

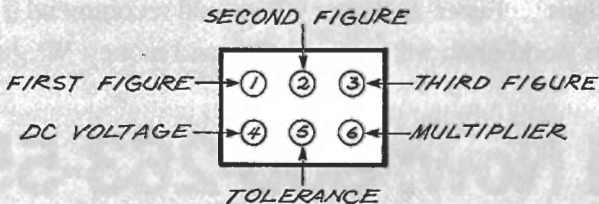
Capacitor Dot Code

Q *repair* TVs and radios and have occasionally come across capacitors that use a dot code to indicate their value. I've been unable to find a listing of these dot codes in any of the data books I have and I'm not even sure if this method of marking capacitor values is used any longer. How do you read the capacitor dot codes?—A. Brownstone, Philadelphia, PA

A I haven't seen dot codes used in years but fortunately I never throw anything out. This information was sent by W. Saliba of Middleton, MA and you should save it because I don't know where else you'll be able to find it.

There were two dot codes used: a three-dot and a six-dot system. Since the former is only a subset of the latter, I'm listing only the six-dot system. The EIA introduced this system for mica capacitors and if you see only three dots, the capacitor is understood to be rated at 500 volts DC with a +/- 20% tolerance.

The complete dot code is shown in Fig. 1. You'll most likely see this kind of coding only in old radios and other vintage equipment. A similar marking system was also used for inductors but I haven't been able to find it anywhere.



<i>COLOR</i>	<i>FIGURE</i>	<i>MULTIPLIER</i>	<i>VOLTS</i>	<i>TOLERANCE</i>
<i>BLACK</i>	0	1	—	—
<i>BROWN</i>	1	10	100	1%
<i>RED</i>	2	100	200	2%
<i>ORANGE</i>	3	1000	300	3%
<i>YELLOW</i>	4	10,000	400	4%
<i>GREEN</i>	5	100,000	500	—
<i>BLUE</i>	6	1,000,000	600	6%
<i>VIOLET</i>	7	10,000,000	700	7%
<i>GRAY</i>	8	100,000,000	800	8%
<i>WHITE</i>	9	1,000,000,000	900	9%
<i>GOLD</i>	—	0.1	1,000	5%
<i>SILVER</i>	—	0.01	2,000	10%
<i>NO COLOR</i>	—	—	500	20%

FIG. 1—CAPACITOR DOT-CODE SYSTEM. If you see only three dots, the capacitor is understood to be rated at 500 volts DC with a $\pm 20\%$ tolerance.