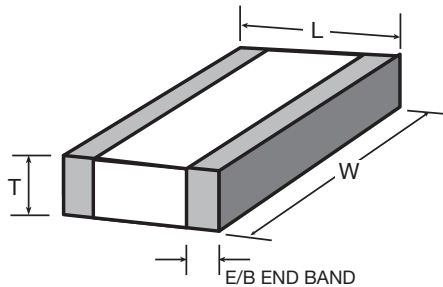


Low Inductance Chip Capacitors

Features

- Multilayer Chip Capacitor with very low inductance
- Monolithic structure for high reliability
- Excellent for by-pass filter applications

Dimensions



Unit: inch (mm)

Series	L	W	E/B (Max)	T (Max)
LIC0204	0.020 ± 0.002 (0.50 ± 0.05)	0.040 ± 0.0021 (1.00 ± 0.05)	0.006 (0.15)	0.016 ± 0.002 (0.40 ± 0.05)
LIC0306	0.032 ± 0.006 (0.80 ± 0.15)	0.063 ± 0.006 (1.60 ± 0.15)	0.0088 (0.22)	0.034 (0.86)
LIC0508	0.048 ± 0.010 (1.20 ± 0.25)	0.080 ± 0.010 (2.00 ± 0.25)	0.016 (0.40)	0.034 (0.86)
LIC0612	0.063 ± 0.010 (1.60 ± 0.25)	0.126 ± 0.010 (3.20 ± 0.25)	0.016 (0.40)	0.038 (0.97)

X7R: SPECIFICATIONS:

OPERATING TEMP. RANGE: X7R = -55°C to +125°C
 TEMPERATURE COEFFICIENT: 0 ±15% Δ°C max.
 VOLTAGE RATINGS: 10, 16, 25, 50 VDC
 DISSIPATION FACTOR: 10V = 5.0% max., 16V = 3.5% max.
 25V = 3.0% max., 50V = 2.5% max.
 INSULATION RESISTANCE: 100,000 MΩ min., or 1,000 MΩ
 (@ +25°C, RVDC) per μF min. or 100 GΩ,
 whichever is less
 TEST PARAMETERS: 1KHz ± 50Hz at 1.0 ± 0.2 Vrms, 25°C
 CAPACITANCE TOLERANCES: K = ±10%; M = ±20%

X6S: SPECIFICATIONS:

OPERATING TEMP. RANGE: X6S = -55°C to +105°C
 TEMPERATURE COEFFICIENT: 0 ±22% Δ°C max.
 VOLTAGE RATINGS: 6.3 VDC
 DISSIPATION FACTOR: 6.3V = 12% max.
 INSULATION RESISTANCE: 100,000 MΩ min., or 1,000 MΩ
 (@ +25°C, RVDC) per μF min. or 100 GΩ,
 whichever is less
 TEST PARAMETERS: 1KHz ± 50Hz at 1.0 ± 0.2 Vrms, 25°C
 CAPACITANCE TOLERANCES: K = ±10%; M = ±20%

X7S: SPECIFICATIONS:

OPERATING TEMP. RANGE: X7S = -55°C to +125°C
 TEMPERATURE COEFFICIENT: 0 ±22% Δ°C max.
 VOLTAGE RATINGS: 4 VDC
 DISSIPATION FACTOR: 0.1 (10%) max. when measured at the
 frequency and voltage specified
 INSULATION RESISTANCE: > 50 ohms F or 5 Gig ohms,
 (@ +25°C, RVDC) whichever is less
 TEST PARAMETERS: 1KHz ± 50Hz at 1.0 ± 0.2 Vrms, 25°C
 CAPACITANCE TOLERANCES: K = ±10%; M = ±20%

X5R: SPECIFICATIONS:

OPERATING TEMP. RANGE: X5R = -55°C TO +85°C
 TEMPERATURE COEFFICIENT: 0 ±15% Δ°C MAX.
 VOLTAGE RATINGS: 4, 6.3, 10, 16, 25, 50, 100 VDC
 DISSIPATION FACTOR: 4V & 6.3V = 10% max., 10V = 5.0% max.
 16V = 3.5% max., 25V = 3.0% max.
 50V & 100V = 2.5% max..
 For values > 10°F and voltages ≤ 10V,
 the D.F. IS 10% max.
 INSULATION RESISTANCE: >1000 ohms F or 100 Gig ohms,
 (@ +25°C, VDCW.) whichever is less
 (10,000 ohms at 125°C)
 TEST PARAMETERS:* 1KHz ± 100Hz at
 1.0 ± 0.2 VRMS > 100 PF, 25°C
 CAPACITANCE TOLERANCE: K = ±10%; M = ±20%

Typical Inductance

SERIES	Measured Inductance (nH)
LIC0204	0.275
LIC0306	0.325

SERIES	Measured Inductance (nH)
LIC0508	0.400
LIC0612	0.450

All components in this section are RoHS compliant per the EU directives and definitions.

5900 Shepherd Mountain Cove • Austin, TX 78730
 Phone: 512 / 794-0081 • Fax: 512 / 794-0087 • Toll Free: 800 / 950-8365
 e-mail: sales@venkel.com • www.venkel.com

Voltage and Capacitance Range

X7R, X6S, X7S, X5R

■ X7R
 ■ X6S
 ■ X7S
 ■ X5R

Case Size	Voltage	222	472	103	123	153	183	223	273	333	393	473	563	683	823	104	224	474	105	225	475	106	
		2200pF	4700pF	.01 μ F	.012 μ F	.015 μ F	.018 μ F	.022 μ F	.027 μ F	.033 μ F	.039 μ F	.047 μ F	.056 μ F	.068 μ F	.082 μ F	.1 μ F	.22 μ F	.47 μ F	1 μ F	2.2 μ F	4.7 μ F	10 μ F	
0204	6.3V																						
	4V																						
0306	6.3V																						
	10V																						
	16V																						
	25V																						
	50V																						
	4V																						
0508	6.3V																						
	10V																						
	16V																						
	25V																						
	50V																						
	4V																						
0612	6.3V																						
	10V																						
	16V																						
	25V																						
	50V																						
	6.3V																						

How To Order

LIC
Series

0508
Size

X7R, X6S, X7S, X5R
Temperature
Characteristic

250 —
Rated Voltage
4R0 = 4V
6R3 = 6.3V
100 = 10V
160 = 16V
250 = 25V
500 = 50V

104
Capacitance
(pico - Farads)
1st two digits
are significant
followed by number
of zeroes.
104 = 0.1 μ F

K
Tolerance Code:
K = \pm 10%
M = \pm 20%

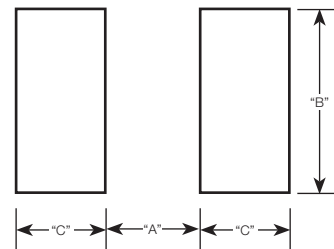
N
Termination
N = Nickel barrier,
Tinned Termination
Composition is
100% matte Tin (Sn)
Standard termination finish for this product
is 100% matte Tin (Sn)

P
Packaging
E = Embossed Tape
P = Paper Tape
(7" reels - 4,000/RL)

Recommended Land Pattern

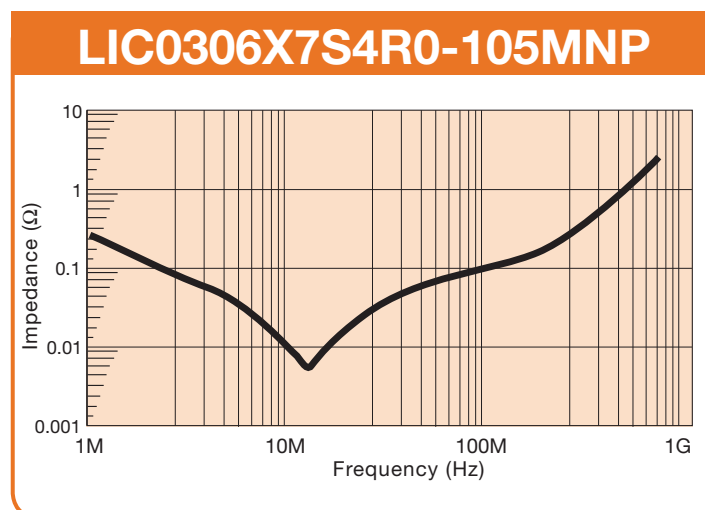
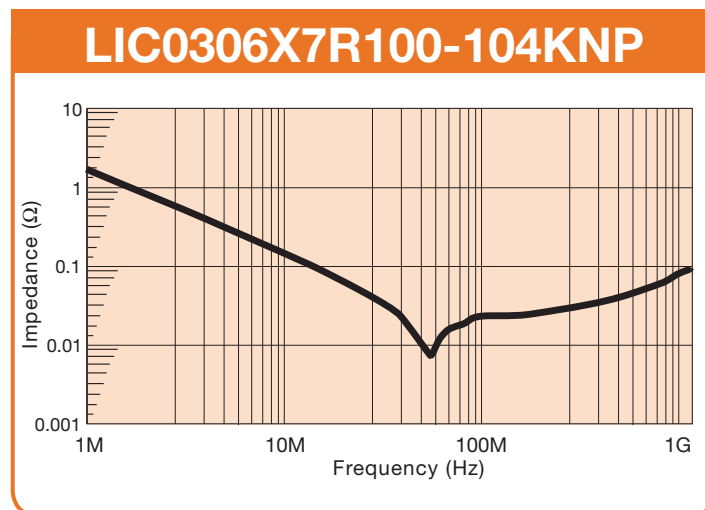
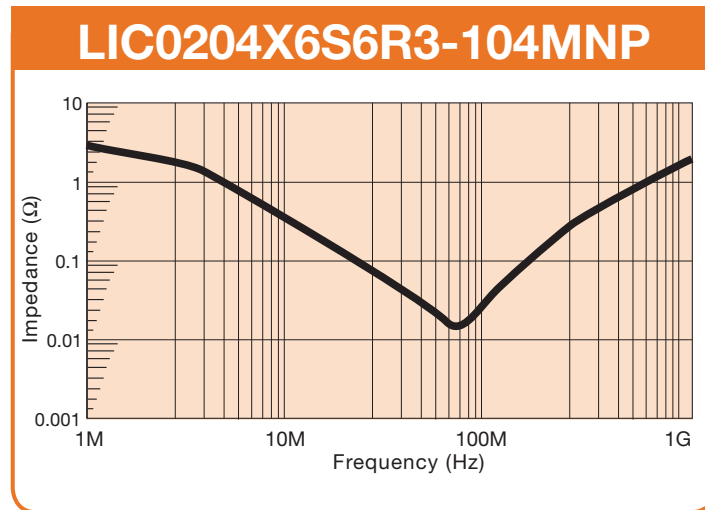
Unit: inch (mm)

Series	A	B	C
LIC0204	0.006 – 0.008 (0.15 – 0.20)	0.028 – 0.04 (0.7 – 1.0)	0.008 – 0.012 (0.20 – 0.30)
LIC0306	0.012 (0.31)	0.060 (1.52)	0.036 (0.90)
LIC0508	0.020 (0.51)	0.080 (2.03)	0.036 (0.90)
LIC0612	0.030 (0.76)	0.120 (3.05)	0.036 (0.90)

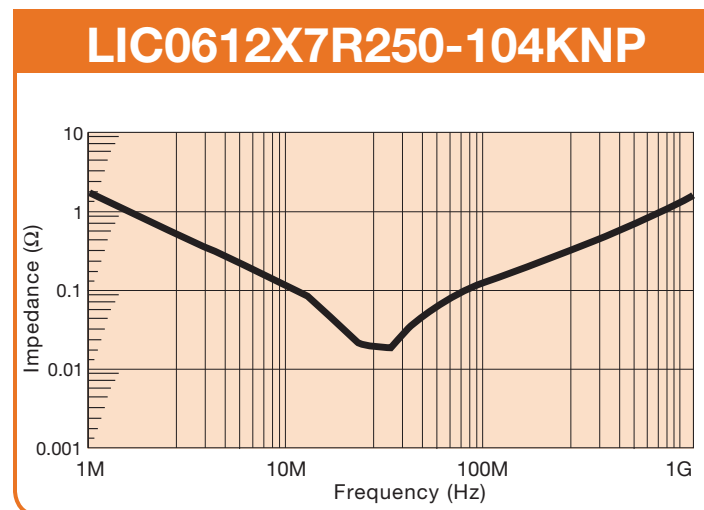
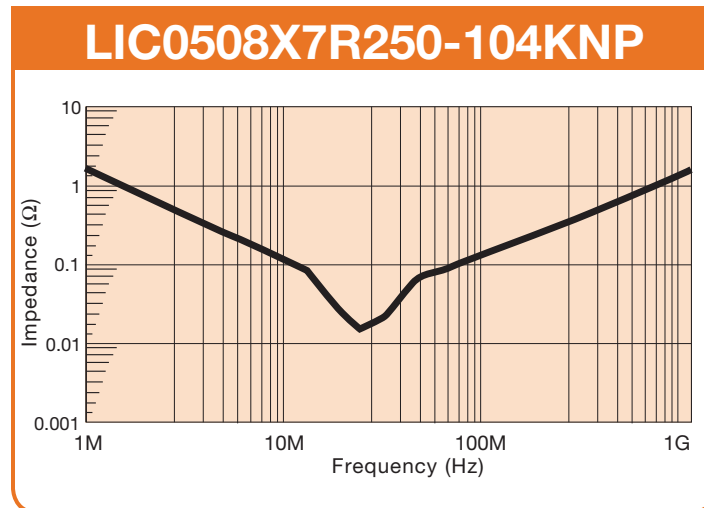


Low Inductance Chip Capacitors

Typical Impedance Characteristics



Typical Impedance Characteristics



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