



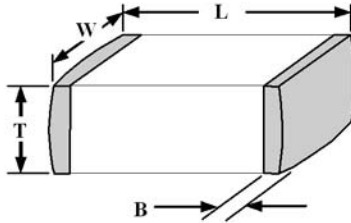
FUNCTIONAL APPLICATIONS

DC Blocking
Amplifier Matching Networks
VCO Frequency Stabilization
Filtering and Diplexers
Antenna Matching

BENEFITS

Stable TC
EIA 0603 Case Size
SMD Compatibility
-55 to +125 °C Operating Range

Mechanical Specifications



Product Code	Body Dimensions			Termination Code, Band Dimension and Material		
	Length (L)	Width (W)	Thickness (T)	Code	Band (B)	Material
C06	.063" ± .009" (1.6 ± 0.23)	.031" ± .008" (0.80 ± 0.20)	.031" Max (0.80) Max.	Z	.010" + .010" - .005" (.254 + .254 - .127)	Ni Barrier, Tin Plate
				S		Ni Barrier, Au Flash
				P		AgPd Termination
				U		Ni Barrier, Solder Plate

Laser Markings available in Horizontal orientation only, Code L.
The MS material system is available in Z and U terminations only.
U termination is not available in the UL material system.

Capacitance Table

C06 Capacitance Values															
CAP CODE	CAP (pF)	Cap Tol.	Rated WVDC	CAP CODE	CAP (pF)	Cap Tol.	Rated WVDC	CAP CODE	CAP (pF)	Cap Tol.	Rated WVDC	CAP CODE	CAP (pF)	Cap Tol.	Rated WVDC
0R1	0.1	A B C D	250V Code 9	0R9	0.9	A B C D	250V Code 9	3R9	3.9	A B C D	250V Code 9	240	24	F G J K	250V* Code 9
R15	0.15			R95	0.95			4R3	4.3			270	27		
0R2	0.2			1R0	1.0			4R7	4.7			300	30		
R25	0.25			1R1	1.1			5R1	5.1			330	33		
0R3	0.3			1R2	1.2			5R6	5.6			360	36		
R35	0.35			1R3	1.3			6R2	6.2			390	39		
0R4	0.4			1R5	1.5			6R8	6.8			430	43		
R45	0.45			1R6	1.6			7R5	7.5			470	47		
0R5	0.5			1R8	1.8			8R2	8.2			510	51		
R55	0.55			2R0	2.0			9R1	9.1			560	56		
0R6	0.6			2R2	2.2			100	10			620	62		
R65	0.65			2R4	2.4			120	12	680		68			
0R7	0.7			2R7	2.7			150	15	750		75			
R75	0.75			3R0	3.0			180	18	820		82			
0R8	0.8			3R3	3.3			200	20	101		100			
R85	0.85			3R6	3.6			220	22						

*MS capacitors in the cap range 36pF to 47pF are 150V rated, Code 8.

Cap values in **red** are available in MS only, in **blue** available in UL, CF, and AH only.

Electrical Specifications

Dielectric Material Code	Temperature Coefficient (ppm/°C Maximum)	Dissipation Factor (% @ 1MHz Maximum)	Dielectric Withstanding Voltage		Insulation Resistance (MΩ Minimum)		Aging	Piezoelectric Effects	Dielectric Absorption
			Voltage Rating (Volts)	DWV (Volts)	@ +25°C	@ +125°C			
CF	0 ± 15	0.05	250	625	10 ⁶	10 ⁵	None	None	None
UL	0 ± 30	0.05	250	625	10 ⁵	10 ⁴			
MS	0 ± 30	0.05	250 100 50	625 250 125	10 ⁵	10 ⁴			

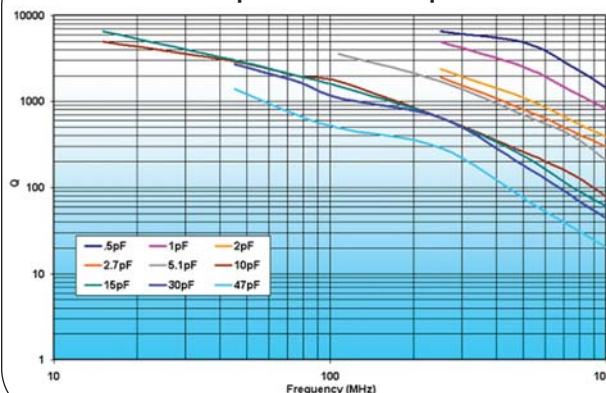
Tolerance Codes	
Code	Tolerance
A	± 0.05pF
B	± 0.10pF
C	± 0.25pF
F	± 1%
G	± 2%
J	± 5%
K	± 10%



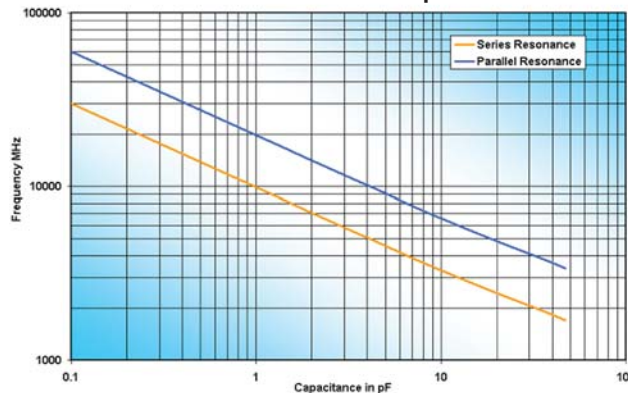
C06 0603



Q vs. Capacitance at Frequencies



C06 Resonance vs. Capacitance



C06 ENGINEERING KIT

20 Pieces Each of 23 Values

CODE	CAP
0R3	0.3pF
0R5	0.5pF
1R0	1.0pF
1R2	1.2pF
1R5	1.5pF
1R8	1.8pF
2R0	2.0pF
2R2	2.2pF
2R7	2.7pF
3R3	3.3pF
3R9	3.9pF
4R7	4.7pF
5R6	5.6pF
6R8	6.8pF
100	10pF
120	12pF
150	15pF
180	18pF
220	22pF
270	27pF
330	33pF
470	47pF
560	56pF
680	68pF
820	82pF
101	100pF

C08BLBB1X5UX 2400pF Block

C06 DESIGNER KIT

KIT C	KIT D	KIT E
0R1	1R2	6R8
0R2	1R5	8R2
0R3	1R8	9R1
0R4	2R2	100
0R5	2R7	120
0R6	3R3	150
0R7	3R9	220
0R8	4R7	270
0R9	5R1	360
1R0	5R6	470



DLI reserves the right to substitute values as required. Customer may request particular cap value and material for sample kit to prove designs.

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Knowles:

<u>C06UL0R9D-9ZN-X1T</u>	<u>C06UL300K-9ZN-X1T</u>	<u>C06UL5R6D-9ZN-X1T</u>	<u>C06UL1R0D-9ZN-X1T</u>	<u>C06UL0R2D-9ZN-X1T</u>
<u>C06UL3R9D-9ZN-X1T</u>	<u>C06UL4R7D-9ZN-X1T</u>	<u>C06UL0R8D-9ZN-X1T</u>	<u>C06UL0R3D-9ZN-X1T</u>	<u>C06UL6R8D-9ZN-X1T</u>
<u>C06UL3R3D-9ZN-X1T</u>	<u>C06UL330K-9ZN-X1T</u>	<u>C06UL0R6D-9ZN-X1T</u>	<u>C06UL1R5D-9ZN-X1T</u>	<u>C06UL2R7D-9ZN-X1T</u>
<u>C06UL0R5D-9ZN-X1T</u>	<u>C06UL0R4D-9ZN-X1T</u>	<u>C06UL0R7D-9ZN-X1T</u>	<u>C06UL120K-9ZN-X1T</u>	<u>C06UL1R2D-9ZN-X1T</u>
<u>C06UL2R0D-9ZN-X1T</u>	<u>C06UL9R1D-9ZN-X1T</u>			