

FEATURES:

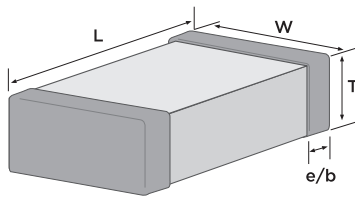
- Excellent Q and low ESR performance at high frequency
- Voltage range: 25V to 500V
- Capacitance range: 0.1pF to 220pF
- Low power consumption
- Suitable for IC decoupling application



PART NUMBER STRUCTURE

C	0805	HQN	201	—	1R0	C	N	P
Ceramic Capacitor	Size	Series	Rated Voltage		Capacitance	Tolerance	Termination	Packaging
	0201 0402 0603 0805		250 = 25VCDW 500 = 50VCDW 101 = 100VCDW 201 = 200VCDW 251 = 250VCDW 501 = 500VCDW		(picofarads) 1st two digits are significant, followed by number of zeroes. (R denotes decimal) e.g: 101 = 100pF OR5 = 0.5pF	**A = ± 0.05pF *B = ± 0.10pF *C = ± 0.25pF *D = ± 0.50pF F = ± 1% G = ± 2% J = ± 5% K = ± 10% * For cap. values below 10pF only. ** For cap. values of 8.2pF and less.	N = 100% matte tin (Sn) over nickel.	P = paper E = Embossed Tape
Example P/N: C0805HQN201-1R0CNP						Standard termination finish is 100% matte Tin (Sn).		

DIMENSIONS

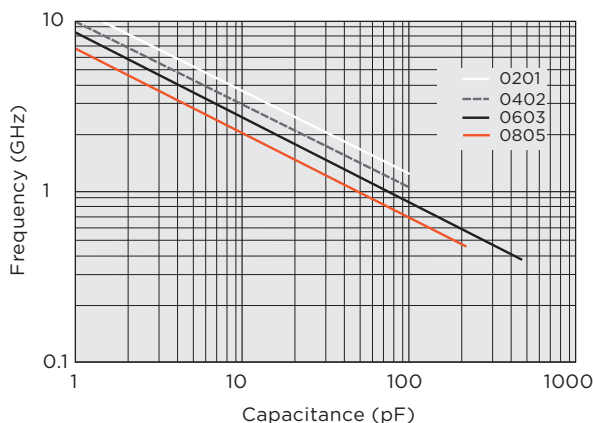


Unit: inch (mm)

SIZE	L	W	T (Max)	THICKNESS SPECIFIC VALUES	E/B (Max)
0201	0.024 ± 0.012 (0.60 ± 0.3)	0.012 ± 0.012 (0.30 ± 0.03)	0.012 +/- 0.0012 (0.30 ± 0.03)	All values	0.006 ± 0.002 (0.15 ± 0.05)
0402	0.040 ± 0.002 (1.00 ± 0.05)	0.020 ± 0.002 (0.50 ± 0.05)	0.020 ± 0.002 (0.50 ± 0.05)	All values	0.01 ± 0.004 (0.25 ± 0.10)
0603	0.064 ± 0.004 (1.60 ± 0.10)	0.032 ± 0.004 (0.80 ± 0.10)	0.032 ± 0.0028 (0.80 ± 0.07)	All other values	0.016 ± 0.006 (0.40 ± 0.15)
	0.064 +0.006/-0.004 (1.60 +0.15/-0.10)	0.032 +0.006/-0.004 (0.80 +0.15/-0.10)	0.020 ± 0.004 (0.50 ± 0.10)	0.1pF 0.2pF	
0805	0.080 ± 0.006 (2.00 ± 0.15)	0.050 ± 0.004 (1.25 ± 0.10)	0.024 ± 0.004 (0.60 ± 0.10)	0.2pF	0.02 ± 0.008 (0.50 ± 0.20)
	0.080 ± 0.008 (2.00 ± 0.20)	0.050 ± 0.008 (1.25 ± 0.20)	0.034 ± 0.004 (0.85 ± 0.10)	All other values	

ELECTRICAL SPECIFICATIONS

Typical Series Resonant Frequency



Temperature Coefficient:

0% ± 30PPM/°C, -55°C to +125°C

Quality Factor:

Q > 5,000 @ 1MHz (Typical 10,000)

0201 Quality Factor:

Q > 1,000 @ 1MHz (Typical 10,000)

Ageing:

None

Insulation Resistance:

1,000 Ω-F or 100 GΩ (whichever is less at 25°C, VDCW). 50mA max.
(IR at 125°C is 10% of the value at 25°C)

Dielectric Strength:

2.5 x VDCW Min., 25°C, 50 mA max

VOLTAGE AND CAPACITANCE RANGE

Values that are typically available.

All measurements in inches (mm)

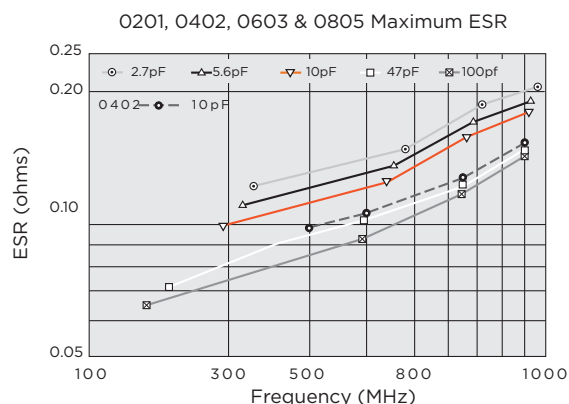
SIZE		0201		0402				0603				0805			
VDCW (MAX)		25V	50V	25V	50V	100V	200V	50V	100V	200V	250V	100V	200V	250V	500V
OR1	0.1pF														
OR2	0.2pF														
OR3	0.3pF														
OR4	0.4pF														
OR5	0.5pF														
OR6	0.6pF														
OR7	0.7pF														
OR8	0.8pF														
OR9	0.9pF														
1R0	1.0pF														
1R2	1.2pF														
1R5	1.5pF														
1R8	1.8pF														
2R2	2.2pF														
2R3	2.3pF														
2R7	2.7pF														
3R3	3.3pF														
3R9	3.9pF														
4R7	4.7pF														
5R6	5.6pF														
5R7	5.7pF														
6R8	6.8pF														
8R2	8.2pF														
9R1	9.1pF														
100	10pF														
120	12pF														
150	15pF														
180	18pF														
200	20pF														
220	22pF														
270	27pF														
330	33pF														
390	39pF														
470	47pF														
560	56pF														
680	68pF														
820	82pF														
101	100pF														
121	120pF														
151	150pF														
181	180pF														
221	220pF														
271	270pF														
331	330pF														
391	390pF														

TEST PARAMETERS

Test parameters for High-Q NPO Capacitors: 1MHz ± 100Hz at 1.0 ± 0.2 Vrms, 25°C, ~50% relative humidity.

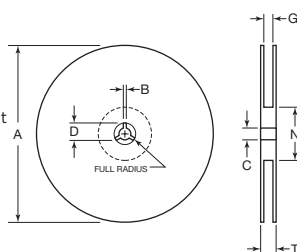
Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.

RF PERFORMANCE CHARACTERISTICS



TAPE & REEL SPECIFICATIONS

All tape and reel specifications must be adhered to per EIA-481-1-A.

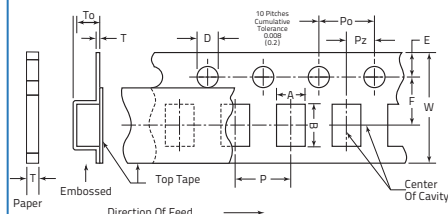


REEL DIMENSIONS

Unit: mm (inch)

TAPE	B min	C	A (7")	A (13")	D min	N min	G	T max
8mm	0.3 (.012)	13 ± .05 (.512 ± .02)	178 ± 2.0 (7 ± .079)	330 ± 2.0 (13 ± .08)	20.2 (.795)	50 (1.97)	10 ± 1.5 (.394 ± 1.059)	14.9 (.587)
12mm	0.3 (.012)	13 ± .05 (.512 ± .02)	178 ± 2.0 (7 ± .079)	330 ± 2.0 (13 ± .08)	20.2 (.795)	50 (1.97)	10 ± 1.5 (.394 ± 1.059)	14.9 (.587)

TAPING SPECIFICATIONS



7 IN. REEL QUANTITIES*

SIZE	0201*	0402*	0603	0805
Tape Size	8mm	8mm	8mm	8mm
Min Qty per Reel	15,000	5000	3000	2000
Max Qty per eel	15,000	10,000	4000	5000

* Quantity dependent on thickness

PAPER TAPE CARRIER DIMENSIONS (8mm)

Unit: mm (inch)

SIZE (inches)	A	B	W	F	E	P ₀	P _z	D	t	P
0201	1.37 ± 0.05 (.014 ± .002)	0.67 ± 0.05 (.026 ± .002)	8.0 ± 0.2 (.315 ± .008)	3.5 ± 0.1 (.138 ± .004)	1.75 ± 0.1 (.069 ± .004)	4.0 ± 0.1 (.157 ± .004)	2.0 ± 0.05 - 0.0 (.079 ± .002) - .000	1.5 ± 0.1 (.064 ± .004)	1.15 MAX (.045 MAX)	2.0 ± 0.05 (.079 ± .002)
0402	0.65 ± 0.1 (.026 ± .004)	1.10 ± 0.2 (.043 ± .008)	8.0 ± 0.2 (.315 ± .008)	3.5 ± 0.1 (.138 ± .004)	1.75 ± 0.1 (.069 ± .004)	4.0 ± 0.1 (.157 ± .004)	2.0 ± 0.05 - 0.0 (.079 ± .002) - .000	1.5 ± 0.1 (.064 ± .004)	1.15 MAX (.045 MAX)	2.0 ± 0.05 (.079 ± .002)
0603	1.10 ± 0.2 (.043 ± .008)	1.90 ± 0.2 (.075 ± .008)	8.0 ± 0.2 (.315 ± .008)	3.5 ± 0.1 (.138 ± .004)	1.75 ± 0.1 (.069 ± .004)	4.0 ± 0.1 (.157 ± .004)	2.0 ± 0.05 - 0.0 (.079 ± .002) - .000	1.5 ± 0.1 (.064 ± .004)	1.15 MAX (.045 MAX)	4.0 ± 0.1 (.157 ± .004)
0805	1.16 ± 0.2 (.046 ± .008)	2.4 ± 0.2 (.095 ± .008)	8.0 ± 0.2 (.315 ± .008)	3.5 ± 0.1 (.138 ± .004)	1.75 ± 0.1 (.069 ± .004)	4.0 ± 0.1 (.157 ± .004)	2.0 ± 0.05 - 0.0 (.079 ± .002) - .000	1.5 ± 0.1 (.064 ± .004)	1.15 MAX (.045 MAX)	4.0 ± 0.1 (.157 ± .004)