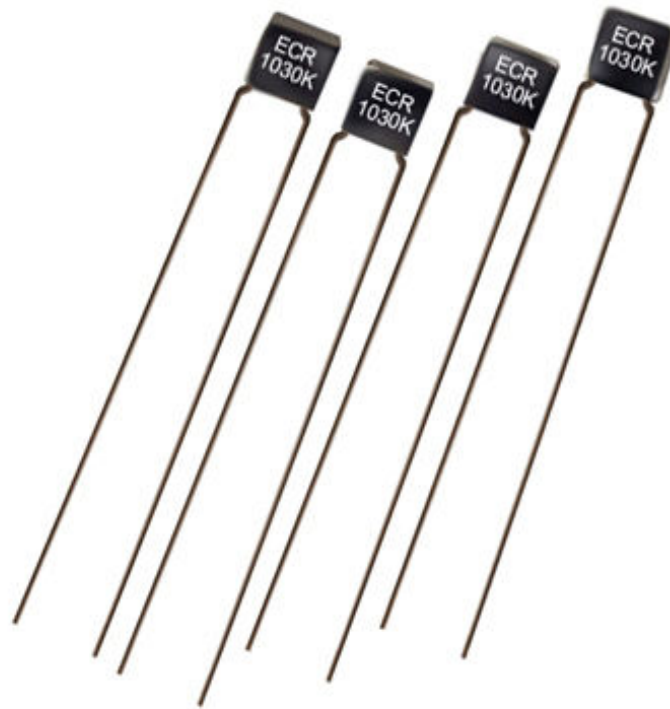


**Avionicap<sup>®</sup> Sub-Miniature Metallized Polycarbonate**

Avionicap<sup>®</sup> Sub-Miniature Metallized Polycarbonate Capacitors. Replacement for CK05 ceramics with improved electrical properties. Ideal for medical devices and instrumentation, computers, signal processing equipment, precision testing/measurement equipment, micro circuitry, telecommunications, avionics.



**FEATURES**

- No Piezoelectric Effect
- Not Frequency Sensitive
- Not Voltage Sensitive

# Specification Summary

Capacitance Range  
0.001 $\mu$ F to 1.0 $\mu$ F

Capacitance Tolerance  
Available in Tolerances of 1%, 2%, 5%, 10% and 20%

Operating Temperature Range  
-55°C to +125°C

Enclosure/ Construction  
Premolded epoxy case, epoxy encapsulated.

Voltage Rating  
DC Working Voltages of 30V, 50V, 75V, 100V, 150V, 200V, and 250V are standard.

## Quality Control

- Capacitors are tested 100% for:
- o Capacitance
  - o Tolerance
  - o Dissipation Factor
  - o Dielectric withstanding Voltage
  - o Insulation Resistance

Process and inspection data are maintained on file and available on special request.

## Environmental

Parameter	Method	Condition
Vibration	204	D
Shock	213	I
Humidity	106	-
Thermal Shock	107	B
Life	108	F

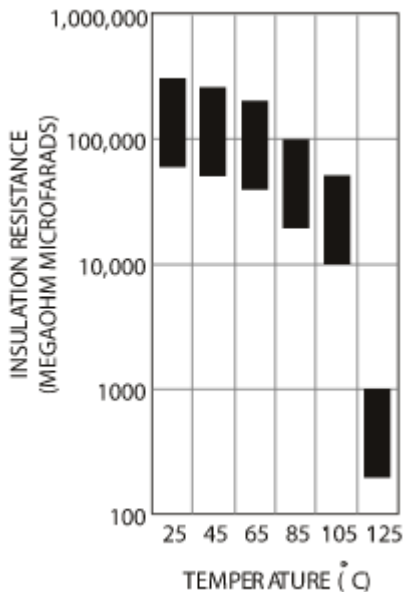
Reference MIL-STD-202

# Characteristics

## Insulation Resistance

Temperature(°C)	25	85	125	
Megaohmsx Microfarads	100,000	7,000	700	

Insulation Resistance



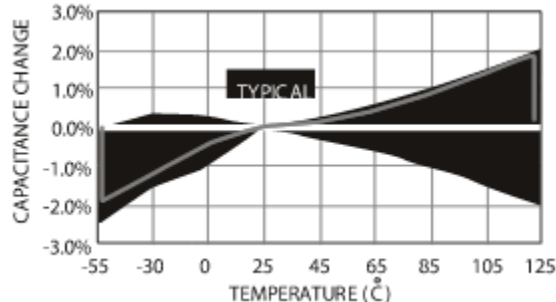
## Dielectric Strength

Capacitance shall withstand a DC potential of 200% rated voltage for two minutes without damage or breakdown. Test voltage must be applied and discharged through a resistance of 1 OHM per volt, minimum, and at 25°C.

## Capacitance Change

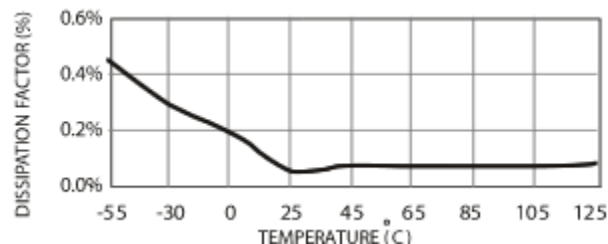
Temperature(°C)	-55	25	85	125
Percentage Change (typical)	-2.5	0	±1.0	±2.0

Capacitance Change



## Dissipation Factor

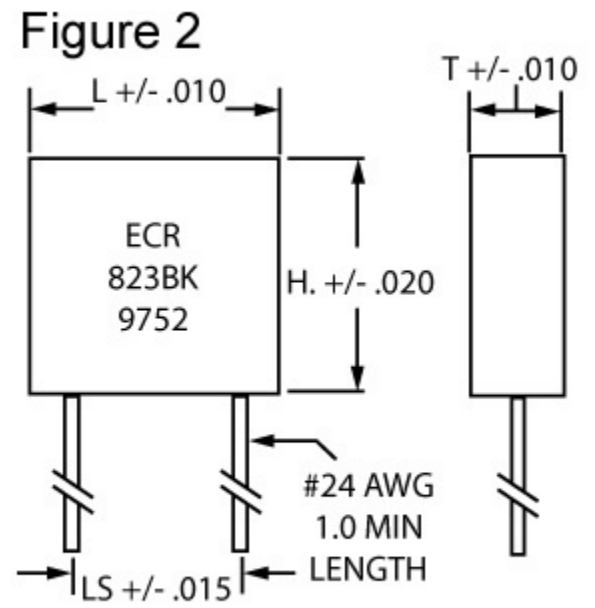
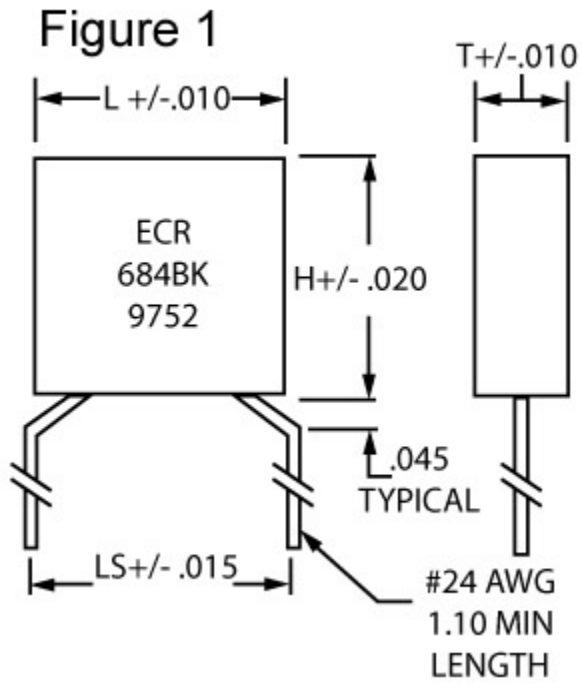
When measured at 1KHz, the dissipation factor shall not exceed 0.3% from +25°C to +125°C.



# ELECTRICAL DATA

EC PART NUMBER	CAP $\mu$ F	VDC	PHYSICAL SIZE			LEAD SPACING LS	FIGURE NO.
			T	H	L		
ECR102G_	0.0010	250	0.090	0.190	0.190	0.2	1
ECR122G_	0.0012	250	0.090	0.190	0.190	0.2	1
ECR152G_	0.0015	250	0.090	0.190	0.190	0.2	1
ECR182G_	0.0018	250	0.090	0.190	0.190	0.2	1
ECR222G_	0.0022	250	0.090	0.190	0.190	0.2	1
ECR272G_	0.0027	250	0.090	0.190	0.190	0.2	1
ECR332G_	0.0033	250	0.090	0.190	0.190	0.2	1
ECR392F_	0.0039	200	0.090	0.190	0.190	0.2	1
ECR472F_	0.0047	200	0.090	0.190	0.190	0.2	1
ECR562F_	0.0056	200	0.090	0.190	0.190	0.2	1
ECR682E_	0.0068	150	0.090	0.190	0.190	0.2	1
ECR822E_	0.0082	150	0.090	0.190	0.190	0.2	1
ECR103D_	0.0100	100	0.090	0.190	0.190	0.2	1
ECR123D_	0.0120	100	0.090	0.190	0.190	0.2	1
ECR153D_	0.0150	100	0.090	0.190	0.190	0.2	1
ECR183D_	0.0180	100	0.090	0.190	0.190	0.2	1
ECR223C_	0.0220	75	0.090	0.190	0.190	0.2	1
ECR273C_	0.0270	75	0.090	0.190	0.190	0.2	1
ECR333B_	0.0330	50	0.090	0.190	0.190	0.2	1
ECR393B_	0.0390	50	0.090	0.190	0.190	0.2	1
ECR473B_	0.0470	50	0.090	0.190	0.190	0.2	1
ECR563B_	0.0560	50	0.090	0.190	0.190	0.2	1
ECR683B_	0.0680	50	0.095	0.245	0.295	0.2	2
ECR823B_	0.0820	50	0.095	0.245	0.295	0.2	2
ECR104B_	0.1000	50	0.095	0.245	0.295	0.2	2
ECR124B_	0.1200	50	0.095	0.295	0.295	0.2	2
ECR154B_	0.1500	50	0.095	0.295	0.295	0.2	2
ECR184B_	0.1800	50	0.095	0.295	0.295	0.2	2
ECR224B_	0.2200	50	0.095	0.395	0.395	0.3	2
ECR274B_	0.2700	50	0.095	0.395	0.395	0.3	2
ECR334B_	0.3300	50	0.095	0.395	0.395	0.3	2
ECR394B_	0.3900	50	0.095	0.395	0.395	0.3	2
ECR474B_	0.4700	50	0.145	0.395	0.395	0.3	2
ECR564B_	0.5600	50	0.145	0.395	0.395	0.3	2
ECR684B_	0.6800	50	0.195	0.395	0.395	0.3	2
ECR824B_	0.8200	50	0.195	0.395	0.395	0.3	2
ECR105B_	1.0000	50	0.195	0.395	0.395	0.3	2

# MECHANICAL DATA



## ADDITIONAL INFORMATION

A new innovation pioneered by Electronic Concepts leads the way to a new era of smaller metallized film capacitors. Now a combination of excellent electrical characteristics and compactness is offered to the equipment designer in a size comparable to a ceramic CK05 capacitor. Besides the superior electrical characteristics these capacitors are self-healing, as is the case with all the metallized film capacitors. Additionally, these capacitors do not exhibit any of the drawbacks inherent in ceramic capacitors.

## HOW TO ORDER

TYPE ECR-Radial Leads	→	ECR
STYLE / VOLTAGE B=50VDC, C=75VDC, D=100VDC, E=150VDC, F=200VDC, G=250VDC	→	B
CAPACITANCE IN PICO FARADS The first two digits are significant figures, the third digit represents the number of zero to follow to express the capacitance in picofarads.	→	104
TOLERANCE F=±1%, G=±2%, J=±5%, K=±10%, M=±20%	→	K

### Marking And Date Code

All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type ECR, capacitance, tolerance, rated DC working voltage and date code. The first two digits of the date code represent the year, the second two digits the week, i.e., 0952 is the 52nd week of 2009, 0902 is the second week of 2009.

### Quality Assurance

Major emphasis is placed on quality assurance. EC is an ISO 9001-2000 and AS9100:2004 Certified Company. Raw material inspection and the use of SPC manufacturing procedures assure the highest quality standards. Procedures are fully described in the EC Quality Control Manual. Electronic Concepts will continue to advance the state-of-the-art by utilizing leading edge technology, compact capacitor designs and establishing reliability procedures.

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