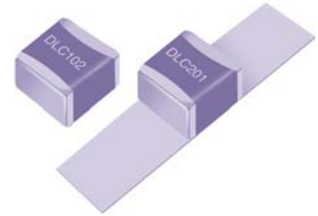


## DLC70E Series

### ◆Product Features

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



### ◆DLC70E Series Rated Capacitance Table

Cap.pF	Code	Tol.	Rated WVDC	Cap.pF	Code	Tol.	Rated WVDC	Cap.pF	Code	Tol.	Rated WVDC
1.0	1R0	B,C,D	3600 Code 362 or 7200 Code 722	22	220	F,G, J,K, M	3600 Code 362 or 7200 Code 722	470	471	F,G, J,K, M	2500 Code 252
1.2	1R2			27	270			560	561		
1.5	1R5			33	330			680	681		
1.8	1R8			39	390			820	821		
2.2	2R2			47	470			1000	102		
2.7	2R7			56	560			1200	122		
3.3	3R3			68	680			1500	152		
3.9	3R9			82	820			1800	182		
4.7	4R7			100	101			2200	222		
5.6	5R6			120	121			2700	272		
6.8	6R8	150	151	3300	332	G,J, K,M	500 Code 501				
8.2	8R2	180	181	4700	472						
10	100	220	221	5100	512						
12	120	F,G, J,K, M	3600 Code 362	270	271						
15	150			330	331						
18	180			390	391						

Remark: special capacitance, tolerances and WVDC are available, consult with DALICAP.

### ◆DLC70E Chip Dimensions

unit:inch(millimeter)

	Length	width	Thickness
DLC70E Chip Dimensions	0.380+.015~-0.010 (9.65+0.38~-0.25)	.380 ± .010 (9.65 ± 0.25)	0.117(4.5)max

### ◆ Performance


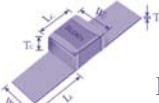
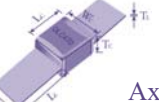

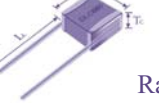

Item	Specifications
Quality Factor (Q)	1 pF to 1000 pF: greater than 10,000 at 1 MHz. 1100 pF to 5100 pF: greater than 10,000 at 1 KHz.
Insulation Resistance (IR)	Test Voltage: 500V 10 <sup>5</sup> Megohms min. @ +25°C at rated WVDC. 10 <sup>4</sup> Megohms min. @ +125°C at rated WVDC.
Rated Voltage	See Rated Voltage Table
Dielectric Withstanding Voltage (DWV)	Rated WVDC: 3600V 1 pF to 680 pF: 120% of rated WVDC for 5 secs. 820 pF to 2200 pF: 150% of rated WVDC for 5 secs. 2700 pF to 5100 pF: 250% of rated WVDC for 5 secs. Rated WVDC: 7200V 1 pF to 82 pF: 8000V applied for 5 secs.
Operating Temperature Range	-55°C to +125°C
Temperature Coefficient (TC)	0 ± 30ppm/°C
Capacitance Drift	± 0.02% or ± 0.02pF, whichever is greater.
Piezoelectric Effects	None
Termination Type	See Termination Type Table


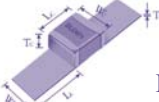
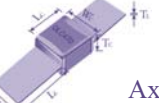

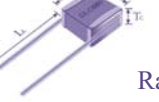

### ◆ Environmental Tests

Item	Specifications	Method
Thermal shock	DWV: the initial value IR: Shall be not less than 30% the initial value Capacitance change: no more than 0.5% or 0.5pF.	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 be not more than 3 minutes. Perform the five cycles.
Moisture resistance		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.	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 min.
Life	IR: Shall be not less than 30% the initial value Capacitance change: no more than 0.2%	MIL-STD-202, Method 108, for 2000 hours, at 125°C. Rated voltage ≥ 7200V: 100% Rated voltage D.C. applied. 1500V ≤ Rated voltage < 7200V: 120% Rated voltage D.C. applied. Rated voltage < 1500V: 150% Rated voltage D.C. applied.

**◆DLC70E Lead Type and Dimensions**

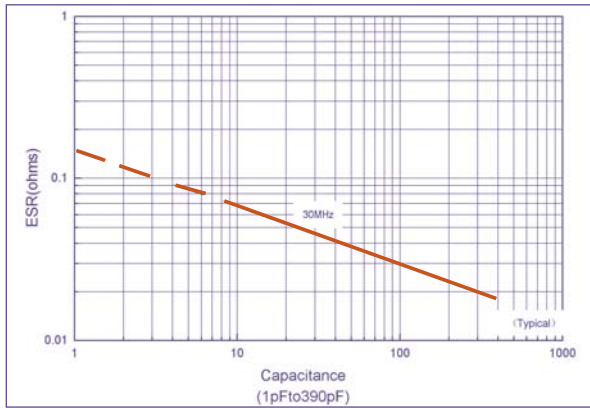
unit:inch(millimeter)

Series	Term. Code	Type/Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material
			Length (L <sub>c</sub> )	Width (W <sub>c</sub> )	Thickness (T <sub>c</sub> )	Overlap (B)	Length (L <sub>L</sub> )	Width (W <sub>L</sub> )	Thickness (T <sub>L</sub> )	
70E	W	 Chip	.380+.015 ~.010 (9.65+0.38 ~-0.25)	.380 ±.010 (9.65 ±0.25)	.177 (4.50) max	.063 (1.60) max	—	—	—	Nickel, Plated 100% Sn, RoHS Compliant
70E	MS	 Microstrip	.380 +.015~ -.010 (9.65 ±0.25)	.380 ±.010 (9.65± 0.25)	.177 (4.5) max	—	.750 (19.05) min	.350 ±.010 (8.89± 0.25)	.010 ±.005 (0.25± 0.13)	Silver or Silver- plated Copper
70E	AR	 Axial Ribbon								
70E	RR	 Radial Ribbon								
70E	RW	 Radial Wire								
70E	AW	 Axial Wire								

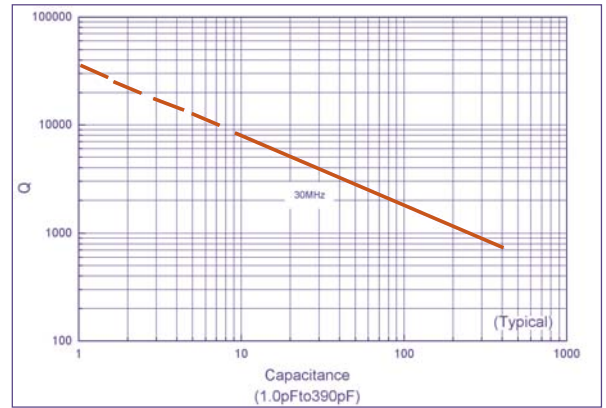
Series	Term. Code	Type/Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material
			Length (L <sub>c</sub> )	Width (W <sub>c</sub> )	Thickness (T <sub>c</sub> )	Overlap (B)	Length (L <sub>L</sub> )	Width (W <sub>L</sub> )	Thickness (T <sub>L</sub> )	
70E	P (non-mag)	 Chip	.380+.015 ~.010 (9.65+0.38 ~-0.25)	.380 ±.010 (9.65 ±0.25)	.177 (4.50) max	.063 (1.60) max	—	—	—	Copper Plated 100% Sn, Non-Mag, RoHS Compliant
70E	MN (non-mag)	 Microstrip	.380 +.015~ -.010 (9.65 ±0.25)	.380 ±.010 (9.65± 0.25)	.177 (4.5) max	—	.750 (19.05) min	.350 ±.010 (8.89± 0.25)	.010 ±.005 (0.25± 0.13)	Silver or Silver- plated Copper
70E	AN (non-mag)	 Axial Ribbon								
70E	FN (non-mag)	 Radial Ribbon								
70E	RN (non-mag)	 Radial Wire								
70E	BN (non-mag)	 Axial Wire								

◆ **DLC70E Performance Curve**

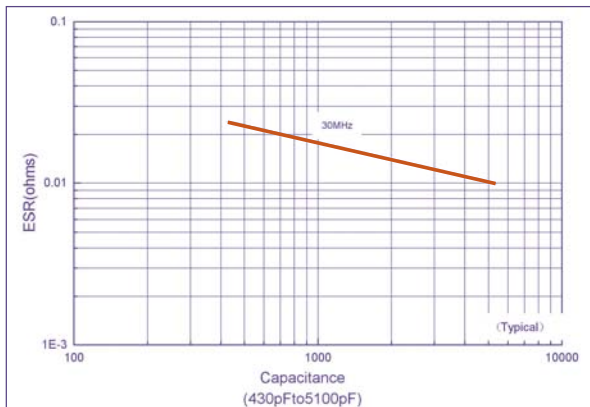
**ESR VS Capacitance**



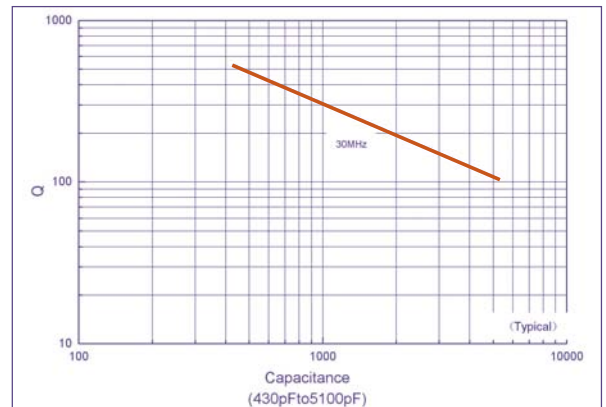
**Q VS Capacitance**



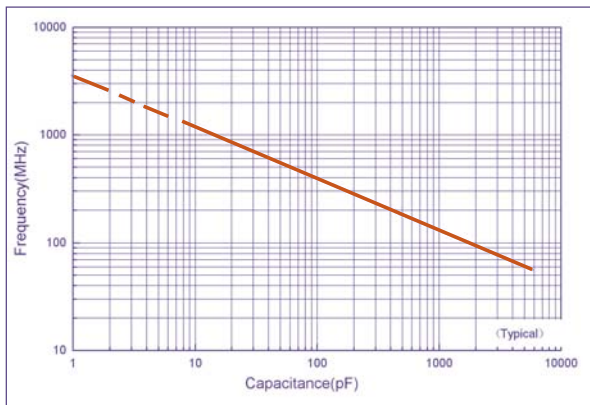
**ESR VS Capacitance**



**Q VS Capacitance**



**Series resonance VS Capacitance**



**Current rating VS Capacitance**

