

DLC70L (1.30" x 1.30")

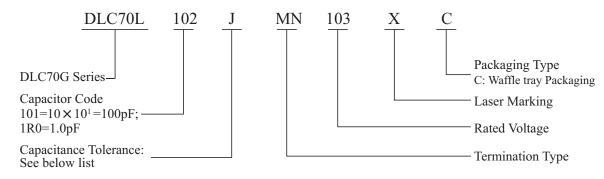
♦ Product Features

High Q, High RF Current/Voltage, High RF Power, Low ESR/ESL, Low Noise, Ultra-Stable Performance.

♦ DLC70L Capacitance & Rated Voltage Table

Cap.pF	Code	Tol.	Rated WVDC	Cap.pF	Code	Tol.	Rated WVDC	Cap.pF	Code	Tol.	Rated WVDC
200	201			1800	182		10KV Code103	12000	123 153		3000V Code302
220	221			2200	222			15000			
270	271			2700	272			22000	223	J -	
300	301			3300	332	G,J		33000	333		
330	331		10KV	4700	472			47000	473		
390	391	G,J	Code103	5100	512			56000	563		
470	471			5600	562			68000	68000 683		1000V Code102
560	561			6800	682			82000	823		
680	681			7500	752			100000	104		
820	821			8200	822			120000	124		
1000	102			10000	103						
1200	122										
1500	152										

♦Part Numbering



Code	G	J
Tolerance	± 2%	± 5%



♦ DLC70L Capacitor Dimensions

unit:inch(millimeter)

	Т		С	apacitor D	Dimension	ns	Le	ad Dimen	sions	Plated
Series	Term. Code	Type/Outlines	Length (Lc)	Width (Wc)	Thick. (Tc)	Overlap (B)	Length (L _L)	Width (W _L)	Thickness (T _L)	Material
70L	Р	Chip (Non-Mag)				.039 ~.071 (1.00~ 1.80)	_	_	_	Non-mag, Copper Plated 100% Sn
70L	MN	Tc Microstrip (Non-Mag)	1.350 ±.050 (34.29 ±1.27)	1	105	_	.748	1.299 ±	.012 ±	
70L	AN	Axial Ribbon (Non-Mag)			max		(19.00) min	.020 (33.00 ±0.50)	.001 (0.30 ±0.025)	Silver- plated Copper
70L	FN	Te Te Radial Ribbon (Non-Mag)					.669 (17.00) min	.157 ± .010 (4.00 ±0.25)	.008 ± .001 (0.20 ±0.025)	



◆ Performance

Item	Specifications		
Quality Factor (Q)	No less than 1000pF, Q value more than 2000, Test frequency 1MHz; More than 1000pF, Q value more than 2000, Test frequency 1KHz;		
Insulation Resistance (IR)	Test Voltage: 500V 10 ⁵ Megohms min. @ +25°C at rated WVDC. 10 ⁴ Megohms min. @ +125°C at rated WVDC.		
Rated Voltage	See Rated Voltage Table		
Dielectric Withstanding Voltage (DWV)	150% of Rated Voltage for 5 seconds, 500VDC < Rated Voltage ≤ 1250VDC 120% of Rated Voltage for 5 seconds, Rated Voltage > 1250VDC		
Operating Temperature Range	−55°C to +125°C		
TemperatureCoefficient (TC)	$0\pm30~\mathrm{ppm/^{\circ}C}$		
Capacitance Drift	$\pm 0.2\%$ or ± 0.05 pF, whichever is greater.		
Piezoelectric Effects	None		

 $Capacitors \ are \ designed \ and \ manufactured \ to \ meet \ the \ requirements \ of \ MIL-PRF-55681 \ and \ MIL-PRF-123.$

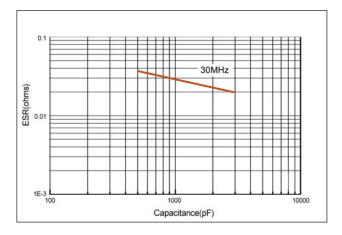
► Environmental Tests

Item	Specifications	Method
Thermal Shock	DWV: the initial value IR: Shall not be less than 30% of the initial value Capacitance change:	MIL-STD-202, Method 107, Condition A. At the maximum rated temperature stay 30 minutes. The time of remo ving shall not be more than 3 minutes. Perform the five cycles.
Moisture Resistance	no more than 0.5% or 0.5pF. whichever is greater.	MIL-STD-202, Method 106.
Humidity (steady state)	DWV: the initial value IR: the initial value Capacitance change: no more than 0.3% or 0.3pF. whichever is greater.	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	IR: Shall not be less than 30% of the initial value Capacitance change: no more than 2.0% or 0.5pF. whichever is greater.	MIL-STD-202, Method 108, for 2000 hours, at 125 °C. 200% of Rated Voltage for Capacitors, Rated Voltage ≤ 500VDC 120% of Rated Voltage for Capacitors, 500VDC < Rated Voltage ≤ 1250VDC 100% of Rated Voltage for Capacitors, Rated Voltage > 1250VDC
Terminal Strength	Microstrip: more than 20 N;	MIL-STD-202, Method 211.

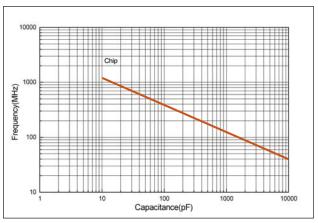


◆ DLC70L Performance Curve

ESR vs Capacitance measured @ 30MHz



Self Resonant Frequency vs Capacitance



Test Conditions:

Typical responses for sample placed across a 1.1-inch gap in a 114-mil-wide Micro-strip on 60 mil FR4 PCB.

Measurements de-embedded to sample edges using TRL calibration procedures.

70L Rated Current vs Frequency

