0603N(.060 x .030)

◆0603N Capacitance & Rated Voltage Table

Cap.pF	Code	Tol.	Rated WVDC	Cap.pF	Code	Tol.	Rated WVDC	Cap.pF	Code	Tol.	Rated WVDC
0.1	0R1	A,B, C,D	250V Code 251	2.2	2R2	A,B, C,D	250V Code 251	16	160	F,G, J,K	250V Code 251
0.2	0R2			2.4	2R4			18	180		
0.3	0R3			2.7	2R7			20	200		
0.4	0R4			3.0	3R0			22	220		
0.5	0R5			3.3	3R3			24	240		
0.6	0R6			3.6	3R6			27	270		
0.7	0R7			3.9	3R9			30	300		
0.8	0R8			4.3	4R3			33	330		
0.9	0R9			4.7	4R7			36	360		
1.0	1R0			5.1	5R1			39	390		
1.1	1R1			5.6	5R6			43	430		
1.2	1R2			6.2	6R2			47	470		
1.3	1R3			6.8	6R8	B,C, J,K		51	510		
1.4	1R4			7.5	7R5			56	560		
1.5	1R5			8.2	8R2			62	620		
1.6	1R6			9.1	9R1			68	680		
1.7	1R7			10	100	F,G, J,K		75	750		
1.8	1R8			11	110			82	820		
1.9	1R9			12	120			91	910		
2.0	2R0			13	130			100	101		
2.1	2R1			15	150						

Remark: special capacitance, tolerance and WVDC are available, consult with PASSIVE PLUS.

◆Part Numbering

0603N 101 J W 251 T

- 0603N — Series
- 101 — Rated Capacitance (See capacitance table)
- J — Capacitance Tolerance (See capacitance table)
- W — Termination Type Nickel, Plated 100%Sn(RoHS)
- 251 — Rated Voltage
- T — Packaging Type T:Tape carrier packaging 500pcs or 4000pcs/reel

Note: Laser marking is available on request.

◆0603N Chip Dimensions

unit:inch(millimeter)

	Length	Width	Thickness
0603N Chip Dimensions	.060 ± .006 (1.52 ± 0.15)	.030 ± .006 (0.81 ± 0.15)	.030+.005~−.003 (0.76+0.13~ −0.08)

◆Performance

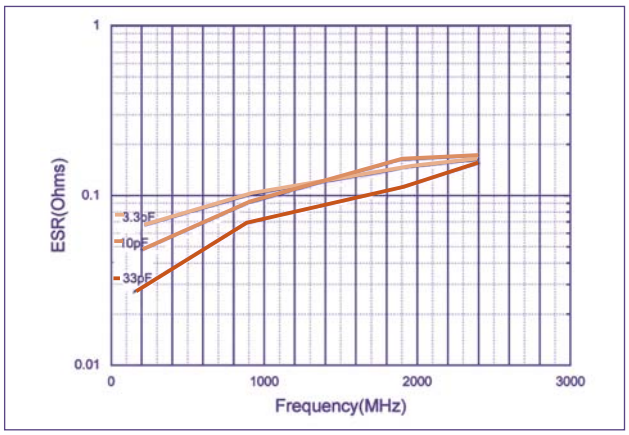
Item	Specifications
Quality Factor (Q)	2,000 min.
Insulation Resistance (IR)	10^5 Megohms min. @ +25℃ at rated WVDC. 10^4 Megohms min. @ +125℃ at rated WVDC.
Rated Voltage	250V
Dielectric Withstanding Voltage (DWV)	250% of rated voltage for 5 seconds.
Operating Temperature Range	−55℃ to +125℃
Temperature Coefficient (TC)	0±30ppm/℃
Capacitance Drift	±0.02% or ±0.02pF, whichever is greater.
Piezoelectric Effects	None

◆Environmental Tests

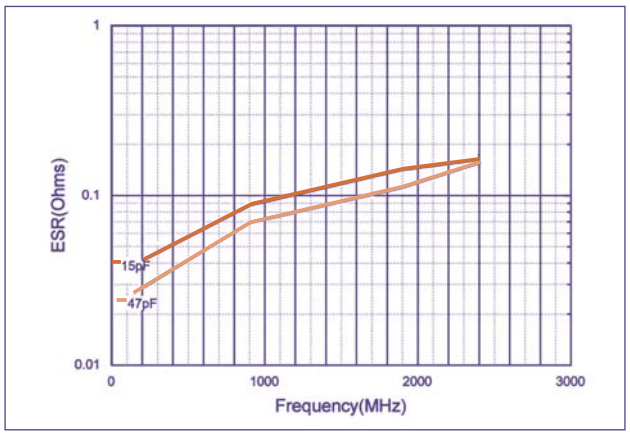
Item	Specifications	Method
Terminal Adhesion	Termination should not pull off. Ceramic should remain undamaged.	Linear pull force exerted on axial leads soldered to each terminal. 2.0lbs.
Resistance to soldering heat	No mechanical damage Capacitance change: −1.0% ~+2.0% Q>500 I.R. >10 G Ohms Breakdown voltage: 2.5 x WVDC	Preheat device to 150°C-180°C for 60 sec. Dip in 260°±5°C solder for 10±1 sec. Measure after 24±2 hour cooling period.
Thermal Shock	No mechanical damage Capacitance change:±0.5% or 0.5pF max Q>500 I.R. >10 G Ohms Breakdown voltage: 2.5 x WVDC	MIL-STD-202, Method 107, Condition A. At the maximum rated temperature (-55°C and 125°C) stay 30 minutes. The time of removing shall not be more than 3 minutes. Perform the five cycles.
Humidity, Steady State	No mechanical damage Capacitance change: ±0.5% or 0.5pF max. Q>300 I.R. >1 G Ohms Breakdown voltage: 2.5 x WVDC	MIL-STD-202, Method 106.
Low Voltage Humidity	No mechanical damage Capacitance change: ±0.3% or 0.3pF max. Q>300 I.R. >1 G Ohms Breakdown voltage: 2.5 x WVDC	MIL-STD-202, Method 103, Condition A, with 1.5 Volts D.C. applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours minimum.
Life	No mechanical damage Capacitance change: ±2.0% or 0.5pF max. Q>500 I.R. >1 G Ohms Breakdown voltage: 2.5 x WVDC	MIL-STD-202, Method 108, for 1000 hours, at 125°C. 200% Rated voltage D.C. applied.

◆0603N Performance Curve

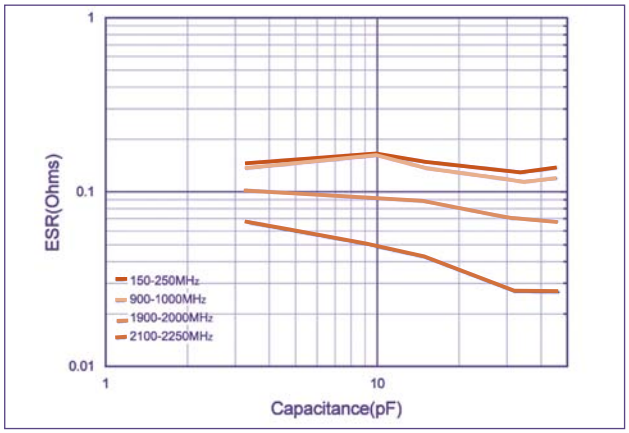
ESR vs Frequency



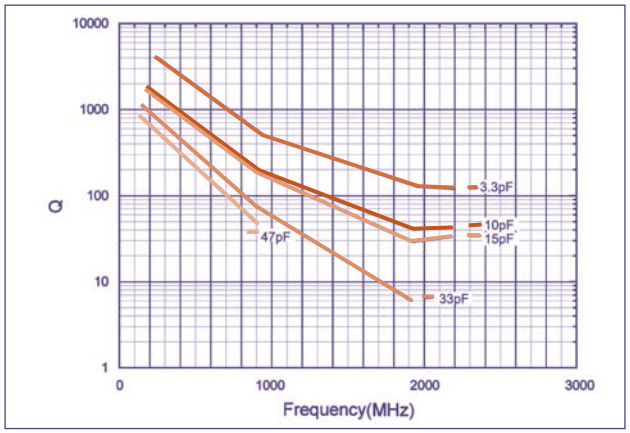
ESR vs Frequency



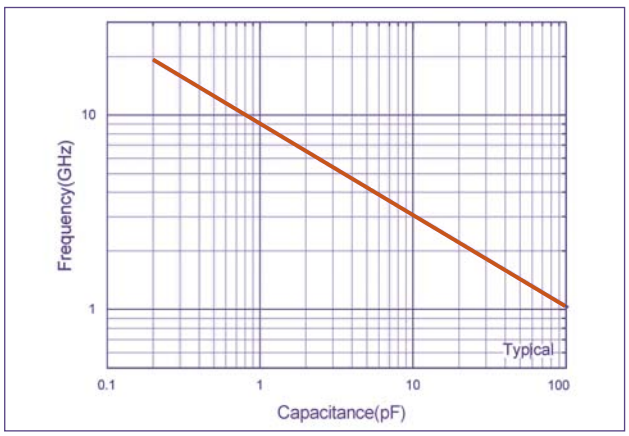
ESR vs Capacitance



Q Factor vs Frequency



Series Resonant Frequency vs Capacitance



Q Factor vs Capacitance