

RF/Microwave Automotive C0G (NP0) Capacitors (RoHS), AEC Q200 Qualified



Ultra Low ESR, “U” Series, C0G (NP0) Chip Capacitors

GENERAL INFORMATION

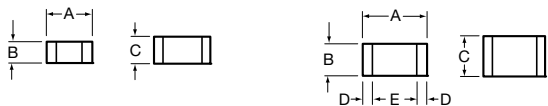
Automotive “U” Series capacitors are C0G (NP0) chip capacitors specially designed for “Ultra” low ESR for applications in the automotive market. Max ESR and effective capacitance

are met on each value producing lot to lot uniformity. Sizes available are EIA chip sizes 0402 and 0603.

DIMENSIONS: inches (millimeters)

0402

0603



					inches (mm)
Size	A	B	C	D	E
0402	0.039±0.004 (1.00±0.1)	0.020±0.004 (0.50±0.1)	0.024 (0.6) max	N/A	N/A
0603	0.060±0.010 (1.52±0.25)	0.030±0.010 (0.76±0.25)	0.036 (0.91) max	0.010±0.005 (0.25±0.13)	0.030 (0.76) min

HOW TO ORDER

0402

Case Size
0402
0603

1

Voltage Code
5 = 50V
1 = 100V
2 = 200V

U

Dielectric =
Ultra Low
ESR

100

Capacitance
EIA Capacitance Code in pF.
First two digits = significant figures
or “R” for decimal place.
Third digit = number of zeros or
after “R” significant figures.

J

Capacitance
Tolerance
Code
B = ±0.1pF
C = ±0.25pF
D = ±0.5pF
F = ±1%
G = ±2%
J = ±5%
K = ±10%
M = ±20%

4

Failure Rate
Code
4 = Automotive

T

Termination
T = Plated Ni and Sn

2

Packaging
Code
2 = 7" Reel
4 = 13" Reel
9 = Bulk

A

Special Code
A = Standard

ELECTRICAL CHARACTERISTICS

Capacitance Values and Tolerances:

Size 0402 - 0.2 pF to 22 pF @ 1 MHz
Size 0603 - 1.0 pF to 100 pF @ 1 MHz

Temperature Coefficient of Capacitance (TC):

0±30 ppm/°C (-55° to +125°C)

Insulation Resistance (IR):

10¹² Ω min. @ 25°C and rated WVDC
10¹¹ Ω min. @ 125°C and rated WVDC

Working Voltage (WVDC):

Size Working Voltage
0402 - 100, 50, 25 WVDC
0603 - 200, 100, 50 WVDC

Dielectric Working Voltage (DWV):

250% of rated WVDC

Equivalent Series Resistance Typical (ESR):

0402 - See Performance Curve, page 234
0603 - See Performance Curve, page 234

Automotive Specifications

Meets or exceeds the requirements of AEC Q200



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CAPACITANCE RANGE

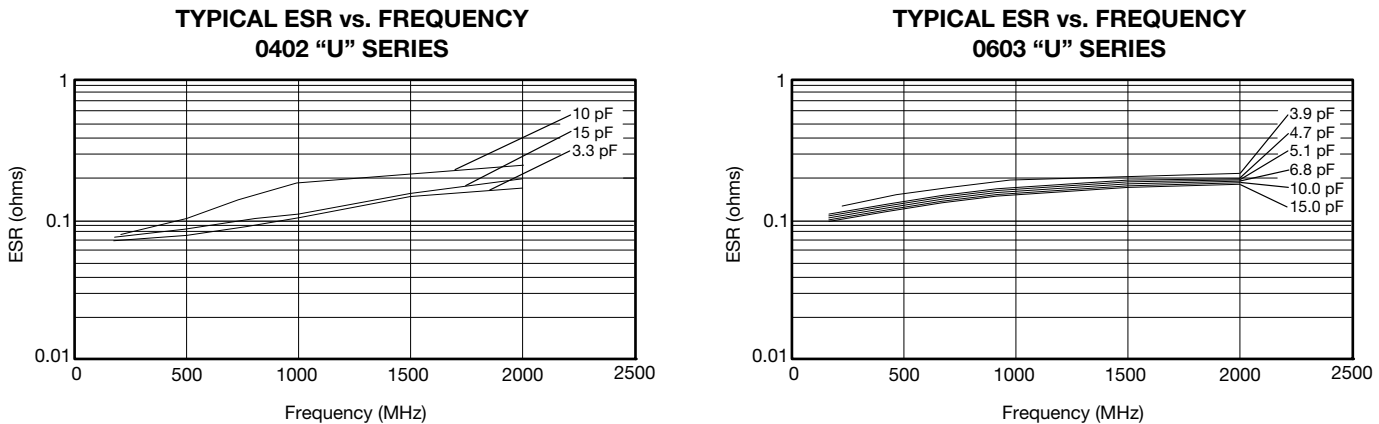
Cap (pF)	Available Tolerance	Size	
		0402	0603
0.2	B,C	100V	N/A
0.3			
0.4	B,C		
0.5			
0.6	B,C,D		
0.7			
0.8	B,C,D		
0.9			

Cap (pF)	Available Tolerance	Size	
		0402	0603
1.0	B,C,D	100V	200V
1.1			
1.2			
1.3			
1.4			
1.5			
1.6			
1.7			
1.8			
1.9			
2.0			
2.1			
2.2			
2.4			
2.7			
3.0			
3.3			
3.6			
3.9			
4.3			
4.7			
5.1			
5.6	B,C,D		
6.2			
6.8	B,C,J,K,M		

Cap (pF)	Available Tolerance	Size	
		0402	0603
7.5	B,C,J,K,M	100V	200V
8.2			
9.1	B,C,J,K,M		
10			
11	F,G,J,K,M	100V	
12			
13		50V	
15			
18			200V
20			
22		100V	100V
24			
27		50V	
30			
33		N/A	
36			
39			
43			
47			
51			
56			
68			
75			
82			
91			

Cap (pF)	Available Tolerance	Size	
		0402	0603
100	F,G,J,K,M	N/A	100V
110			
120			50V
130			
140			50V
150			
160			N/A
180			
200			
220			
270			
300			
330			
360			
390			
430			
470			
510			
560			
620			
680			
750			
820			
910			
1000	F,G,J,K,M		

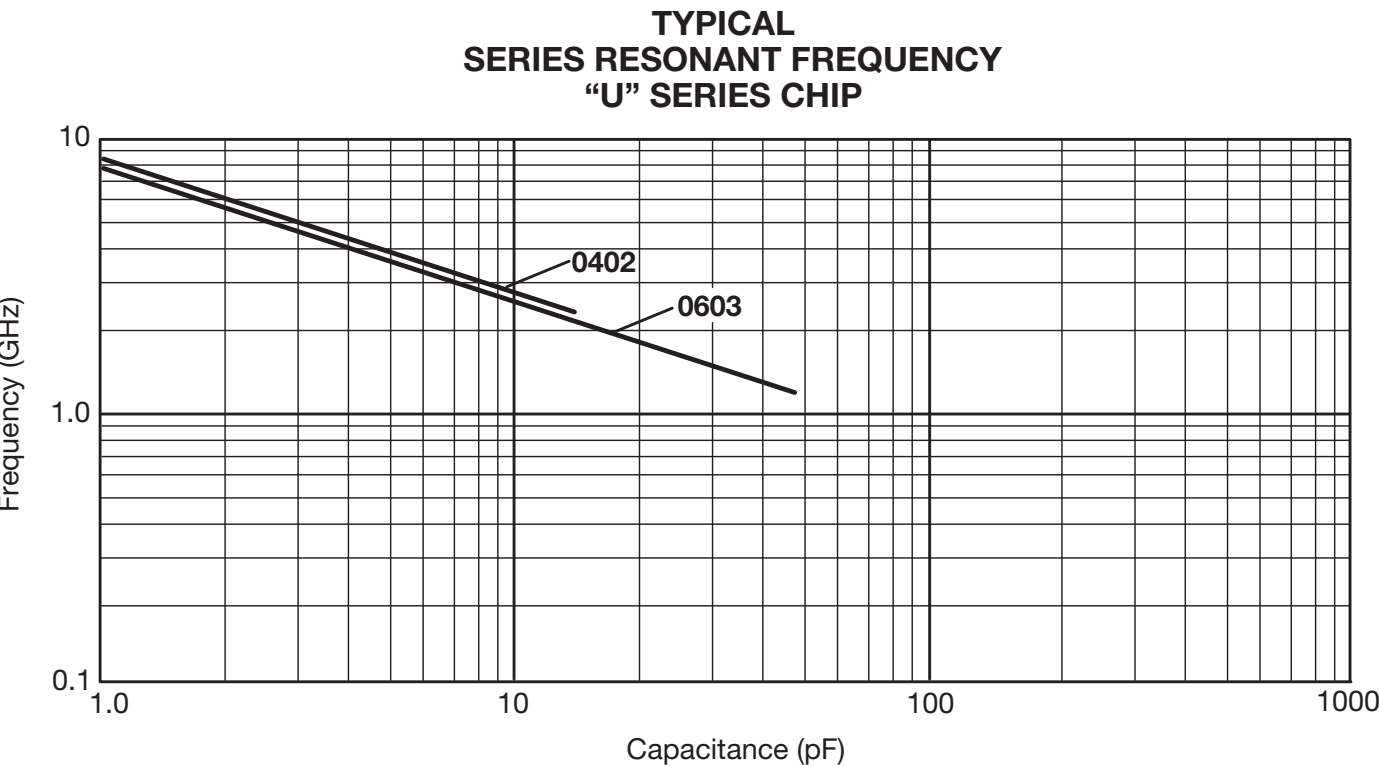
ULTRA LOW ESR, “U” SERIES



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Capacitors (RoHS), AEC Q200 Qualified



Ultra Low ESR, “U” Series, C0G (NP0) Chip Capacitors



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

AVX:

[06035U300GAJ2A](#) [04025U0R9BAT2A\500](#) [04025U2R0BAJ2A](#) [04025U1R0BAT2A\500](#) [04025U3R9BAT2A\500](#)
[04025U2R0BAT2A\500](#) [04025U100F4T2A](#) [04025U5R6B4T2A](#) [06032U2R7B4T2A](#) [06032U3R9B4T2A](#)
[06035U100F4T2A](#) [04025U4R3BAQ2A](#) [04025U8R2C4T2A](#) [04025U220F4T2A](#) [04025U5R6BAQ2A](#) [04025U3R0B4T4A](#)
[04025U240F4T2A](#) [04025U2R7B4T2A](#) [04025U180F4T2A](#) [04025U1R5C4T2A](#) [04025U3R9C4T2A](#)
[04025U4R7B4T2A](#) [04025U4R7C4T2A](#) [04025U7R5B4T2A](#) [04025U5R1BAQ2A](#) [04025U8R2B4T2A](#)
[04025U3R3C4T2A](#) [04025U0R7C4T2A](#) [04025U6R8C4T2A](#) [04025U1R5BAQ2A](#) [04025U3R6C4T2A](#)
[04025U2R2BAQ2A](#) [04025U1R2BAQ2A](#) [04025U3R9B4T4A](#) [04025U6R8BAQ2A](#) [04025U1R2C4T2A](#)
[04025U3R9B4T2A](#) [04025U8R2BAQ2A](#) [04025U4R1C4T2A](#) [04025U8R0B4T2A](#) [04025U8R4C4T2A](#)
[04025U9R1BAQ2A](#) [04025U7R5BAQ2A](#) [04025U5R0B4T2A](#) [04025U3R6CAQ2A](#) [04025U3R3BAQ2A](#)
[04025U2R2B4T2A](#) [04025U7R0C4T2A](#) [04025U160F4T2A](#) [04025U150F4T2A](#) [04025U8R0C4T2A](#) [04025U100G4T2A](#)
[04025U300J4T2A](#) [04025U7R0B4T2A](#) [04025U3R0B4T2A](#) [04025U6R6C4T2A](#) [04025U1R8BAQ2A](#) [04025U9R1C4T2A](#)
[04025U1R0C4T2A](#) [04025U110F4T2A](#) [04025U0R5C4T2A](#) [04025U6R0D4T2A](#) [04025U6R8B4T2A](#)
[04025U5R0C4T2A](#) [04025U9R1B4T2A](#) [04025U120G4T2A](#) [04025U270F4T2A](#) [04025U2R7BAQ2A](#) [04025U1R8C4T2A](#)
[04025U3R3B4T2A](#) [04025U120F4T2A](#)