

Types CD17, CD18 & CDV18, High-Frequency, Mica Capacitors

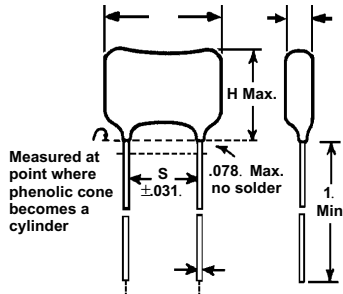
High-Frequency Capacitors for CATV and RF Applications



Types CD17 and CD18 assure controlled, resonance-free performance through 1 GHz. Insertion loss data is typically flat within ± 0.1 dB over the entire frequency range, and is specified to be flat within ± 0.2 dB. Interchangeable with the most popular, common mica capacitors, Type CD17 is available in the same case sizes and lead spacing as CD15; CD18, in the same case sizes and lead spacing as CD19, and CDV18, in the same as CDV19.

Highlights

- Shockproof and delamination free
- Near zero capacitance change with (t), (V) and (f)
- Very high Q at UHF/VHF frequencies
- 0.0005 typical dissipation factor
- 100,000 V/ μ s dV/dt capability minimum
- Low, notch-free impedance to beyond 1 GHz
- Ultra low ESR for cool operation

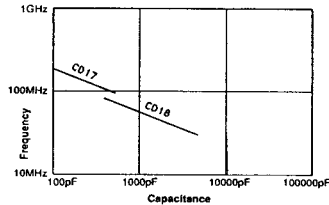


Specifications

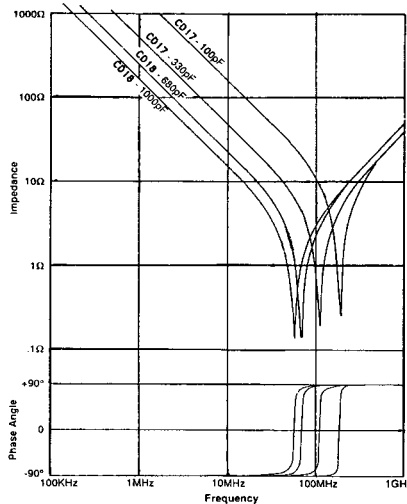
Voltage Range:	100 Vdc to 1,000 Vdc
Capacitance Range:	1 pF to 5,100 pF
Capacitance Tolerance:	$\pm 1/2$ pF (D), ± 1 pF (C), $\pm 1/2\%$ (E), $\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J)
Temperature Range:	-55°C to $+150^\circ\text{C}$

Typical Performance Curves

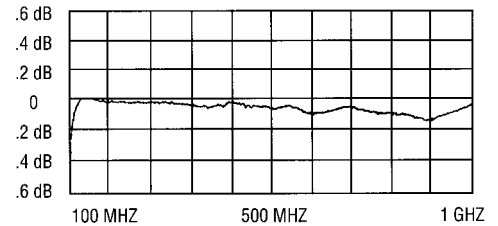
Self-Resonant Frequency vs. Capacitance



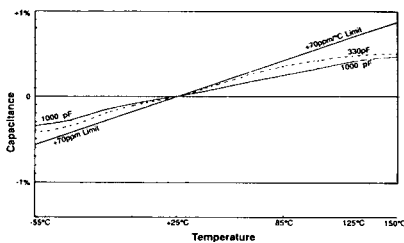
Impedance and Phase Angle vs. Frequency



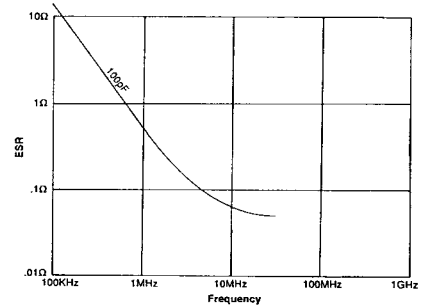
Insertion Loss vs. Frequency for CD17FC621J03, 75 Ω System



Capacitance Change vs. Temperature



ESR vs. Frequency



RoHS-5 Compliant

Has more than 1000 ppm lead in some homogenous material but otherwise complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

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Ordering Information Radial-Leaded Dipped Mica Capacitors

Ordering Information

Order by complete part number as below. For other options, write your requirements on your purchase order or request for quotation.

Note: RoHS compliant not available for CD6, CD7 or MIL-C5 parts.

Radial-Leaded Silvered Mica Capacitors (Except D7, D10*)

CD15 Series	C Characteristic Code	D Voltage (Vdc)	100 Capacitance (pF)	J Capacitance Tolerance	O Temperature Range	3 Vibration Grade	F Blank = Not Specified F = RoHS Compliant
		Y = 50 Vdc A = 100 Vdc C = 300 Vdc D = 500 Vdc	F = 1000 Vdc H = 1500 Vdc J = 2000 Vdc K = 2500 Vdc	010 = 1 pF (1.5) = 1.5 pF 361 = 360 pF 122 = 1200 pF	O = -55 °C to +125 °C P = -55 °C to +150 °C		

Code	Temp. Coeff. ppm/ °C	Capacitance Drift	Standard Cap. Range
C	-200 to +200	±(0.5% +0.1pF)	1–18 pF
E	-20 to +100	±(0.1% +0.1 pF)	20–82 pF
F	0 to +70	±(0.05% +0.1 pF)	91 pF and up

No.	MIL-STD-202	Vibration Condition (Hz)
1	Method 201	10 to 55
3	Method 204 Condition D	10 to 2,000

Standard vibration grade is 3, the more severe requirement

Options Available

- ◆ Non-flammable units per IEC 695-2-2 are available for standard dipped capacitors. Specify IEC 695-2-2 on your order.
- ◆ Tape and reeling, specify per next page.
- ◆ “P” temperature range available for CD10, CD15, CD19, CD30, CD42, CDA15
- ◆ For MIL-C-5 capacitors, see below.

Capacitance Tolerance

Tol. Code	Tolerance	Capacitance Range
C	±1 pF	1– 9 pF
D	±1/2 pF	1–99 pF
E	±1/2 %	100 pF and up
F	±1 %	50 pF and up
G	±2 %	25 pF and up
H	±3 %	18 pF and up
J	±5 %	10 pF and up

Standard tolerance is ±1/2 pF for less than 10 pF and ±5% for 10 pF and up

MIL-C-5 Capacitors

Capacitors are available marked and manufactured to the requirements of standard MIL-C-5. To order the MIL-C-5 part number, change the Catalog Number by

replacing the CDE type with the MIL-C-5 Style Number using the table below. Example: Change CD15ED470J03 to CM05ED470J03.

CDE Type Number	MIL-C-5 Style Number	
CD10	CM04	CM09
CD15	CM05	CM10
CD19	CM06	CM11
CD30	CM07	CM12

The following ratings have no MIL-C-5 equivalents:

Type CD10: 2, 3, 4, 50, 250 and 400 pF

Type CD15: 2, 3, 4, 50, 250, 430 and higher pF

Type CD19: 390 and lower pF, 2,500 pF, and 5000 and higher pF

Type CD30: 5,000 and lower pF, 33,000 and higher pF

* Order Type D7 and D10 using the Catalog Numbers shown in the ratings tables.

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[CDV30FH102JO3F](#) [CDV30FK102FO3F](#) [293100B682JO0](#) [CDV30FH471GO3F](#) [MCM01-001CD200J-F](#) [MCM01-009EF121J-F](#) [MCM01-009ED351J-F](#) [MCM01-009ED101K-F](#) [MC08EA180J-TF](#) [CMR06F332JPDR](#) [CMR05F391FPDM](#) [CDV30FK121JO3F](#) [CDV30EK820JO3](#)
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