.
9. To rise the stability of resistor, it is very important to take resistor met with circuit conditions and is also economical not to have unreasonable design from a point of pricing of resistor.
10. Generally, failure of resistor takes a concentrated trend in the impulse circuit with complicated pulse wave form or LC circuit generated high voltage with transient phenomena, therefore, it is very important for designers to consider these conditions in the circuit design,if the resistor is applied in these circuit.

±2% E24	,±5% E48	±1% E96	±0.5% E192
100	100	100	100
			101
		102	102
			104
	105	105	105
			106
		107	107
			109
110	110	110	110
			111
		113	113
			114
	115	115	115
			117
		118	118
120			120
	121	121	121
			123
		124	124
			126
	127	127	127
			129
130		130	130
			132
	133	133	133
			135
		137	137
			138
	140	140	140
			142
		143	143
			145
	147	147	147
			149
150		150	150
			152
	154	154	154
			156
		158	158
			160
160			
	162	162	162
			164
		165	165
			167
	169	169	169
			172
		174	174
			176
	178	178	178
180			180
		182	182
			184
	187	187	187
			189
		191	191
			193
	196	196	196
			198
200		200	200
			203
	205	205	205
			208
		210	210
			213
	215	215	215
220			218
		221	221
			223
	226	226	226
			229
		232	232
			234
	237	237	237
240			240
		243	243
			246
	249	249	249
			252
		255	255
			258
	261	261	261
			264
		267	267
270			
			271
	274	274	274
			277
		280	280
			284
	287	287	287
			291
		294	294
			298
300			
	301	301	301
			305
		309	309
			312
	316	316	316
			320
		324	324
			328

±2% E24	,±5% E48	±1% E96	±0.5% E192
330			
	332	332	332
			336
		340	340
			344
	348	348	348
			352
		357	357
360			
			361
	365	365	365
			370
		374	374
			379
	383	383	383
			388
390			
		392	392
			397
	402	402	402
			407
		412	412
			417
	422	422	422
			427
430			
		432	432
			437
	442	442	442
			448
		453	453
			459
	464	464	464
470			470
		475	475
			481
	487	487	487
			493
		499	499
			505
510			
	511	511	511
			517
		523	523
			530
	536	536	536
			542
		549	549
			556
560			
	562	562	562
			569
		576	576
			583
	590	590	590
			597
		604	604
			612
	619	619	619
620			
			626
		634	634
			642
	649	649	649
			657
		665	665
			673
680			
	681	681	681
			690
		698	698
			706
	715	715	715
			723
		732	732
			741
	750	750	750
			759
		768	768
			777
	787	787	787
			796
		806	806
			816
820			
	825	825	825
			835
		845	845
			856
	866	866	866
			876
		887	887
			898
	909	909	909
910			
			920
		931	931
			942
	953	953	953
			965
		976	976
			988

CINETECH
SYMBOL OF QUALITY