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

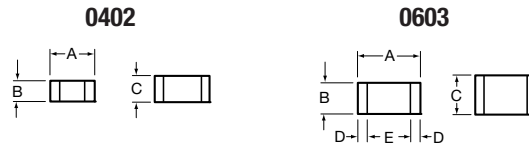


## Ultra Low ESR, "U" Series, C0G (NP0) Chip Capacitors

### GENERAL INFORMATION

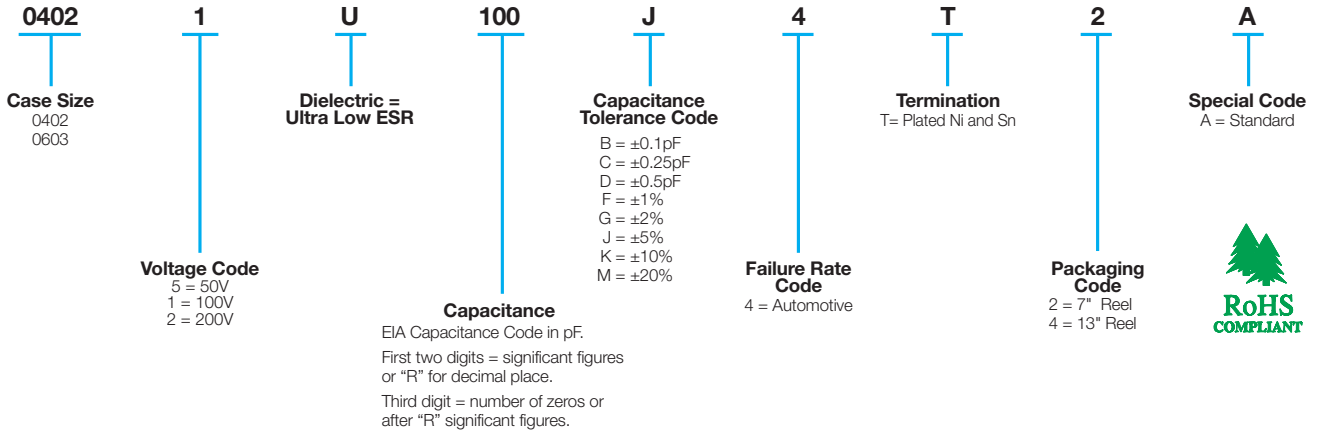
Automotive "U" Series capacitors are C0G (NP0) chip capacitors specially designed for "Ultra" low ESR for applications in the automotive market. Max ESR and effective capacitance are met on each value producing lot to lot uniformity. Sizes available are EIA chip sizes 0402 and 0603.

### DIMENSIONS: mm (inches)



Size	A	B	C	D	E
0402	1.00±0.1 (0.039±0.004)	0.50±0.1 (0.020±0.004)	0.60 max (0.024)	N/A	N/A
0603	1.52±0.25 (0.060±0.010)	0.76±0.25 (0.030±0.010)	0.91 max (0.036)	0.25±0.13 (0.010±0.005)	0.76 min (0.030)

### HOW TO ORDER



### 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):

10<sup>12</sup> Ω min. @ 25°C and rated WVDC  
 10<sup>11</sup> Ω min. @ 125°C and rated WVDC

#### Working Voltage (WVDC):

Size Working Voltage  
 0402 - 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  
 0603 - See Performance Curve

#### Automotive Specifications

Meets or exceeds the requirements of AEC Q200

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



## Ultra Low ESR, "U" Series, C0G (NP0) Chip Capacitors

### CAPACITANCE RANGE

Cap (pF)	Available Tolerance	Size	
		0402	0603
0.2	B,C	50V	N/A
0.3	↓	↓	↓
0.4			
0.5	B,C	↓	↓
0.6	B,C,D		
0.7	↓	↓	↓
0.8			
0.9	B,C,D	↓	↓

Cap (pF)	Available Tolerance	Size	
		0402	0603
1.0	B,C,D	↓	↓
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			
6.2	B,C,D	↓	↓
6.8	B,C,J,K,M	↓	↓

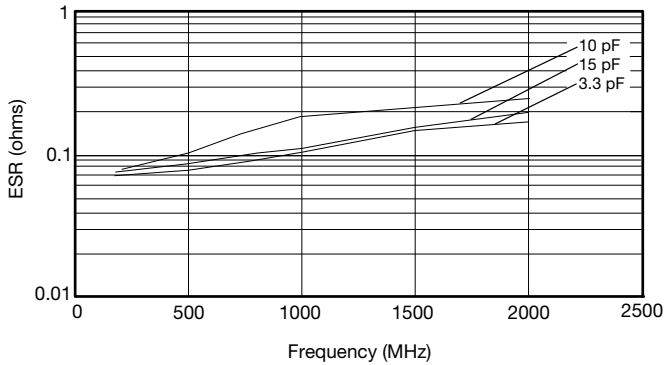
Cap (pF)	Available Tolerance	Size		
		0402	0603	
7.5	B,C,J,K,M	↓	↓	
8.2				
9.1	B,C,J,K,M			
10	F,G,J,K,M			
11	↓			↓
12				
13				
15				
18				
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91				

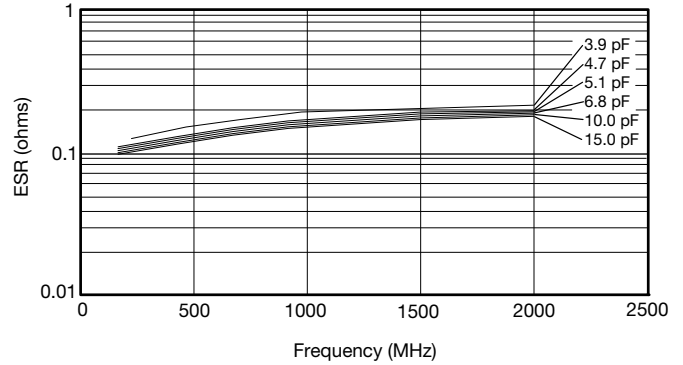
Cap (pF)	Available Tolerance	Size	
		0402	0603
100	F,G,J,K,M	↓	↓
110			
120			
130			
140			
150			
160			
180			
200			
220			
270			
300			
330			
360			
390			
430			
470			
510			
560			
620			
680			
750			
820			
910			
1000	F,G,J,K,M	↓	↓

### ULTRA LOW ESR, "U" SERIES

TYPICAL ESR vs. FREQUENCY  
0402 "U" SERIES



TYPICAL ESR vs. FREQUENCY  
0603 "U" SERIES



TYPICAL SERIES RESONANT FREQUENCY  
"U" SERIES CHIP

