KEC70F Series

◆Product Features

High Q, High RF Current/Voltage, High RF Power, Low ESR/ESL, Low Noise,

Ultra- Stable Performance.

◆KEC70F 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	2000V Code 202 or 3000V Code 302 or 5000V Code 502	22	220	G,J, K,M	2000V Code 202 or 3000V Code 302 or 5000V Code 502	390	391	G,J, K,M	2000V Code 202 or 3000V Code 302
1.2	1R2			27	270			470	471		
1.5	1R5			33	330			560	561		
1.8	1R8			39	390			680	681		
2.2	2R2			47	470			820	821		2000V Code 202
2.7	2R7			56	560			1000	102		
3.3	3R3			68	680			1200	122		
3.9	3R9			82	820			1500	152		
4.7	4R7			100	101			1800	182		
5.6	5R6			120	121		2000V Code 202 or 3000V Code 302	2200	222		1000V Code 102
6.8	6R8			150	151			2700	272		
8.2	8R2			180	181			3300	332		
10	100	G,J, K,M		220	221			4700	472		
12	120			270	271			5100	512		
15	150			300	301			5600	562		
18	180							6800	682		

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

◆Performance

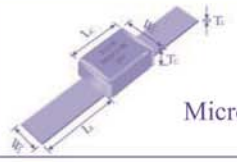
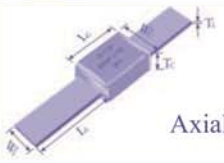
Item	Specifications
Quality Factor (Q)	1 pF to 1000 pF: greater than 2000 at 1 MHz. More than 1000 pF: greater than 2000 at 1 KHz.
Insulation Resistance (IR)	Test Voltage: 500V 10^5 Megohms min. @ +25℃ at rated WVDC. 10^4 Megohms min. @ +125℃ at rated WVDC.
Rated Voltage	See Rated Voltage Table
Dielectric Withstanding Voltage(DWV)	250% of rated WVDC for 5 seconds.
Operating Temperature Range	−55℃ to +125℃
Temperature Coefficient (TC)	0±30ppm/℃
Capacitance Drift	±0.02% or ±0.02pF, whichever is greater.
Piezoelectric Effects	None

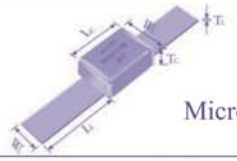
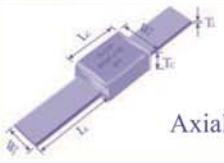
◆Environmental Tests

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 cycle
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°Cwith 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. 150% Rated voltage D.C. applied.
Terminal Strength	Microstrip: more than 20 N; lead wire: more than 10 N.	MIL-STD-202, Method 211

◆KEC70F Lead Type and Dimensions

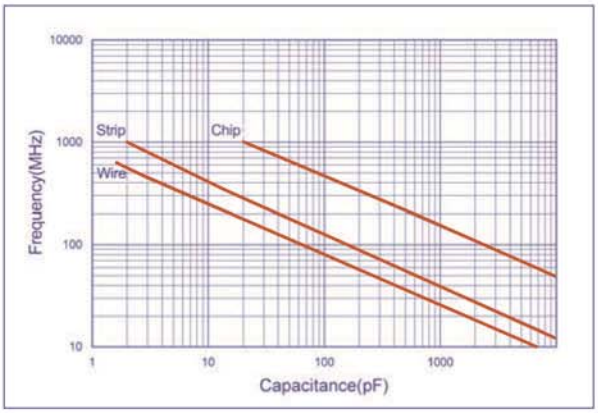
unit: inch(millimeter)

Series	Term. Code	Type/Outlines	Capacitor Dimensions			Lead Dimensions			Lead Material
			Length (L_C)	Width (W_C)	Thickness (T_C)	Length (L_L)	Width (W_L)	Thickness (T_L)	
70F	MS	 Microstrip	.614 +.015~ −.010 (15.60 +0.38~ −0.25)	.433 ±.01 (11.0 ±0.25)	.154 ±.008 (3.90 ±0.20)	.787 (20.00) min	.35 ±.01 (8.89 ±0.25)	.01 ±.005 (0.25 ±0.13)	Silver-plated Copper
70F	AR	 Axial Ribbon							
70F	RW	 Radial Wire				.787 (20.00) min	Dia.=.03 ± .004 (0.8±0.1)		
70F	AW	 Axial Wire				1.181 (30.00) min			

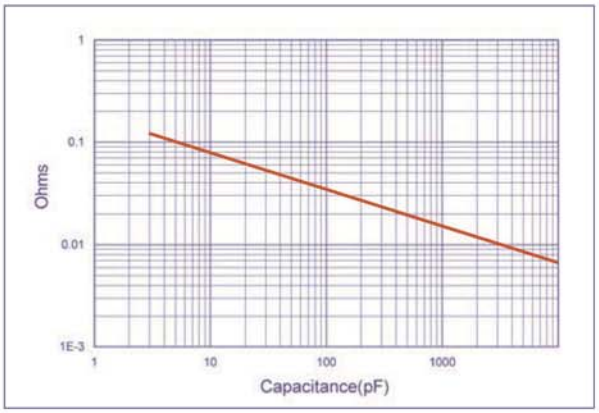
Series	Term. Code	Type/Outlines	Capacitor Dimensions			Lead Dimensions			Lead Material
			Length (L_C)	Width (W_C)	Thickness (T_C)	Length (L_L)	Width (W_L)	Thickness (T_L)	
70F	MN (non-mag)	 Microstrip	.614 +.015~ −.010 (15.60 +0.38~ −0.25)	.433 ±.01 (11.0 ±0.25)	.154 ±.008 (3.90 ±0.20)	.787 (20.00) min	.35 ±.01 (8.89 ±0.25)	.01 ±.005 (0.25 ±0.13)	Silver-plated Copper
70F	AN (non-mag)	 Axial Ribbon							
70F	RN (non-mag)	 Radial Wire				.787 (20.00) min	Dia.=.03 ± .004 (0.8±0.1)		
70F	BN (non-mag)	 Axial Wire				1.181 (30.00) min			

◆KEC70F Performance Curve

Self Resonant Frequency vs Capacitance

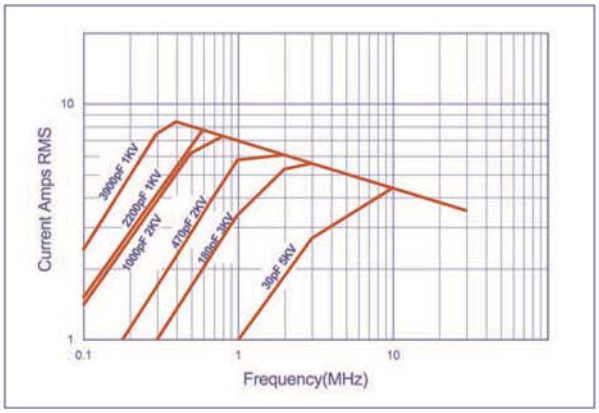


ESR vs Capacitance measured @ 30MHz



%Maximum Current vs Ambient Temperature

KEC70F Wire Terminals Rated Current vs Frequency



KEC70F Strip Terminals Rated Current vs Frequency