

RF series

Ultra High Q & Low ESR capacitor series

◆ Features

- » High Q and low ESR performance at high frequency
- » Ultra low capacitance to 0.1pF
- » Can offer high precision tolerance to $\pm 0.05\text{pF}$
- » Quality improvement of telephone calls for low power loss and better performance

◆ Application

- » Telecommunication products & equipments:
Mobile phone, WLAN, Base station
- » RF module: Power amplifier, VCO
- » Tuners

◆ Part Number

RF	0402	N	100	J	500
Series	Size	Dielectric	Capacitance	Tolerance	Rated voltage
	Inch: 0201 0402 0603 0805	N: NPO (COG)	Two significant Digits followed by no. of zeros and P is in place of decimal point Eg.: 0P5 = 0.5pF 1P0 = 1.0pF 100 = 10×10^0 = 10pF	A= $\pm 0.05\text{pF}$ B= $\pm 0.1\text{pF}$ C= $\pm 0.25\text{pF}$ D= $\pm 0.5\text{pF}$ F= $\pm 1\%$ G= $\pm 2\%$ J= $\pm 5\%$	Two significant Digits followed by no. of zeros and V is in place of decimal point 6V3 = 6.3 VDC 100= 10 VDC 250= 25 VDC 500= 50 VDC 101= 100 VDC 251= 250 VDC

◆ General Electrical Data

Dielectric	NPO (COG)
Size	0201, 0402, 0603, 0805
Capacitance*	0201: 0.1pF to 33pF; 0402: 0.1pF to 100pF; 0603: 0.3pF to 100pF; 0805: 0.3pF to 100pF
Capacitance tolerance	Cap $\leq 5\text{pF}$: A ($\pm 0.05\text{pF}$), B ($\pm 0.1\text{pF}$), C ($\pm 0.25\text{pF}$) 5pF<Cap<10pF: B ($\pm 0.1\text{pF}$), C ($\pm 0.25\text{pF}$), D ($\pm 0.5\text{pF}$) Cap $\geq 10\text{pF}$: F ($\pm 1\%$), G ($\pm 2\%$), J ($\pm 5\%$)
Rated voltage (WVDC)	6.3V, 10V, 25V, 50V, 100V, 250V, 500V
Q*	Cap $\geq 30\text{pF}$, Q ≥ 1000 ; Cap<30pF, Q $\geq 400+20C$
Insulation resistance at U_R	$\geq 10G\Omega$
Operating temperature	-55 to +125°C
Capacitance change	$\pm 30\text{ppm}/^\circ\text{C}$; 0201Cap $\geq 22\text{pF}$, $\pm 60\text{ppm}/^\circ\text{C}$
Termination	Ni/Sn (lead-free termination)

* Measured at the conditions of 25°C ambient temperature and 30~70% related humidity.

** Apply 1.0 \pm 0.2Vrms, 1.0MHz \pm 10% for Cap $\leq 1000\text{pF}$ and 1.0 \pm 0.2Vrms, 1.0kHz \pm 10% for Cap>1000pF.



◆ Capacitance Range

Dielectric		NPO (COG)						Tolerance
Size	0201				0402			
Rated Voltage	6.3	10	25	50	25	50	100	
Capacitance	0.1pF (0P1)							B
	0.2pF (0P2)							A, B
	0.3pF (0P3)							A, B
	0.4pF (0P4)							A, B
	0.5pF (0P5)							A, B, C
	0.6pF (0P6)							A, B, C
	0.7pF (0P7)							A, B, C
	0.8pF (0P8)							A, B, C
	0.9pF (0P9)							A, B, C
	1.0pF (1P0)							A, B, C
	1.1pF (1P1)							A, B, C
	1.2pF (1P2)							A, B, C
	1.3pF (1P3)							A, B, C
	1.4pF (1P4)							A, B, C
	1.5pF (1P5)							A, B, C
	1.6pF (1P6)							A, B, C
	1.7pF (1P7)							A, B, C
	1.8pF (1P8)							A, B, C
	1.9pF (1P9)							A, B, C
	2.0pF (2P0)							A, B, C
	2.1pF (2P1)							A, B, C
	2.2pF (2P2)							A, B, C
	2.3pF (2P3)							A, B, C
	2.4pF (2P4)							A, B, C
	2.5pF (2P5)							A, B, C
	2.6pF (2P6)							A, B, C
	2.7pF (2P7)							A, B, C
	2.8pF (2P8)							A, B, C
	2.9pF (2P9)							A, B, C
	3.0pF (3P0)							A, B, C
	3.1pF (3P1)							A, B, C
	3.2pF (3P2)							A, B, C
	3.3pF (3P3)							A, B, C
	3.4pF (3P4)							A, B, C
	3.5pF (3P5)							A, B, C
	3.6pF (3P6)							A, B, C
	3.7pF (3P7)							A, B, C
	3.8pF (3P8)							A, B, C
	3.9pF (3P9)							A, B, C
	4.0pF (4P0)							A, B, C
	4.1pF (4P1)							A, B, C
	4.2pF (4P2)							A, B, C
	4.3pF (4P3)							A, B, C
	4.4pF (4P4)							A, B, C
	4.5pF (4P5)							A, B, C
	4.6pF (4P6)							A, B, C
	4.7pF (4P7)							A, B, C
	4.8pF (4P8)							A, B, C
	4.9pF (4P9)							A, B, C
	5.0pF (5P0)							A, B, C
	5.1pF (5P1)							B, C, D
5.2pF (5P2)							B, C, D	
5.3pF (5P3)							B, C, D	
5.4pF (5P4)							B, C, D	
5.5pF (5P5)							B, C, D	

◆ **Capacitance Range**

Dielectric		COG (NPO)						Tolerance
Size	0201				0402			
Rated Voltage	6.3	10	25	50	25	50	100	
Capacitance	5.6pF (5P6)							B, C, D
	5.7pF (5P7)							B, C, D
	5.8pF (5P8)							B, C, D
	5.9pF (5P9)							B, C, D
	6.0pF (6P0)							B, C, D
	6.1pF (6P1)							B, C, D
	6.2pF (6P2)							B, C, D
	6.3pF (6P3)							B, C, D
	6.4pF (6P4)							B, C, D
	6.5pF (6P5)							B, C, D
	6.6pF (6P6)							B, C, D
	6.7pF (6P7)							B, C, D
	6.8pF (6P8)							B, C, D
	6.9pF (6P9)							B, C, D
	7.0pF (7P0)							B, C, D
	7.1pF (7P1)							B, C, D
	7.2pF (7P2)							B, C, D
	7.3pF (7P3)							B, C, D
	7.4pF (7P4)							B, C, D
	7.5pF (7P5)							B, C, D
	7.6pF (7P6)							B, C, D
	7.7pF (7P7)							B, C, D
	7.8pF (7P8)							B, C, D
	7.9pF (7P9)							B, C, D
	8.0pF (8P0)							B, C, D
	8.1pF (8P1)							B, C, D
	8.2pF (8P2)							B, C, D
	8.3pF (8P3)							B, C, D
	8.4pF (8P4)							B, C, D
	8.5pF (8P5)							B, C, D
	8.6pF (8P6)							B, C, D
	8.7pF (8P7)							B, C, D
	8.8pF (8P8)							B, C, D
	8.9pF (8P9)							B, C, D
	9.0pF (9P0)							B, C, D
	9.1pF (9P1)							B, C, D
	9.2pF (9P2)							B, C, D
	9.3pF (9P3)							B, C, D
	9.4pF (9P4)							B, C, D
	9.5pF (9P5)							B, C, D
	9.6pF (9P6)							B, C, D
	9.7pF (9P7)							B, C, D
9.8pF (9P8)							B, C, D	
9.9pF (9P9)							B, C, D	
10pF (100)							F, G, J	
11pF (110)							F, G, J	
12pF (120)							F, G, J	
13pF (130)							F, G, J	
15pF (150)							F, G, J	
16pF (160)							F, G, J	
18pF (180)							F, G, J	
20pF (200)							F, G, J	
22pF (220)							F, G, J	

Dielectric		COG (NPO)							
Size		0201				0402			Tolerance
Rated Voltage		6.3	10	25	50	25	50	100	
Capacitance	24pF (240)								F, G, J
	27pF (270)								F, G, J
	30pF (300)								F, G, J
	33pF(330)								F, G, J
	36pF(360)								F, G, J
	39pF(390)								F, G, J
	43pF(430)								F, G, J
	47pF(470)								F, G, J
	56pF(560)								F, G, J
	68pF(680)								F, G, J
	82pF(820)								F, G, J
	100pF(101)								F, G, J

◆ **Capacitance Range**

Dielectric		NPO (COG)								
Size	0603				0805				Tolerance	
Rated Voltage	25	50	100	250	50	100	250	500		
Capacitance	0.1pF (0P1)									
	0.2pF (0P2)									
	0.3pF (0P3)									A, B
	0.4pF (0P4)									A, B
	0.5pF (0P5)									A, B, C
	0.6pF (0P6)									A, B, C
	0.7pF (0P7)									A, B, C
	0.8pF (0P8)									A, B, C
	0.9pF (0P9)									A, B, C
	1.0pF (1P0)									A, B, C
	1.1pF (1P1)									A, B, C
	1.2pF (1P2)									A, B, C
	1.3pF (1P3)									A, B, C
	1.4pF (1P4)									A, B, C
	1.5pF (1P5)									A, B, C
	1.6pF (1P6)									A, B, C
	1.7pF (1P7)									A, B, C
	1.8pF (1P8)									A, B, C
	1.9pF (1P9)									A, B, C
	2.0pF (2P0)									A, B, C
	2.1pF (2P1)									A, B, C
	2.2pF (2P2)									A, B, C
	2.3pF (2P3)									A, B, C
	2.4pF (2P4)									A, B, C
	2.5pF (2P5)									A, B, C
	2.6pF (2P6)									A, B, C
	2.7pF (2P7)									A, B, C
	2.8pF (2P8)									A, B, C
	2.9pF (2P9)									A, B, C
	3.0pF (3P0)									A, B, C
	3.1pF (3P1)									A, B, C
	3.2pF (3P2)									A, B, C
	3.3pF (3P3)									A, B, C
	3.4pF (3P4)									A, B, C
	3.5pF (3P5)									A, B, C
	3.6pF (3P6)									A, B, C
	3.7pF (3P7)									A, B, C
	3.8pF (3P8)									A, B, C
	3.9pF (3P9)									A, B, C
	4.0pF (4P0)									A, B, C
	4.1pF (4P1)									A, B, C
	4.2pF (4P2)									A, B, C
	4.3pF (4P3)									A, B, C
	4.4pF (4P4)									A, B, C
	4.5pF (4P5)									A, B, C
	4.6pF(4P6)									A, B, C
	4.7pF (4P7)									A, B, C
	4.8pF (4P8)									A, B, C
	4.9pF (4P9)									A, B, C
	5.0pF (5P0)									A, B, C
5.1pF (5P1)									B, C, D	
5.2pF (5P2)									B, C, D	
5.3pF (5P3)									B, C, D	
5.4pF (5P4)									B, C, D	
5.5pF (5P5)									B, C, D	



FAITHFUL LINK

◆ Capacitance Range

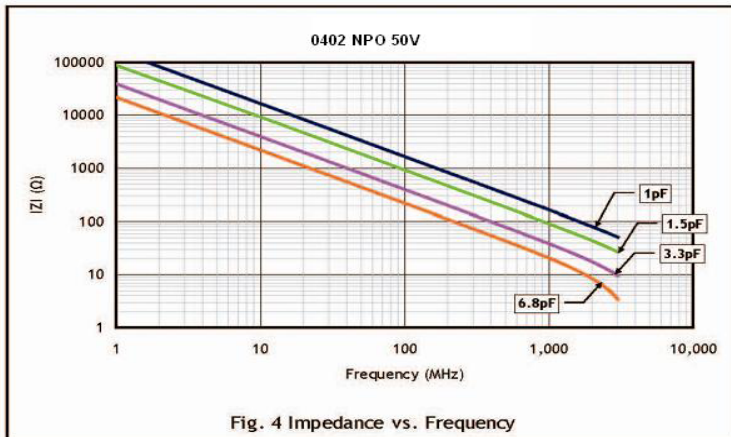
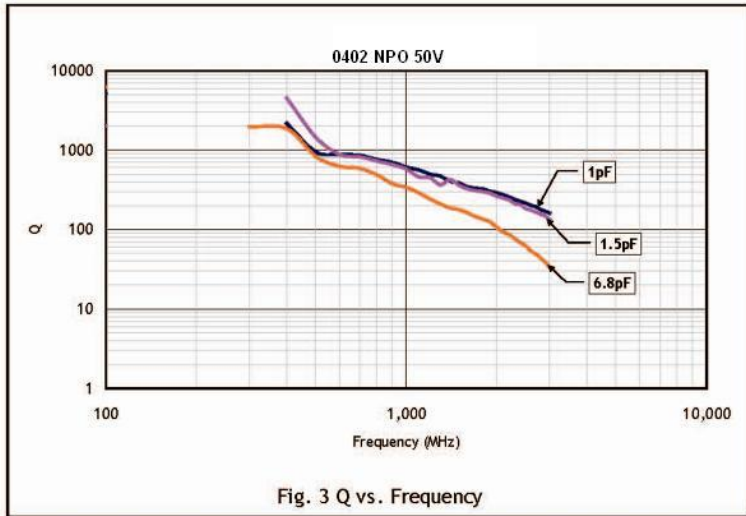
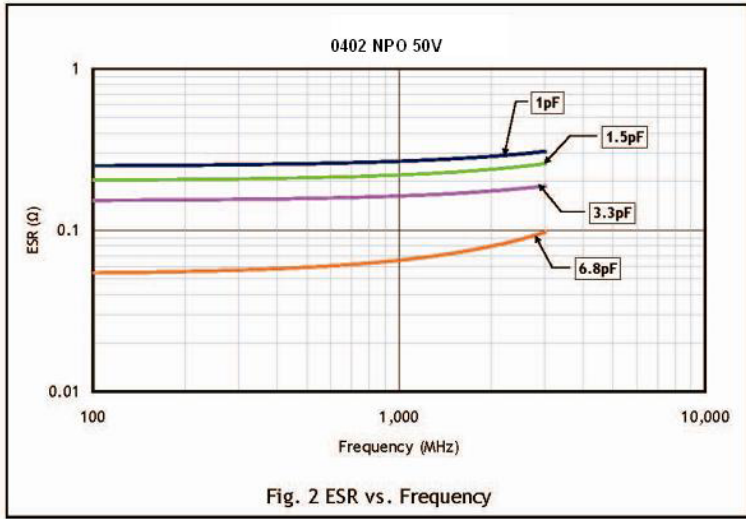
Dielectric		COG (NPO)								Tolerance
Size	0603				0805					
Rated Voltage	25	50	100	250	50	100	250	500		
Capacitance	5.6pF (5P6)									B, C, D
	5.7pF (5P7)									B, C, D
	5.8pF (5P8)									B, C, D
	5.9pF (5P9)									B, C, D
	6.0pF (6P0)									B, C, D
	6.1pF (6P1)									B, C, D
	6.2pF (6P2)									B, C, D
	6.3pF (6P3)									B, C, D
	6.4pF (6P4)									B, C, D
	6.5pF (6P5)									B, C, D
	6.6pF (6P6)									B, C, D
	6.7pF (6P7)									B, C, D
	6.8pF (6P8)									B, C, D
	6.9pF (6P9)									B, C, D
	7.0pF (7P0)									B, C, D
	7.1pF (7P1)									B, C, D
	7.2pF (7P2)									B, C, D
	7.3pF (7P3)									B, C, D
	7.4pF (7P4)									B, C, D
	7.5pF (7P5)									B, C, D
	7.6pF (7P6)									B, C, D
	7.7pF (7P7)									B, C, D
	7.8pF (7P8)									B, C, D
	7.9pF (7P9)									B, C, D
	8.0pF (8P0)									B, C, D
	8.1pF (8P1)									B, C, D
	8.2pF (8P2)									B, C, D
	8.3pF (8P3)									B, C, D
	8.4pF (8P4)									B, C, D
	8.5pF (8P5)									B, C, D
	8.6pF (8P6)									B, C, D
	8.7pF (8P7)									B, C, D
	8.8pF (8P8)									B, C, D
	8.9pF (8P9)									B, C, D
	9.0pF (9P0)									B, C, D
	9.1pF (9P1)									B, C, D
	9.2pF (9P2)									B, C, D
	9.3pF (9P3)									B, C, D
	9.4pF (9P4)									B, C, D
	9.5pF (9P5)									B, C, D
	9.6pF (9P6)									B, C, D
	9.7pF (9P7)									B, C, D
9.8pF (9P8)									B, C, D	
9.9pF (9P9)									B, C, D	
10pF (100)									F, G, J	
11pF (110)									F, G, J	
12pF (120)									F, G, J	
13pF (130)									F, G, J	
15pF (150)									F, G, J	
16pF (160)									F, G, J	
18pF (180)									F, G, J	
20pF (200)									F, G, J	
22pF (220)									F, G, J	

◆ Capacitance Range

Dielectric		COG (NPO)								
Size		0603				0805				Tolerance
Rated Voltage		25	50	100	250	50	100	250	500	
Capacitance	24pF (240)									F, G, J
	27pF (270)									F, G, J
	30pF (300)									F, G, J
	33pF(330)									F, G, J
	36pF(360)									F, G, J
	39pF(390)									F, G, J
	43pF(430)									F, G, J
	47pF(470)									F, G, J
	56pF(560)									F, G, J
	68pF(680)									F, G, J
	82pF(820)									F, G, J
	100pF(101)									F, G, J

1. For more information about products with special capacitance or other data, please contact Faithful link

◆ Electrical Characteristics



◆ **Electrical Characteristics**

