

MIL-C-5E  
 27 May 1975  
 SUPERSEDING  
 MIL-C-5D  
 5 August 1966

MILITARY SPECIFICATION  
 CAPACITORS, FIXED, MICA DIELECTRIC,  
 GENERAL SPECIFICATION FOR

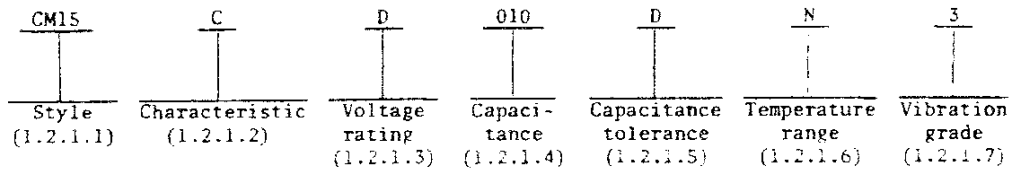
This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the general requirements for molded, dipped, and potted mica dielectric, fixed capacitors intended primarily for use in high-stability, low-loss radio-frequency applications such as tuned circuits (see 6.1). This is a graded specification covering ranges in temperature coefficient, capacitance tolerance, temperature, and vibration.

1.2 Classification.

1.2.1 Type designation. The type designation shall be in the following form, and as specified (see 3.1 and 6.2):



1.2.1.1 Style. The style is identified by the two-letter symbol "CM" followed by a two-digit number; the letters identify mica dielectric, fixed capacitors, and the number identifies the shape and dimensions of the capacitor.

1.2.1.2 Characteristic. The characteristic is identified by a single letter which indicates the relative stability of the capacitor with temperature change, in accordance with table I.

TABLE I. Characteristic.

Symbol	Temperature coefficient	Capacitance drift
	Parts/million/°C	
B - - - - -	Not specified	Not specified
C - - - - -	-200 to +200	±(0.5 percent +0.1 pF)
D - - - - -	-100 to +100	±(0.3 percent +0.1 pF)
E - - - - -	-20 to +100	±(0.1 percent +0.1 pF)
F - - - - -	0 to +70	±(0.05 percent +0.1 pF)

H----- +/-500 see amendment 2

1.2.1.3 Voltage rating. The voltage rating is identified by a single letter in accordance with table II.

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TABLE II. Voltage rating.

Symbol	Voltage rating	Symbol	Voltage rating	Symbol	Voltage rating
	volts, dc		volts, dc		volts, dc
A - - - - -	100	J - - - - -	2,000	R - - - - -	10,000
B - - - - -	250	K - - - - -	2,500	S - - - - -	12,000
C - - - - -	300	L - - - - -	3,000	T - - - - -	15,000
D - - - - -	500	M - - - - -	4,000	U - - - - -	20,000
E - - - - -	600	N - - - - -	5,000	V - - - - -	25,000
F - - - - -	1,000	P - - - - -	6,000	W - - - - -	30,000
G - - - - -	1,200	Q - - - - -	8,000	X - - - - -	35,000
H - - - - -	1,500				

1.2.1.4 Capacitance. The nominal capacitance value expressed in picofarads (pF) is identified by a three-digit number; the first two digits represent significant figures and the last digit specifies the number of zeros to follow.

1.2.1.5 Capacitance tolerance. The capacitance tolerance is identified by a single letter in accordance with table III.

TABLE III. Capacitance tolerance.

Symbol	Capacitance tolerance
D - - - - -	± 5 pF
F - - - - -	±1%
G - - - - -	±2%
J - - - - -	±5%
K - - - - -	±10%

1.2.1.6 Temperature range. The temperature range is identified by a single letter in accordance with table IV.

TABLE IV. Operating temperature range.

Symbol	Operating temperature range
M - - - - -	-55° to +70°C
N - - - - -	-55° to +85°C
O - - - - -	-55° to +125°C
P - - - - -	-55° to +150°C

1.2.1.7 Vibration grade. The vibration grade is identified by a single digit in accordance with table V.

TABLE V. Vibration grade.

Symbol	Vibration condition
1 - - - - -	10 to 55 Hz
3 - - - - -	10 to 2,000 Hz