

INDUCTOR COLOR GUIDE

Result Is In μH

4-BAND-CODE  270 $\mu\text{H} \pm 5\%$

COLOR	1st BAND	2nd BAND	MULTIPLIER	TOLERANCE
BLACK	0	0	1	$\pm 20\%$
BROWN	1	1	10	Military $\pm 1\%$
RED	2	2	100	Military $\pm 2\%$
ORANGE	3	3	1,000	Military $\pm 3\%$
YELLOW	4	4	10,000	Military $\pm 4\%$
GREEN	5	5		
BLUE	6	6		
VIOLET	7	7		
GREY	8	8		
WHITE	9	9		
NONE				Military $\pm 20\%$
GOLD			0.1 / Mil. Dec. Pt.	Both $\pm 5\%$
SILVER			0.01	Both $\pm 10\%$

Military Identifier



6.8 $\mu\text{H} \pm 10\%$
MILITARY CODE


Electronix Express / RSR
<http://www.elexp.com>

CAPACITOR GUIDE

The Result of Capacitor Code is Given in pF

1st Digit Of Value 2nd Digit Of Value Multiplier Tolerance ($\pm\%$)

474 =
47 x 10,000 pF
= .47 μF

 474M
200 Max. Voltage

F = 1%
G = 2%
J = 5%
K = 10%
M = 20%
Z = +80%/-20%

On some capacitors the value is shown as a straight number (4.7pF). On others the decimal point is replaced with the first letter of the prefix (4p7 = 4.7pF).

Prefix	Abbr.	Multiplier
pico	p	10^{-12}
nano	n	10^{-9}
micro	μ	10^{-6}

1000 pico = 1 nano
1 nano = .001 micro
1000 nano = 1 micro

EXAMPLES:

223J = 22 x 10³pF = 22nF = 0.022 μF 5%

151K = 15 x 10¹pF = 150pF 10%

1-800-972-2225

In NJ 732-381-8020

COMMONLY USED CAPACITOR VALUES

pF	pF	μF	μF	μF	μF	μF	μF	μF
10	100	.001	.01	.1	1	10	100	1000
22	220	.0022	.022	.22	2.2	22	220	2200
33	330	.0033	.033	.33	3.3	33	330	3300
47	470	.0047	.047	.47	4.7	47	470	4700

COMMONLY USED INDUCTOR VALUES

μH	μH	μH	mH	mH	mH	mH
1.0	10	100	1	10	100	1000
2.2	22	220	2.2	22	220	
3.3	33	330	3.3	33	330	
4.7	47	470	4.7	47	470	

REACTANCE FORMULAS

$$X_C = \frac{1}{2\pi f C} \quad C = \frac{1}{2\pi f X_C}$$

$$X_L = 2\pi f L \quad L = \frac{X_L}{2\pi f}$$

IMPEDANCE FORMULAS

$$Z = \sqrt{R^2 + (X_L - X_C)^2}$$

(For Series Circuit)

$$Z = \frac{R X}{\sqrt{R^2 + X^2}}$$

(For R and X in Parallel)

RESONANT FREQUENCY FORMULAS

$$f = \frac{1}{2\pi\sqrt{LC}} = \frac{159.2^{**}}{\sqrt{LC}}$$

$$L = \frac{1}{4\pi^2 f^2 C} = \frac{25,330^{**}}{f^2 C}$$

$$C = \frac{1}{4\pi^2 f^2 L} = \frac{25,330^{**}}{f^2 L}$$

** In these formulas f is in KHz and L and C are in micro units.

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REFERENCE GUIDE

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