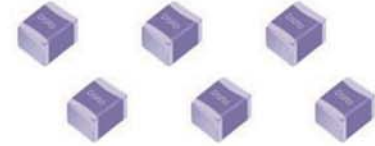


## KEC10B Series

### ◆Product Features

High Q, High Power, Low ESR/ESL, low Noise, High Self-Resonance,  
 Ultra-Stable Performance.



### ◆KEC10B Series Rated Capacitance Table

Cap.pF	Code	Tol.	WVDC V	Cap.pF	Code	Tol.	WVDC V	Cap.pF	Code	Tol.	WVDC V	Cap.pF	Code	Tol.	WVDC V
0.5	0R5			3.3	3R3			24	240			180	181		300 Code 301
0.6	0R6			3.6	3R6			27	270		500	200	201		200 Code 201
0.7	0R7			3.9	3R9			30	300		Code 501	220	221		
0.8	0R8			4.3	4R3			33	330		or 1500	240	241		
0.9	0R9			4.7	4R7	A, B, C, D		36	360		Code 152	270	271		
1.0	1R0			5.1	5R1			39	390			300	301		
1.1	1R1			5.6	5R6			43	430			330	331		
1.2	1R2			6.2	6R2			47	470			360	361		
1.3	1R3		500 Code	6.8	6R8		500 Code	51	510	F, G, J, K, M		390	391		
1.4	1R4	A, B, C, D	501 or 1500 Code	7.5	7R5		501 or 1500 Code	56	560		500 Code	430	431		
1.5	1R5			8.2	8R2			62	620		501 or 1000 Code	470	471	F, G, J, K, M	
1.6	1R6			9.1	9R1			68	680			510	511		
1.7	1R7		152 Code	10	100		152 Code	75	750		102 Code	560	561		
1.8	1R8			11	110	F, G, J, K, M		82	820			620	621		
1.9	1R9			12	120			91	910			680	681		
2.0	2R0			13	130			100	101			750	751		
2.1	2R1			15	150			110	111		300 Code 301 or 1000 Code 102	820	821		
2.2	2R2			16	160			120	121			910	911		
2.4	2R4			18	180			130	131			1000	102		
2.7	2R7			20	200			150	151						
3.0	3R0			22	220			160	161						

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

### ◆KEC10B Chip Dimensions

unit:inch(millimeter)

	Length	Width	Thickness
KEC10B Chip Dimensions	0.110+.025~-0.010 (2.79+0.51~-0.25)	.110±.010 (2.79±0.25)	.10(2.6)max

### ◆ Performance


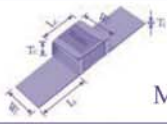

Item	Specifications
Quality Factor (Q)	greater than 10,000 at 1 MHz
Insulation Resistance (IR)	0.5 pF to 470 pF: 10 <sup>6</sup> Megohms min. @ +25°C at rated WVDC. 10 <sup>5</sup> Megohms min. @ +125°C at rated WVDC. 510 pF to 1000 pF: 10 <sup>5</sup> Megohms min. @ +25°C at rated WVDC. 10 <sup>4</sup> Megohms min. @ +125°C at rated WVDC.
Rated Voltage	See Rated Voltage Table
Dielectric Withstanding Voltage(DWV)	250% of rated Voltage for 5 seconds, rated Voltage ≤ 500V 150% of rated Voltage for 5 seconds, 500V ≤ rated Voltage ≤ 1250V 120% of rated Voltage for 5 seconds, rated Voltage > 1250V
Operating Temperature Range	0.5pF to 330pF ≤ 500V: -55°C to +175°C. Other: -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


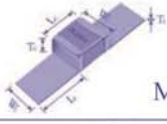
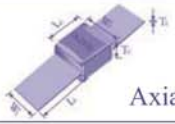
### ◆ Environmental Tests

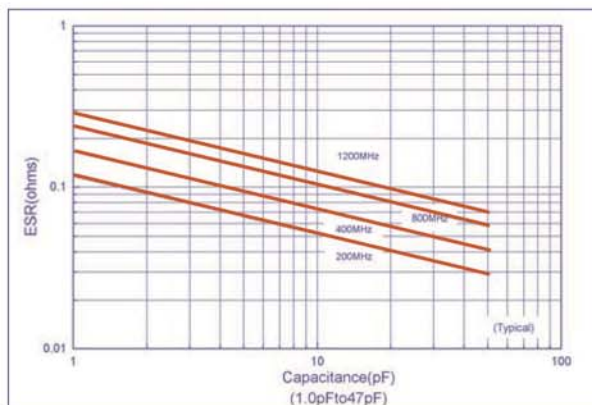
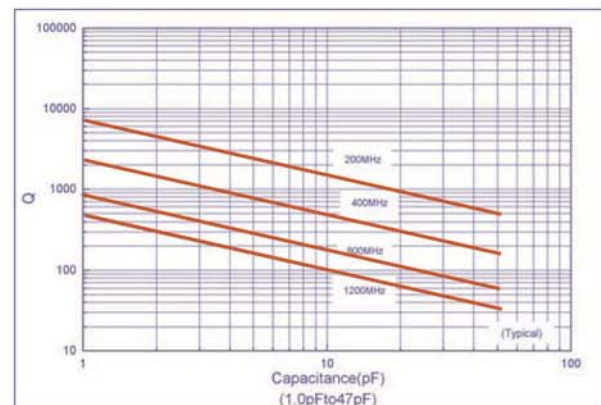
Item	Specifications	Method
Thermal shock	DWV: the initial value IR: Shall be not less than 30% the initial value Capacitance change: no more than 0.5% or 0.5pF.	MIL-STD-202, Method 107, Condition A. At the maximum rated temperature(-55°C and 125°C) stay 30 minutes,The time of removing shall be not more 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 ≤ 500V: 200% Rated voltage D.C. applied. 500V ≤ Rated voltage ≤ 1250V: 120% Rated voltage D.C. applied. Rated voltage > 1250V: 100% Rated voltage D.C. applied.

**◆KEC10B Lead Type and Dimensions**

unit:inch(millimeter)

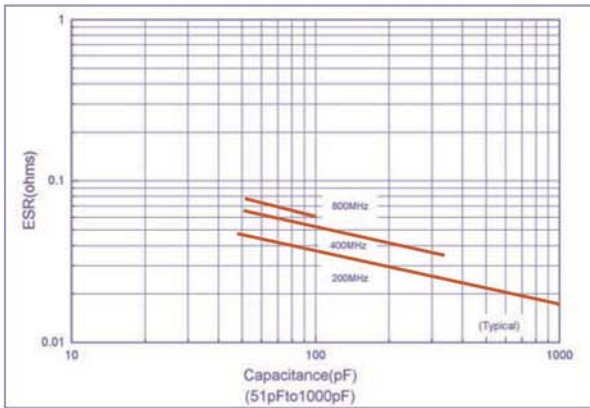
Series	Term. Code	Type / Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material
			Length (L <sub>C</sub> )	Width (W <sub>C</sub> )	Thickness (T <sub>C</sub> )	Overlap (B)	Length (L <sub>L</sub> )	Width (W <sub>L</sub> )	Thickness (T <sub>L</sub> )	
10B	W	 Chip	.110+0.020 ~.010 (2.79+0.51 ~-0.25)	.110 ± .010 (2.79 ±0.25)	.10 (2.54) max	.024 (0.6) max	—	—	—	Nickel, Plated 100% Sn, RoHS Compliant
10B	MS	 Microstrip	.135 ± .015 (3.43 ±0.38)	.110 ± .010 (2.79 ±0.25)	.10 (2.54) max	—	.250 ± 6.35 min	.093 ± .005 (2.36 ±0.13)	.008 ± .001 (0.2 ±0.025)	Silver or Silver- plated Copper
10B	AR	 Axial Ribbon								

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> )	
10B	P (non-mag)	 Chip	.110+0.020 ~.010 (2.79+0.51 ~-0.25)	.110 ± .010 (2.79 ±0.25)	.10 (2.54) max	.024 (0.6) max	—	—	—	Copper Plated 100% Sn, Non-Mag, RoHS Compliant
10B	MN (non-mag)	 Microstrip	.135 ± .015 (3.43 ±0.38)	.110 ± .010 (2.79 ±0.25)	.10 (2.54) max	—	.250 ± 6.35 min	.093 ± .005 (2.36 ±0.13)	.008 ± .001 (0.2 ±0.025)	Silver or Silver- plated Copper
10B	AN (non-mag)	 Axial Ribbon								

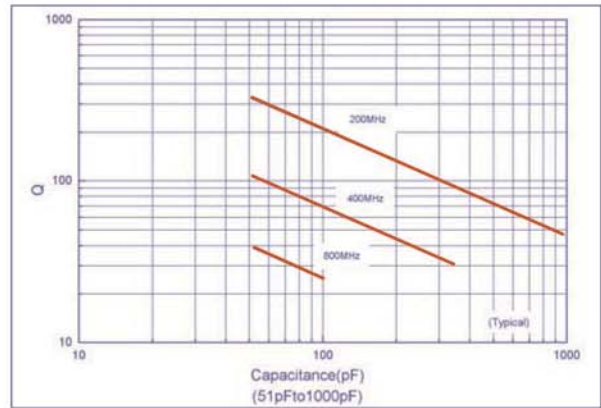
**◆KEC10B Performance Curve**
**ESR VS Capacitance**

**Q VS Capacitance**


◆KEC10B Performance Curve

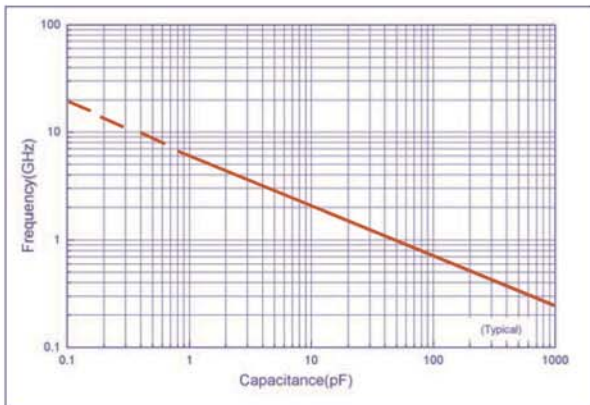
ESR VS Capacitance



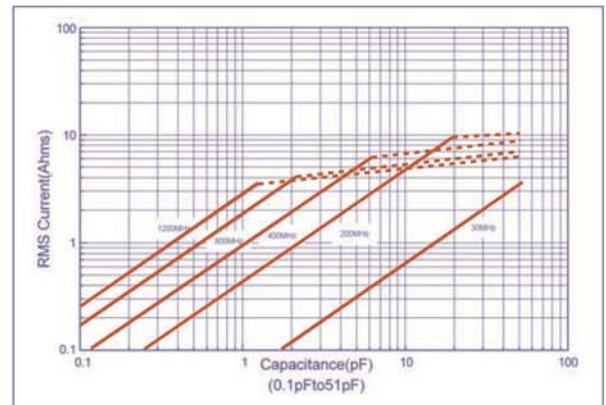
Q VS Capacitance



Series resonance VS Capacitance



Current rating VS Capacitance



Current rating VS Capacitance

