

KEC70B Series
◆Product Features

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


◆KEC70B 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		500 Code 501 or 1500 Code 152	3.6	3R6	A, B, C, D	500 Code 501 or 1500 Code 152	30	300	F, G, J, K, M	500	220	221	200 Code 201	
0.6	0R6			3.9	3R9				Code		240	241			
0.7	0R7			4.3	4R3				501 or 1500		270	271			
0.8	0R8			4.7	4R7				Code		300	301			
0.9	0R9			5.1	5R1				152		330	331			
1.0	1R0			5.6	5R6						360	361			
1.1	1R1			6.2	6R2						390	391			
1.2	1R2			6.8	6R8				500		430	431			
1.3	1R3			7.5	7R5				Code		470	471			
1.4	1R4			8.2	8R2				501		510	511			
1.5	1R5			9.1	9R1			or	560	561					
1.6	1R6			10	100			1000	620	621					
1.7	1R7			11	110			Code	680	681					
1.8	1R8			12	120			102	750	751					
1.9	1R9			13	130				820	821					
2.0	2R0			15	150			300	910	911					
2.1	2R1			16	160			Code	1000	102					
2.2	2R2			18	180			or	1100	112					
2.4	2R4			20	200			1000 Code 102	1200	122					
2.7	2R7			22	220				1500	152					
3.0	3R0		24	240		300	1800	182							
3.3	3R3		27	270		Code 301	2200	222							

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

◆KEC70B Chip Dimensions

unit:inch(millimeter)

	Length	Width	Thickness
KEC70B Chip Dimensions	0.110+.025~- .010 (2.79+0.51~ -0.25)	.110±.010 (2.79±0.25)	.10(2.6)max

◆ Performance


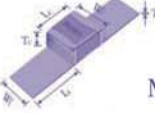
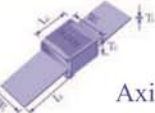
Item	Specifications
Quality Factor (Q)	greater than 10,000 at 1 MHz
Insulation Resistance (IR)	0.5 pF to 470 pF: 10 ⁶ Megohms min. @ +25°C at rated WVDC. 10 ⁵ Megohms min. @ +125°C at rated WVDC. 510 pF to 1000 pF: 10 ⁵ Megohms min. @ +25°C at rated WVDC. 10 ⁴ Megohms min. @ +125°C at rated WVDC.
Rated Voltage	See Rated Voltage Table
Dielectric Withstanding Voltage(DWV)	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)	0 ± 30ppm/°C
Capacitance Drift	± 0.02% or ± 0.02pF, whichever is greater.
Piezoelectric Effects	None
Termination Type	See Termination Type Table


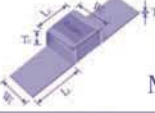
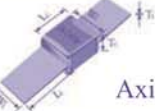
◆ Environmental Tests

Item	Specifications	Method
Thermal shock	DWV: the initial value IR: Shall be not less than 30% the initial value Capacitance change:	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	no more than 0.5% or 0.5pF.	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.

◆ **KEC70B Lead Type and Dimensions**

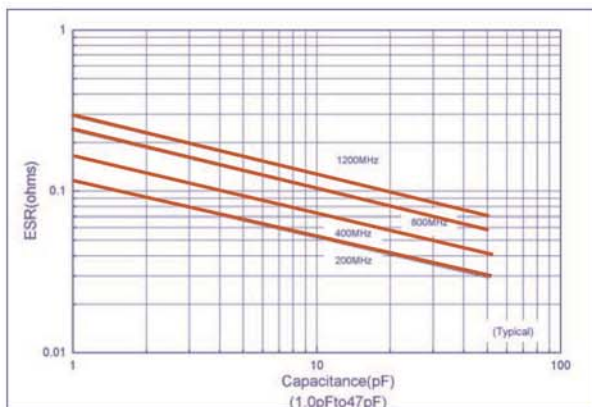
unit:inch(millimeter)

Series	Term. Code	Type / Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material
			Length (L _c)	Width (W _c)	Thickness (T _c)	Overlap (B)	Length (L _i)	Width (W _i)	Thickness (T _i)	
70B	W	 Chip	.110+.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
70B	MS	 Microstrip	.135 ± .015 (3.43 ±0.38)	.110 ± .010 (2.79 ±0.25)	.10 (2.54) max	—	.250 min	.093 ± .005 (2.36 ±0.13)	.008 ± .001 (0.2 ±0.025)	Silver or Silver- plated Copper
70B	AR	 Axial Ribbon								

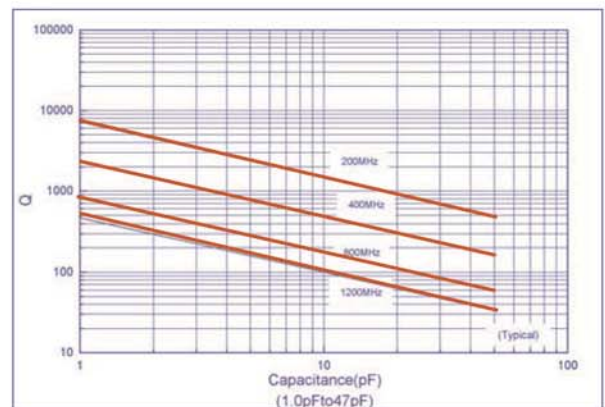
Series	Term. Code	Type / Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material
			Length (L _c)	Width (W _c)	Thickness (T _c)	Overlap (B)	Length (L _i)	Width (W _i)	Thickness (T _i)	
70B	P (non-mag)	 Chip	.110+.020 ~.010 (2.79+0.51 ~0.25)	.110 ± .010 (2.79 ±0.25)	.10 (2.54) max	.024 (0.6) max	—	—	—	Copper Plated 100% Sn, Non-Mag, RoHS Compliant
70B	MN (non-mag)	 Microstrip	.135 ± .015 (3.43 ±0.38)	.110 ± .010 (2.79 ±0.25)	.10 (2.54) max	—	.250 min	.093 ± .005 (2.36 ±0.13)	.008 ± .001 (0.2 ±0.025)	Silver or Silver- plated Copper
70B	AN (non-mag)	 Axial Ribbon								

◆ **KEC70B Performance Curve**

ESR VS Capacitance

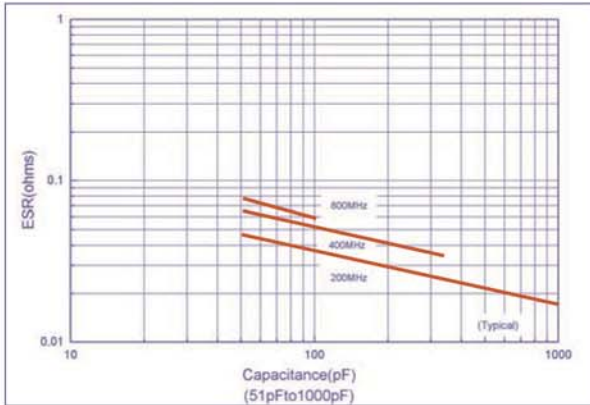


Q VS Capacitance

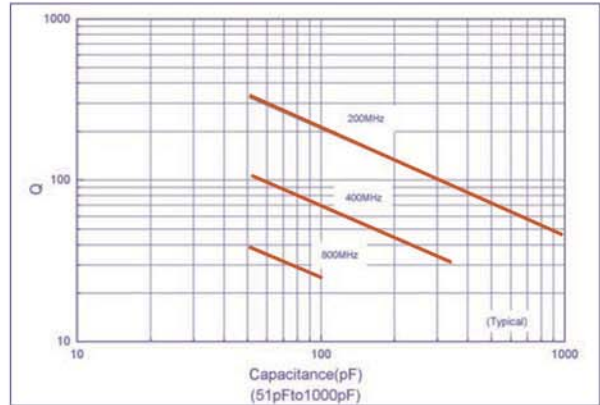


◆ **KEC70B Performance Curve**

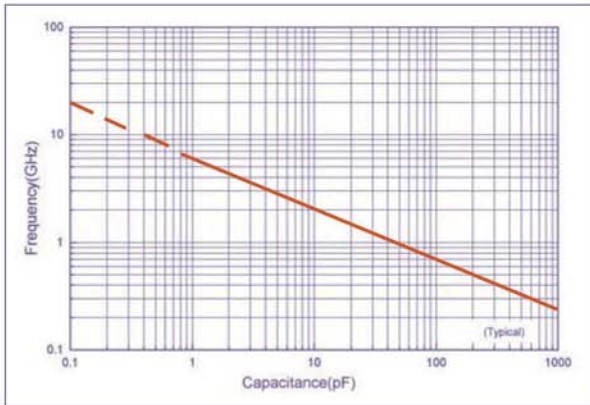
ESR VS Capacitance



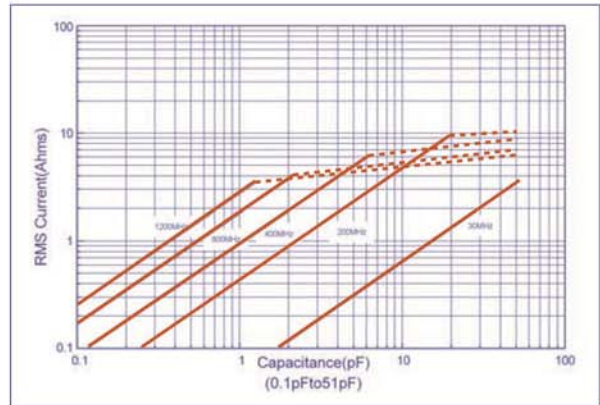
Q VS Capacitance



Series resonance VS Capacitance



Current rating VS Capacitance



Current rating VS Capacitance

