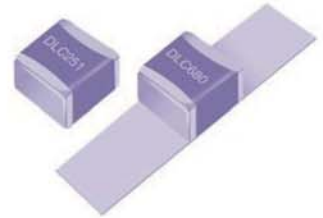


## KEC10E Series

### ◆Product Features

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



### ◆KEC10E 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		1000 Code 102
1.5	1R5			33	330			680	681		1000 Code 102
1.8	1R8			39	390			820	821		1000 Code 102
2.2	2R2			47	470			1000	102		1000 Code 102
2.7	2R7			56	560			1200	122		1000 Code 102
3.3	3R3			68	680			1500	152		1000 Code 102
3.9	3R9			82	820			1800	182		1000 Code 102
4.7	4R7			100	101			2200	222		1000 Code 102
5.6	5R6			120	121			2700	272		1000 Code 102
6.8	6R8	150	151	3300	332	500 Code 501					
8.2	8R2	180	181	4700	472	500 Code 501					
10	100	F,G, J,K, M		220	221		3600 Code 362	5100	512		
12	120			270	271						
15	150			330	331						
18	180			390	391						

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

### ◆KEC10E Chip Dimensions

unit:inch(millimeter)

	Length	Width	Thickness
KEC10E Chip Dimensions	0.380±.015~-.010 (9.65±0.38~-0.25)	.380±.010 (9.65±0.25)	0.117(4.5)max

**◆ Performance**


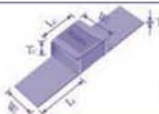
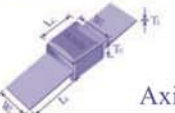


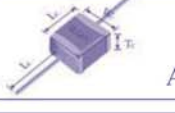
Item	Specifications
Quality Factor (Q)	1 pF to 1000 pF: greater than 10,000 at 1 MHz. 1100 pF to 2700 pF: greater than 10,000 at 1 KHz.
Insulation Resistance (IR)	Test Voltage: 500V 10 <sup>5</sup> Megohms min. @ +25°C at rated WVDC. 10 <sup>4</sup> Megohms min. @ +125°C at rated WVDC.
Rated Voltage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


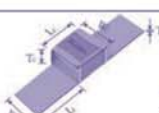
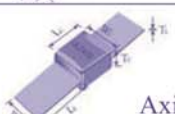


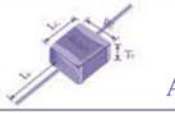
**◆ Environmental Tests**

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. 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.

**◆KEC10E Lead Type and Dimensions**

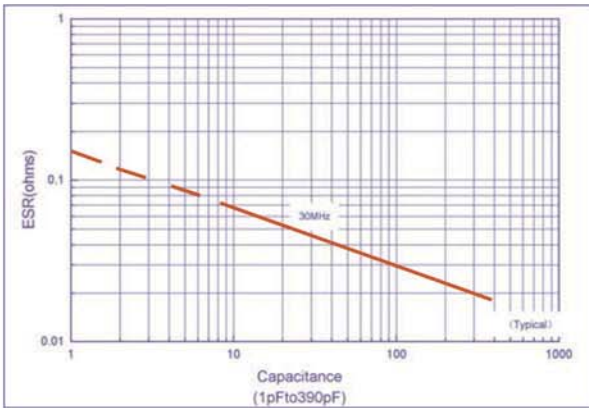
unit:inch(millimeter)

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> )	
10E	W	 Chip	.380+0.015 ~.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
10E	MS	 Microstrip	.380 +0.015~ -.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
10E	AR	 Axial Ribbon								
10E	RR	 Radial Ribbon								
10E	RW	 Radial Wire								
10E	AW	 Axial Wire								
							.394 ±.039 (10±1)	.114 ±.005 (2.9 ±0.13)	.012 ±.002 (0.3 ±0.05)	
							.787 (20) min	Dia.=.031±.004 (0.8±0.1)		
							1.18 (30) min			

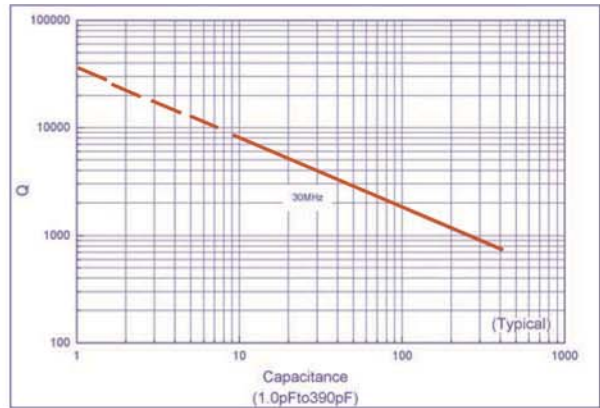
Series	Term. Code	Type/Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material
			Length (L <sub>c</sub> )	Width (W <sub>c</sub> )	Thickness (T <sub>c</sub> )	Overlap (B)	Length (L <sub>l</sub> )	Width (W <sub>l</sub> )	Thickness (T <sub>l</sub> )	
10E	P (non-mag)	 Chip	.380+0.015 ~.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
10E	MN (non-mag)	 Microstrip	.380 +0.015~ -.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
10E	AN (non-mag)	 Axial Ribbon								
10E	FN (non-mag)	 Radial Ribbon								
10E	RN (non-mag)	 Radial Wire								
10E	BN (non-mag)	 Axial Wire								
							.394 ±.039 (10±1)	.114 ±.005 (2.9 ±0.13)	.012 ±.002 (0.3 ±0.05)	
							.787 (20) min	Dia.=.031±.004 (0.8±0.1)		
							1.18 (30) min			

◆ KEC10E Performance Curve

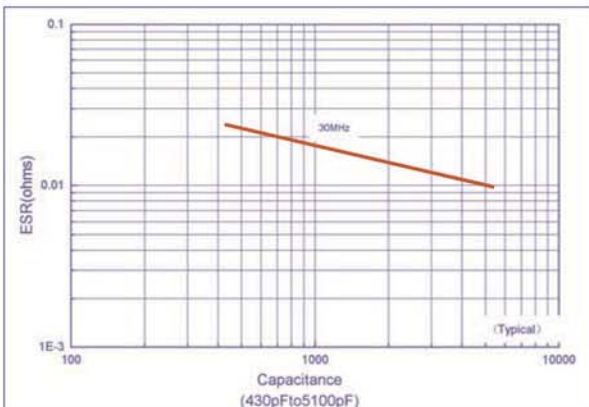
ESR VS Capacitance



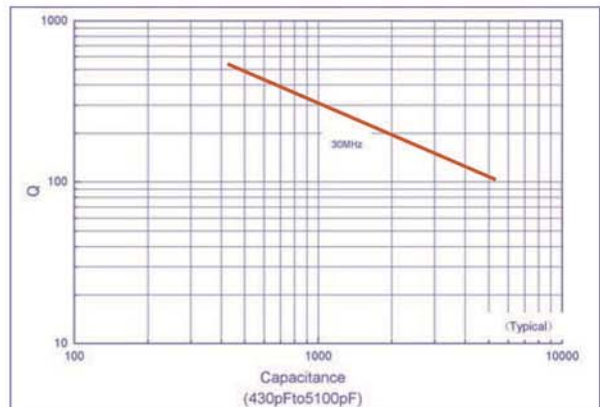
Q VS Capacitance



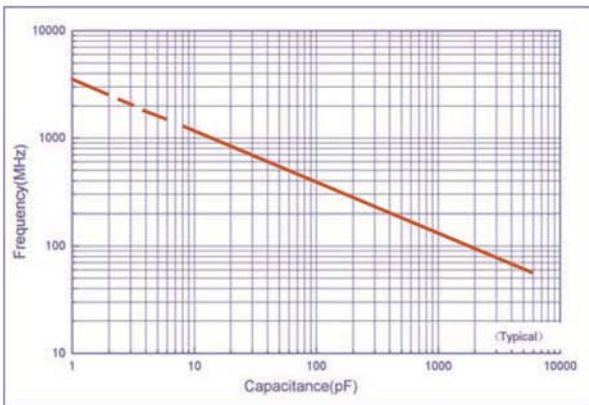
ESR VS Capacitance



Q VS Capacitance



Series resonance VS Capacitance



Current rating VS Capacitance

