

**KEC10C Series**
**◆Product Features**

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


**◆KEC10C Series Rated Capacitance Table**

Cap.pF	Code	Tol.	WVDC V	Cap.pF	Code	Tol.	WVDC V	Cap.pF	Code	Tol.	WVDC V
1.0	1R0	B,C,D	2500 Code 252	18	180	F,G, J,K, M	2500 Code 252	330	331	F,G, J,K, M	1500 Code 152
1.2	1R2			22	220			390	391		
1.5	1R5			27	270			470	471		
1.8	1R8			33	330			560	561		1000 Code 102
2.2	2R2			39	390			680	681		
2.7	2R7			47	470			820	821		
3.3	3R3			56	560			1000	102		
3.9	3R9			68	680			1200	122		
4.7	4R7			82	820			1500	152		500 Code 501
5.6	5R6			100	101			1800	182		300 Code 301
6.8	6R8			120	121			2200	222		
8.2	8R2	150	151	2700	272						
10	100	F,G, J,K, M		180	181						
12	120			220	221						
15	150			270	271						

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

**◆KEC10C Chip Dimensions**

unit:inch(millimeter)

	Length	Width	Thickness
KEC10C Chip Dimensions	.230+.020~- .010 (5.84+0.51~ -0.25)	.250 ± .015 (6.35 ± 0.38)	.165(4.19)max

### ◆ Performance


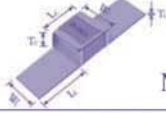
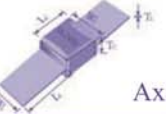



Item	Specifications
Quality Factor (Q)	1 pF to 1000 pF: greater than 10,000 at 1 MHz. 1100 pF to 2700 pF: greater than 10,000 at 1 KHz.
Insulation Resistance (IR)	Test Voltage: 500V 10 <sup>5</sup> Megohms min. @ +25°C at rated WVDC. 10 <sup>4</sup> Megohms min. @ +125°C at rated WVDC.
Rated Voltage	See Rated Voltage Table
Dielectric Withstanding Voltage(DWV)	1 pF to 470 pF: 120% of rated WVDC for 5 secs. 560 pF to 1200 pF: 150% of rated WVDC for 5 secs. 1500 pF to 2700 pF: 250% of rated WVDC for 5 secs.
Operating Temperature Range	-55°C to +125°C
Temperature Coefficient (TC)	+90 ± 20ppm/°C
Capacitance Drift	± 0.02% or ± 0.02pF, whichever is greater.
Piezoelectric Effects	None
Termination Type	See Termination Type Table


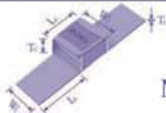
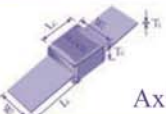



### ◆ Environmental Tests

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. no less than 1500V, 120% Rated voltage D.C. applied; less than 1500V, 150% rated voltage D.C. applied.

**◆KEC10C Lead Type and Dimensions**

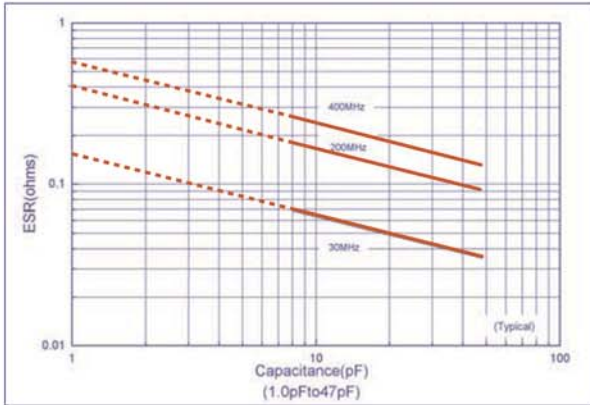
unit:inch(millimeter)

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> )		
10C	W	 Chip	.230+.020 ~.010 (5.84+0.51 ~-0.25)	.250 ± .015 (6.35 ±0.38)	.165 (4.19) max	.047 (1.20) max	—	—	—	Nickel, Plated 100% Sn, RoHS Compliant	
10C	MS	 Microstrip	.245 ± (6.22 ±0.64)	.250 ± (6.35 ±0.38)	.165 (4.19) max	—	.500 (12.7) min	.240 ±	.004 ±	Silver or Silver- plated Copper	
10C	AR	 Axial Ribbon						.005 (6.10 ±0.13)	.001 (0.1 ±0.025)		
10C	RR	 Radial Ribbon						.394 ±.039 (10±1)	.114 ±.005 (2.9 ±0.13)		.012 ±.001 (0.3 ±0.025)
10C	RW	 Radial Wire						1.0 (25.4) min	Dia.=.031±.004 (0.8±0.1)		
10C	AW	 Axial Wire									

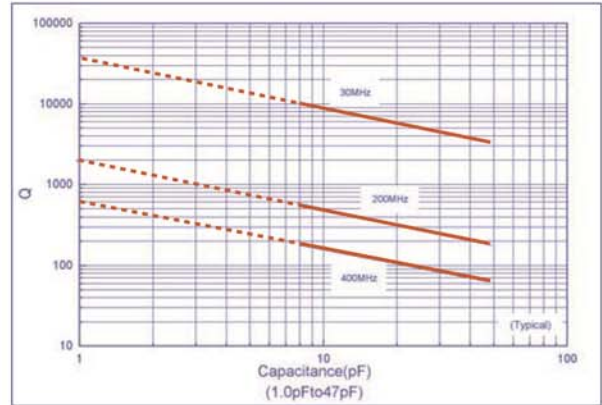
Series	Term. Code	Type/Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material	
			Length (L <sub>c</sub> )	Width (W <sub>c</sub> )	Thickness (T <sub>c</sub> )	Overlap (B)	Length (L <sub>l</sub> )	Width (W <sub>l</sub> )	Thickness (T <sub>l</sub> )		
10C	P (non-mag)	 Chip	.230+.020 ~.010 (5.84+0.51 ~-0.25)	.250 ± .015 (6.35 ±0.38)	.165 (4.19) max	.047 (1.20) max	—	—	—	Copper Plated 100% Sn, Non-Mag, RoHS Compliant	
10C	MN (non-mag)	 Microstrip	.245 ± (6.22 ±0.64)	.250 ± (6.35 ±0.38)	.165 (4.19) max	—	.500 (12.7) min	.240 ±	.004 ±	Silver or Silver- plated Copper	
10C	AN (non-mag)	 Axial Ribbon						.005 (6.10 ±0.13)	.001 (0.1 ±0.025)		
10C	FN (non-mag)	 Radial Ribbon						.394 ±.039 (10±1)	.114 ±.005 (2.9 ±0.13)		.012 ±.001 (0.3 ±0.025)
10C	RN (non-mag)	 Radial Wire						1.0 (25.4) min	Dia.=.031±.004 (0.8±0.1)		
10C	BN (non-mag)	 Axial Wire									

◆ KEC10C Performance Curve

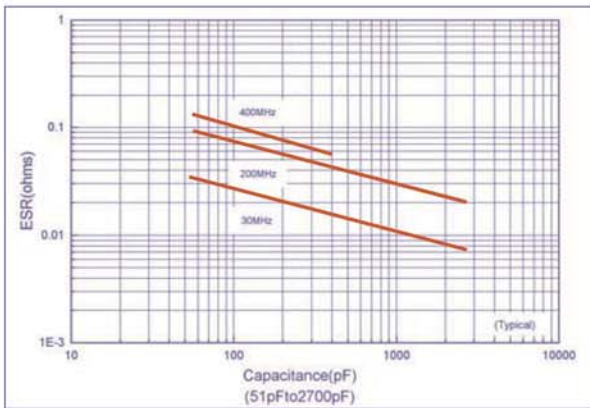
ESR VS Capacitance



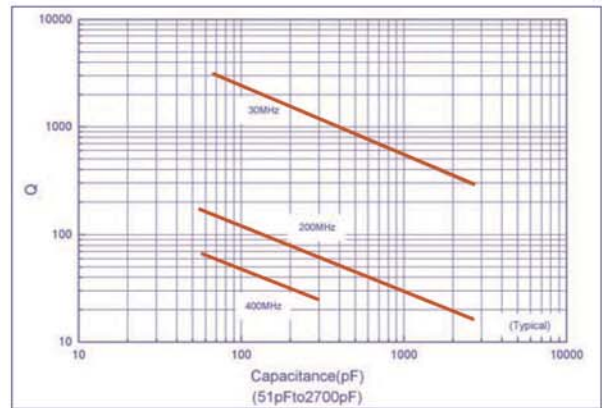
Q VS Capacitance



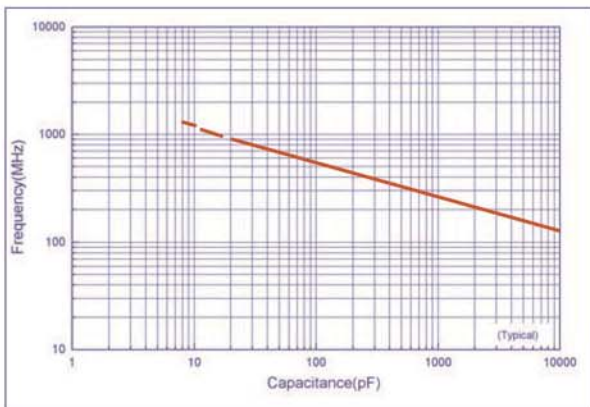
ESR VS Capacitance



Q VS Capacitance



Series resonance VS Capacitance



Current rating VS Capacitance

