

## DIPPED MICA CAPACITORS

Case Style	CAPACITANCE RANGE		MIL EQUIVALENT	
	Commercial	MIL	Straight Leads	Crimped Leads
<u>DM 5</u>	1-390	-----	none	none
<u>DM10</u>	1-470	1-390	CM04	CM09
<u>DM15</u>	1-1200	1-390	CM05	CM10
<u>DM19</u>	100-8200	430-4700	CM06	CM11
<u>DM20</u>	680-12000	-----	none	none
<u>DM30</u>	5100-20000	5100-20000	CM07	CM12
<u>DM42</u>	16000-100000	22000-62000	CM08	CM13

ARCO **Dipped Mica Capacitors** are designed to meet the exacting physical, electrical and environmental requirements of the MIL-C-5 and RS-153 specifications.

It is well known that natural **mica** is extremely stable against heat. ARCO **Capacitors** are **manufactured** from selected Indian ruby muscovite **mica** having optimum electrical characteristics. Silvered **mica** is made by printing electrodes on **mica** film with special silver paste. The silvered films are stacked to the desired value interleaved with metal foils for contact. Then the terminals are clamped on to the element. (The terminals are copper clad steel wires finished with a solder coating for good solder ability). The clamped unit is either dipped under vacuum in epoxy resin and coated with epoxy powder conformally or dipped in phenolic resin and vacuum impregnated with liquid epoxy resin. The envelope thus formed gives high moisture and heat resistance to the unit. This design ensures high reliability and stability.

Careful selection of raw materials and constant monitoring of all equipment and processes provides an overall uniform level of quality consistent with the stringent requirements of today's most sophisticated electronic equipment.

### ADVANTAGES OF MICA CAPACITOR

- stability over full equipment life
- high insulation
- low capacitance change with temperature
- close tolerance
- wide operating temperature rang

### APPLICATIONS

These capacitors are particularly useful when close tolerance and capacitance stability are required.

- oscillator circuits
- logic and transmission circuits
- D.C. voltage blocking
- filters
- delay lines
- pulse forming networks

Special compact types: Among the many capacitor types manufactured DM5 type features an extremely small size. A single coat available in all the types. The very thin coating assures high installation density. However, for thin type's additional moisture proof sealing under high humidity conditions.

### CAPACITANCE RANGE:

1pF through 100000pF in case styles DM5 through DM42

**VOLTAGE RANGE:**

50VDCW through 500 VDCW higher voltages on request

**OPERATING TEMPERATURE:**

150°C at full rated voltage

**MARKING**

Arco dipped micas are permanently marked in a manner designed to withstand the environment requirements of the applicable MIL and EIA specifications, as also the permanency and durability requirements of MIL-M-13231.

As a minimum, markings will consist of capacitance in Pico farad, capacitance tolerance in percent, and manufacture identifying symbol. Where space does not permit, the capacitance tolerance will be expressed as a single letter.

Parts supplied to the military specification will bear full, or abbreviated, military designation as required by MIL-C-5.

**ORDERING CODE**

<b>DM 05</b>	<b>F</b>	<b>D</b>	<b>181</b>	<b>J</b>	<b>O</b>	<b>3</b>	<b>SYM</b>
<u>STYLE</u>		<u>WORKING VOLT</u>	<u>CAPACITANCE</u>		<u>TEMP RANGE</u>		<u>SL / SHORTLEAD</u> <u>LF / LEAD FREE</u>
	↓	Y - 50 V DC A - 100 V DC C - 300 V DC D - 500 V DC		↓	O. -55C to + 125C P. -55C to + 150C	↓	
<u>LETTER</u>	<u>TEMPERATURE COEFFICIENT PPM/C</u>	<u>CAPACITANCE DRIFT</u>	<u>CAPACITANCE TOLERANCE</u>		<u>VIBRATION GRADE</u>		
C	-200 TO + 200	+/- (.05% + 0.1pF)	D - +/- 0.5 Pf K - +/- 10% J - +/- 5% G - +/- 2% F - +/- 1% E - +/- ½%		<u>FREQUENCY</u> 10Hz to 2KHz		
D	-100 TO + 100	+/- (0.3% + 0.1pF)					
E	-20 TO + 100	+/- (0.1% + 0.1pF)					
F	0 TO + 70	+/- (0.05% + 0.1pF)					

**STYLE**

Indicated by letters CM or DM followed by two digits identifying case size.

**CHARACTERISTIC**

Identified by a single letter indicating stability with change in temperature.

**CAPACITANCE**

Normal capacitance is expressed in pF and is identified by a three number digit. The first two digits represent significant figures. The third digit indicates the number of digits to follow (sometimes referred

to as the decimal multiplier). Where a third significant figure is required a four digit number would be applied. The first three would indicate significant figures.

**LEADS**

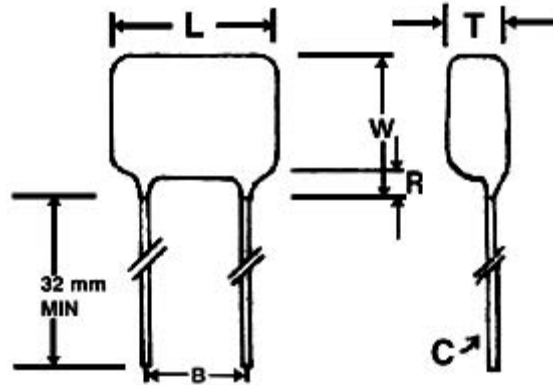
All ARCO dipped mica capacitors are manufactured with copper-clad steel leads. The copper-clad leads are annealed and manufactured with steel wire SAE 1010 or SAE 1006; having a 30% minimum conductivity copper coating. The leads are finished with a solder coating (60% tin and 40% lead), having a minimum thickness of 0.0001" (0.00254mm).

Normal production is supplied with straight radial leads. Crimped and/or cut variations are available on order. Capacitors with working voltage of 1000 VDC, 2500 VDC are available on order.

**SPECIAL FEATURES**

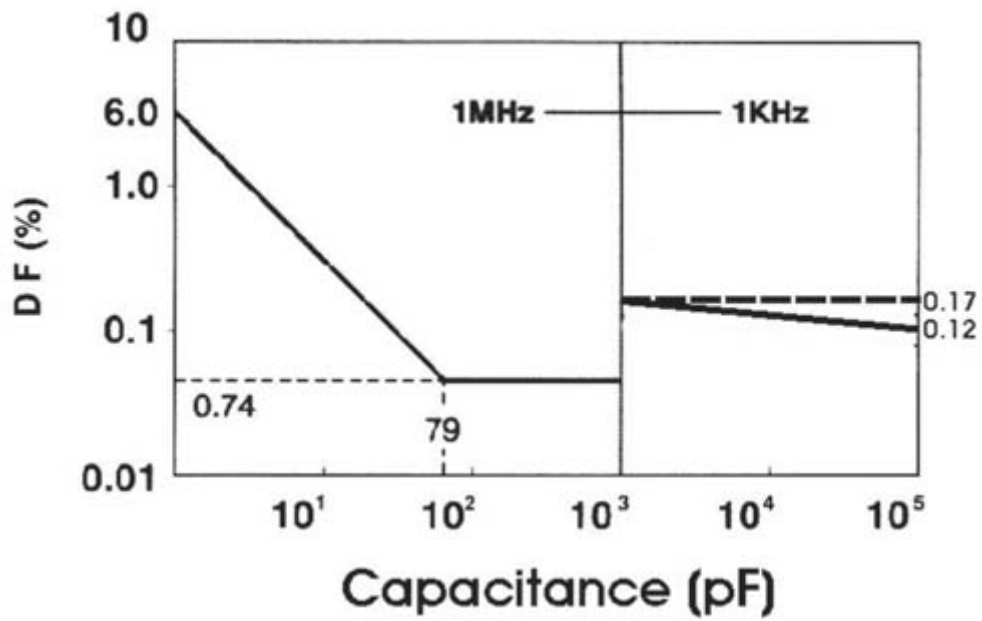
Features provided at our customer's request.

1. Metallurgical bonding.
2. Thin coat (single dip) for high installation density.
3. Crimped and cut leads.
4. Crimped and cut leads with tape and reel package.



DIM	DM5	DM10	DM15	DM19	DM20	DM30	DM42
B	3.05 ±.79	3.57 ±.79	5.95 ±.79	8.73 ±.79	11.11 ±.79	11.11 ±.79	26.99 ±.79
C	#26 (0.4039)	#26 (0.4039)	#22 (0.635)	#20 (0.813)	#20 (0.813)	#18 (1.016)	#18 (1.016)
R	1.98 MAX	1.98 MAX	1.98 MAX	3.18 MAX	3.18 MAX	3.18 MAX	3.18 MAX
<b>All dimensions in mm</b>							

### D FACTOR v/s CAPACITANCE



### INSULATION RESISTANCE v/s CAPACITANCE

