



Vintage Radio Repair Reference

Courtesy of the Delaware Valley Historic Radio Club

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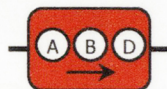


Old Style Capacitor Color Codes

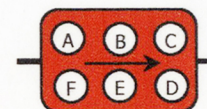
	Type	Digits	Multiplier	Tolerance
Black	Mica	0	1	± 20%
Brown		1	10	± 1%
Red		2	100	± 2%
Orange		3	1K	± 3%
Yellow		4	10K	± 4%
Green		5	100K	± 5%
Blue		6	1M	
Violet		7	10M	
Grey		8	100M	
White	Mica	9	1000M	
Gold			.1	
Silver	Paper		.01	± 10%
None				± 20%



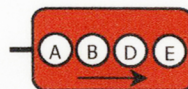
1, 2 1st and 2nd digits
3 Multiplier
4 Tolerance
5, 6 1st and 2nd digits of voltage in 100s of volts (optional)



A, B 1st and 2nd digits
D Multiplier



A Type
B, C 1st and 2nd digits
D Multiplier
E Tolerance
F Class



A, B 1st and 2nd digits
D Multiplier
E Tolerance

µF – nF - µµF/pF Capacitor Conversion and Modern Markings

µF	nF	µµF/pF	Mark	µF	nF	µµF/pF	Mark	µF	nF	µµF/pF	Mark	µF	nF	µµF/pF	Mark	µF	nF	µµF/pF	Mark	µF	nF	µµF/pF
.000001	.001	1	1 or 1R0	.000039	.039	39	39 or 390	.00047	.47	470	471	.0050	5.0	5,000	502	.20	200	200,000	204	4.7	4,700	4,700,000
.000002	.002	2	2 or 2R0	.000040	.040	40	40 or 400	.00050	.50	500	501	.0056	5.6	5,600	562	.22	220	220,000	224	5.6	5,600	5,600,000
.000003	.003	3	3 or 3R0	.000047	.047	47	47 or 470	.00056	.56	560	561	.0068	6.8	6,800	682	.25	250	250,000	254	6.8	6,800	6,800,000
.000004	.004	4	4 or 4R0	.000050	.050	50	50 or 500	.00060	.60	600	601	.0082	8.2	8,200	822	.30	300	300,000	304	8.2	8,200	8,200,000
.000005	.005	5	5 or 5R0	.000056	.056	56	56 or 560	.00068	.68	680	681	.0088	8.8	8,800	882	.33	330	330,000	334	10	10,000	10,000,000
.000006	.006	6	6 or 6R0	.000060	.060	60	60 or 600	.00070	.70	700	701	.010	10	10,000	103	.40	400	400,000	404	12	12,000	12,000,000
.000007	.007	7	7 or 7R0	.000068	.068	68	68 or 680	.00080	.80	800	801	.015	15	15,000	153	.47	470	470,000	474	15	15,000	15,000,000
.000008	.008	8	8 or 8R0	.000070	.070	70	70 or 700	.0010	1.0	1,000	102	.020	20	20,000	203	.50	500	500,000	504	20	20,000	20,000,000
.000009	.009	9	9 or 9R0	.000080	.080	80	80 or 800	.0012	1.2	1,200	122	.022	22	22,000	223	.56	560	560,000	564	22	22,000	22,000,000
.000010	.010	10	10 or 100	.000082	.082	82	82 or 820	.0015	1.5	1,500	152	.025	25	25,000	253	.60	600	600,000	604	25	25,000	25,000,000
.000012	.012	12	12 or 120	.00010	.10	100	101	.0018	1.8	1,800	182	.030	30	30,000	303	.68	680	680,000	684	30	30,000	30,000,000
.000015	.015	15	15 or 150	.00012	.12	120	121	.0020	2.0	2,000	202	.040	40	40,000	403	.82	820	820,000	824	40	40,000	40,000,000
.000018	.018	18	18 or 180	.00015	.15	150	151	.0022	2.2	2,200	222	.047	47	47,000	473	.88	880	880,000	884	47	47,000	47,000,000
.000020	.020	20	20 or 200	.00018	.18	180	181	.0024	2.4	2,400	242	.050	50	50,000	503	1.0	1,000	1,000,000	105	50	50,000	50,000,000
.000022	.022	22	22 or 220	.00020	.20	200	201	.0025	2.5	2,500	252	.056	56	56,000	563	1.5	1,500	1,500,000		60	60,000	60,000,000
.000024	.024	24	24 or 240	.00022	.22	220	221	.0027	2.7	2,700	272	.060	60	60,000	603	2.0	2,000	2,000,000		68	68,000	68,000,000
.000025	.025	25	25 or 250	.00025	.25	250	251	.0030	3.0	3,000	302	.068	68	68,000	683	2.2	2,200	2,200,000		80	80,000	80,000,000
.000027	.027	27	27 or 270	.00027	.27	270	271	.0033	3.3	3,300	332	.070	70	70,000	703	2.7	2,700	2,700,000		100	100,000	100,000,000
.000030	.030	30	30 or 300	.00030	.30	300	301	.0039	3.9	3,900	392	.082	82	82,000	823	3.0	3,000	3,000,000		150	150,000	150,000,000
.000033	.033	33	33 or 330	.00033	.33	330	331	.0040	4.0	4,000	402	.10	100	100,000	104	3.3	3,300	3,300,000		200	200,000	200,000,000
.000036	.036	36	36 or 360	.00039	.39	390	391	.0047	4.7	4,700	472	.15	150	150,000	154	4.0	4,000	4,000,000				



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Body-End-Dot and 3/4 Band Resistors					Wattage Rating by Physical Size for Older Resistors		5 Band Resistors					
	1 st Band (Body)	2 nd Band (End)	3 rd Band (Dot) Multiplier	4 th Band Tolerance				1 st Band	2 nd Band	3 rd Band	4 th Band Multiplier	5 th Band Tolerance
Black	0	0	1Ω				Black	0	0	0	1Ω	
Brown	1	1	10Ω				Brown	1	1	1	10Ω	± 1%
Red	2	2	100Ω				Red	2	2	2	100Ω	± 2%
Orange	3	3	1KΩ				Orange	3	3	3	1KΩ	
Yellow	4	4	10KΩ				Yellow	4	4	4	10KΩ	
Green	5	5	100KΩ				Green	5	5	5	100KΩ	± .5%
Blue	6	6	1MΩ				Blue	6	6	6	1MΩ	± .25%
Violet	7	7	10MΩ				Violet	7	7	7	10MΩ	± .1%
Grey	8	8					Grey	8	8	8		± .05%
White	9	9					White	9	9	9		
Gold				± 5%			Gold					± 5%
Silver				± 10%			Silver					± 10%
-none-				± 20%			-none-					

Common Radio Dial Lamps									
#	Volts	Amps	Type	Bead	#	Volts	Amps	Type	Bead
40	6-8	.12	T-3 ¼ Screw	Brown	46	6.3	.25	T-3 ¼ Screw	Blue
41	2.5	.5	T-3 ¼ Screw	White	47	6.3	.15	T-3 ¼ Bayonet	Brown
42	3.2	.5	T-3 ¼ Screw	Green	48	2.0	.06	T-3 ¼ Screw	Pink
43	2.5	.5	T-3 ¼ Bayonet	White	49	2.0	.06	T-3 ¼ Bayonet	Pink
44	6.3	.25	T-3 ¼ Bayonet	Blue	50	7.5	.2	G-3 ½ Screw	White
45	3.2	.5	T-3 ¼ Bayonet	White (GE, Sylvania)	51	7.5	.2	G-3 ½ Bayonet	White
				Green (Raytheon, Tung-Sol)	55	6.5	.4	G-4 ½ Bayonet	White

