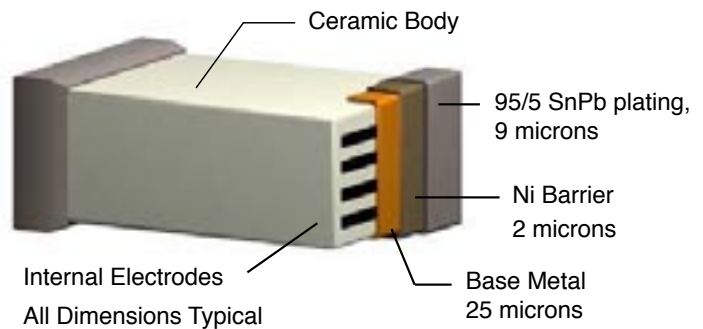


## TIN LEAD PLATED, HIGH CAPACITANCE MLCCs



Johanson Dielectrics' tin lead plated products are offered for high reliability, aerospace, and other applications where tin whiskering is a concern. The plating is tin lead over nickel barrier with 5% minimum lead content. The lead content of the plating in every manufacturing lot is verified using XRF method, and this data is available upon request. MIL-PRF-55681 and Hi Rel screened versions are also available.



### ELECTRICAL CHARACTERISTICS

PARAMETER	X7R	X5R
TEMPERATURE COEFFICIENT:	± 15% max. from -55 to +125°C	± 15% max. from -55 to +85°C
DISSIPATION FACTOR:	0.10 max.	
INSULATION RESISTANCE:	IR @ 25°C, WVDC = 500ΩF or 10GΩ whichever is less	
DIELECTRIC STRENGTH:	DWV = 2.5 X WVDC, 25°C, 50mA max.	
TEST PARAMETERS:	Capacitance values ≤ 22 μF: 1.0kHz±50Hz @ 1.0±0.2 Vrms Capacitance values > 22 μF: 120Hz±10Hz @ 0.5V±0.1 Vrms	

# TIN LEAD PLATED, HIGH CAPACITANCE MLCCs

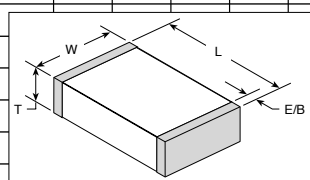
## CAPACITANCE SELECTION

CASE SIZE				0.10 $\mu$ F	0.22 $\mu$ F	0.33 $\mu$ F	0.47 $\mu$ F	1.0 $\mu$ F	2.2 $\mu$ F	3.3 $\mu$ F	4.7 $\mu$ F	10 $\mu$ F	22 $\mu$ F	47 $\mu$ F	100 $\mu$ F	
0603 R14	L W T E/B	Inches (mm) Inches (mm) Max. (mm)	50 VDC													
			25 VDC													
			16 VDC													
			10 VDC													
			6.3 VDC													
0805 R15	L W T E/B	Inches (mm) Inches (mm) Max. (mm)	50 VDC													
			25 VDC													
			16 VDC													
			10 VDC													
			6.3 VDC													
1206 R18	L W T E/B	Inches (mm) Inches (mm) Max. (mm)	50 VDC													
			25 VDC													
			16 VDC													
			10 VDC													
			6.3 VDC													
1210 S41	L W T E/B	Inches (mm) Inches (mm) Max. (mm)	50 VDC													
			25 VDC													
			16 VDC													
			10 VDC													
			6.3 VDC													
1812 S43	L W T E/B * T	Inches (mm) Inches (mm) Max. (mm) Max. (mm)	50 VDC													
			25 VDC													
			16 VDC													
			10 VDC													
			6.3 VDC													

DIELECTRIC

X7R

X5R



## HOW TO ORDER

250	R15	X	225	M	T	4	E
<b>VOLTAGE</b>	<b>CASE SIZE</b>	<b>DIELECTRIC</b>	<b>CAPACITANCE</b>	<b>TOLERANCE</b>	<b>TERMINATION</b>	<b>MARKING</b>	<b>TAPE CODE</b>
6R3 = 6.3 V 100 = 10 V 160 = 16 V 250 = 25 V 500 = 50 V	R07 = 0402 R14 = 0603 R15 = 0805 R18 = 1206 S41 = 1210 S43 = 1812	W = X7R X = X5R	1st two digits are significant; third digit denotes number of zeros.  474 = 0.47 $\mu$ F 475 = 4.70 $\mu$ F	K = $\pm$ 10% M = $\pm$ 20%	T = Tin Lead with 5% min lead content	4 = Unmarked	E = 7" Plastic