

# 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  $\pm 0.1$  dB over the entire frequency range, and is specified to be flat within  $\pm 0.2$  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/ $\mu$ s dV/dt capability minimum
- Low, notch-free impedance to beyond 1 GHz
- Ultra low ESR for cool operation



### Specifications

<b>Voltage Range:</b>	100 Vdc to 1,000 Vdc
<b>Capacitance Range:</b>	1 pF to 5,100 pF
<b>Capacitance Tolerance:</b>	$\pm 1/2$ pF (D), $\pm 1$ pF (C), $\pm 1/2\%$ (E), $\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J)
<b>Temperature Range:</b>	$-55^\circ\text{C}$ 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  $\Omega$  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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## Ratings

Cap. (pF)	Catalog Part Number	Volt Rate	L in (mm)	H in (mm)	T in (mm)	S in (mm)	D in (mm)	Cap. (pF)	Catalog Part Number	Volt Rate	L in (mm)	H in (mm)	T in (mm)	S in (mm)	D in (mm)
1	CD17CD010D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	270	CD17FD271J03F	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
2	CD17CD020D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	270	CD18FD271J03F	500	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
3	CD17CD030D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	270	CDV18FF271J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
4	CD17CD040D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	300	CD17FD301J03F	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
5	CD17CD050D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	300	CD18FD301J03F	500	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
6	CD17CD060D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	300	CDV18FF301J03F	1000	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
7	CD17CD070D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	330	CD17FD331J03F	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
8	CD17CD080D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	330	CD18FD331J03F	500	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
9	CD17CD090D03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	330	CDV18FF331J03F	1000	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
10	CD17CD100J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	360	CD17FD361J03F	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
12	CD17CD120J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	360	CD18FD361J03F	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
15	CD17CD150J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	360	CDV18FF361J03F	1000	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
18	CD17CD180J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	390	CD17FD391J03F	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
20	CD17ED200J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	390	CD18FD391J03F	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
22	CD17ED220J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	390	CDV18FF391J03F	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
24	CD17ED240J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	430	CD17FD431J03F	500	.470 (11.9)	.400 (10.2)	.220 (5.6)	.234 (5.9)	.025 (.6)
27	CD17ED270J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	430	CD18FD431J03F	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
27	CDV18EF270J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	430	CDV18FF431J03F	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
30	CD17ED300J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	470	CD17FD471J03F	500	.470 (11.9)	.400 (10.2)	.220 (5.6)	.234 (5.9)	.025 (.6)
30	CDV18EF300J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	470	CD18FD471J03F	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
33	CD17ED330J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	470	CDV18FF471J03F	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
33	CDV18EF330J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	500	CD17FD501J03F	500	.470 (11.9)	.400 (10.2)	.220 (5.6)	.234 (5.9)	.025 (.6)
36	CD17ED360J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	500	CD18FD501J03F	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
36	CDV18EF360J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	510	CD17FD511J03F	500	.470 (11.9)	.400 (10.2)	.220 (5.6)	.234 (5.9)	.025 (.6)
39	CD17ED390J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	510	CD18FD511J03F	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
39	CDV18EF390J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	510	CDV18FF511J03F	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
43	CD17ED430J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	560	CD17FC561J03F	300	.460 (11.7)	.380 (9.7)	.210 (5.3)	.234 (5.9)	.025 (.6)
43	CDV18EF430J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	560	CD18FD561J03F	500	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
47	CD17ED470J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	560	CDV18FF561J03F	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
47	CDV18EF470J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	620	CD17FC621J03F	300	.460 (11.7)	.380 (9.7)	.210 (5.3)	.234 (5.9)	.025 (.6)
50	CD17ED500J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	620	CD18FD621J03F	500	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
50	CDV18EF500J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	620	CDV18FF621J03F	1000	.660 (16.8)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
51	CD17ED510J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	680	CD17FC681J03F	300	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
51	CDV18EF510J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	680	CD18FD681J03F	500	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
56	CD17ED560J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	680	CDV18FF681J03F	1000	.660 (16.8)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
56	CDV18EF560J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	750	CD17FC751J03F	300	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
62	CD17ED620J03F	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)	750	CD18FD751J03F	500	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
62	CDV18EF620J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	750	CDV18FF751J03F	1000	.660 (16.8)	.530 (13.5)	.230 (5.8)	.344 (8.7)	.032 (.8)
68	CD17ED680J03F	500	.450 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)	820	CD17FC821J03F	300	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
68	CDV18EF680J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	820	CD18FD821J03F	500	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
75	CD17ED750J03F	500	.450 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)	820	CDV18FF821J03F	1000	.660 (16.8)	.530 (13.5)	.230 (5.8)	.344 (8.7)	.032 (.8)
75	CDV18EF750J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	910	CD17FA911J03F	100	.470 (11.9)	.390 (9.9)	.220 (5.6)	.234 (5.9)	.025 (.6)
82	CD17ED820J03F	500	.450 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)	910	CD18FD911J03F	500	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
82	CDV18EF820J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	1000	CD17FA102J03F	100	.480 (12.2)	.400 (10.2)	.230 (5.8)	.234 (5.9)	.025 (.6)
91	CD17FD910J03F	500	.460 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)	1000	CD18FD102J03F	500	.650 (16.5)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
91	CDV18FF910J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	1100	CD17FA112J03F	100	.490 (12.4)	.420 (10.7)	.240 (6.1)	.234 (5.9)	.025 (.6)
100	CD17FD101J03F	500	.460 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)	1100	CD18FD112J03F	500	.650 (16.5)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
100	CDV18FF101J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	1200	CD17FA122J03F	100	.490 (12.4)	.420 (10.7)	.240 (6.1)	.234 (5.9)	.025 (.6)
110	CD17FD111J03F	500	.460 (11.4)	.370 (9.4)	.180 (4.6)	.234 (5.9)	.025 (.6)	1200	CD18FD122J03F	500	.660 (16.8)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
110	CDV18FF111J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	1300	CD18FD132J03F	500	.660 (16.8)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
120	CD17FD121J03F	500	.460 (11.7)	.370 (9.4)	.180 (4.6)	.234 (5.9)	.025 (.6)	1500	CD17FA152J03F	100	.500 (12.7)	.430 (10.9)	.250 (6.4)	.234 (5.9)	.025 (.6)
120	CDV18FF121J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	1500	CD18FD152J03F	500	.660 (16.8)	.520 (13.2)	.230 (5.8)	.344 (8.7)	.032 (.8)
130	CD17FD131J03F	500	.460 (11.7)	.370 (9.4)	.180 (4.6)	.234 (5.9)	.025 (.6)	1600	CD18FD162J03F	500	.660 (16.8)	.530 (13.5)	.230 (5.8)	.344 (8.7)	.032 (.8)
130	CDV18FF131J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	1800	CD18FD182J03F	500	.670 (17.0)	.530 (13.5)	.240 (6.1)	.344 (8.7)	.032 (.8)
150	CD17FD151J03F	500	.460 (11.7)	.370 (9.4)	.190 (4.8)	.234 (5.9)	.025 (.6)	2000	CD18FD202J03F	500	.670 (17.0)	.530 (13.5)	.240 (6.1)	.344 (8.7)	.032 (.8)
150	CDV18FF151J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	2200	CD18FD222J03F	500	.670 (17.0)	.530 (13.5)	.250 (6.4)	.344 (8.7)	.032 (.8)
160	CD17FD161J03F	500	.460 (11.7)	.370 (9.4)	.190 (4.8)	.234 (5.9)	.025 (.6)	2400	CD18FD242J03F	500	.670 (17.0)	.540 (13.7)	.260 (6.6)	.344 (8.7)	.032 (.8)
160	CDV18FF161J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	2500	CD18FD252J03F	500	.680 (17.3)	.540 (13.7)	.260 (6.6)	.344 (8.7)	.032 (.8)
180	CD17FD181J03F	500	.460 (11.7)	.370 (9.4)	.190 (4.8)	.234 (5.9)	.025 (.6)	2700	CD18FD272J03F	500	.680 (17.3)	.540 (13.7)	.270 (6.9)	.344 (8.7)	.032 (.8)
180	CDV18FF181J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	3000	CD18FD302J03F	500	.680 (17.3)	.550 (14.0)	.280 (7.1)	.344 (8.7)	.032 (.8)
200	CD17FD201J03F	500	.460 (11.7)	.380 (9.7)	.190 (4.8)	.234 (5.9)	.025 (.6)	3300	CD18FD332J03F	500	.680 (17.3)	.550 (14.0)	.290 (7.4)	.344 (8.7)	.032 (.8)
200	CDV18FF201J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	3600	CD18FD362J03F	500	.680 (17.3)	.560 (14.2)	.300 (7.6)	.344 (8.7)	.032 (.8)
220	CD17FD221J03F	500	.460 (11.7)	.380 (9.7)	.200 (5.1)	.234 (5.9)	.025 (.6)	3900	CD18FD392J03F	500	.690 (17.5)	.560 (14.2)	.310 (7.9)	.344 (8.7)	.032 (.8)
220	CDV18FF221J03F	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)	4300	CD18FD432J03F	500	.690 (17.5)	.570 (14.5)	.330 (8.4)	.344 (8.7)	.032 (.8)

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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