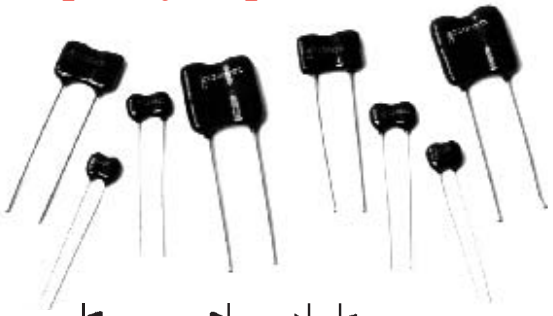
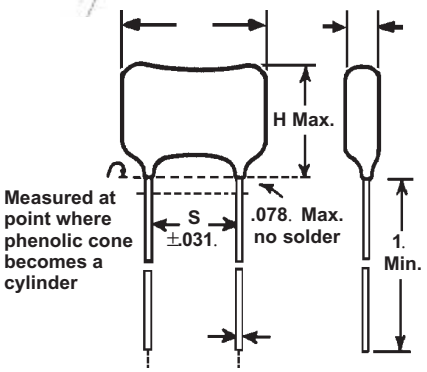
Types CD17, CD18 & CDV18, High-Frequency, Mica Capacitors

High-Frequency Capacitors for CATV and RF Applications





Types CD17 and CD18 assure controlled, reasonance-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

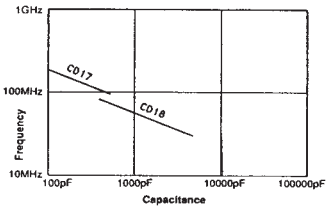
- Shockproof and delamination free
- Near zero capacitance change with (t), (V) and (f)
- Very high Q at UHF/VHF frequencies
- 0.0005 typical dissipation factor
- 100,000 V/µs dV/dt capability minimum
- Low, notch-free impedance to beyond 1 GHz
- Ultra low ESR for cool operation

Specifications

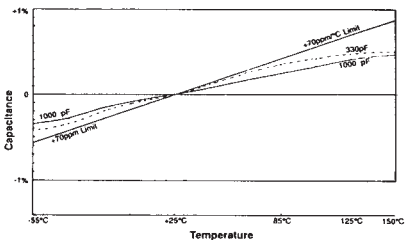
Voltage Range:	100 Vdc to 1,000 Vdc
Capacitance Range:	1 pF to 5,100 pF
Capacitance Tolerance:	±½ pF (D), ±1 pF (C), ±½% (E), ±1% (F), ±2% (G), ±5% (J)
Temperature Range:	–55 °C to +150 °C

Typical Perfomance Curves

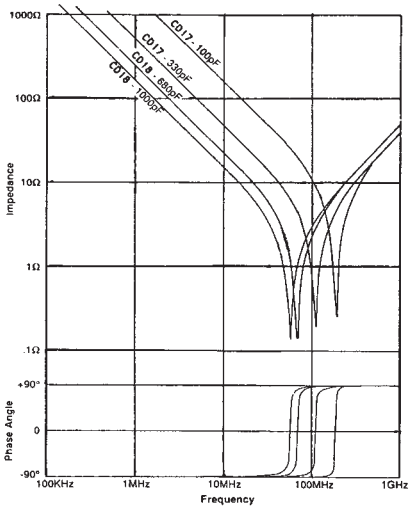
Self-Resonant Frequency vs. Capacitance



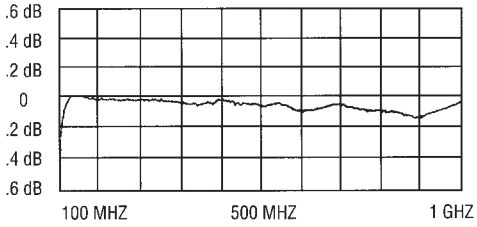
Capacitance Change vs. Temperature



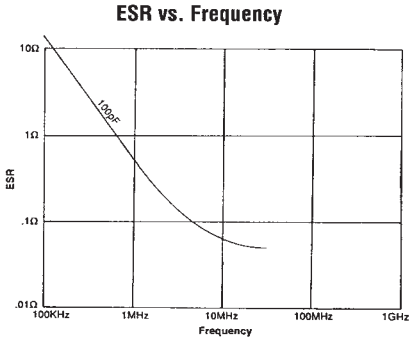
Impedance and Phase Angle vs. Frequency



Insertion Loss vs. Frequency for CD17FC621J03, 75 Ω System



ESR vs. Frequency



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

Ratings

Cap. (pF)	Catalog Part Number	Volt Rate	L in (mm)	H in (mm)	T in (mm)	S in (mm)	D in (mm)
1	CD17CD010D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
2	CD17CD020D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
3	CD17CD030D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
4	CD17CD040D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
5	CD17CD050D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
6	CD17CD060D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
7	CD17CD070D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
8	CD17CD080D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
9	CD17CD090D03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
10	CD17CD100J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
12	CD17CD120J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
15	CD17CD150J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
18	CD17CD180J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
20	CD17ED200J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
22	CD17ED220J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
24	CD17ED240J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
27	CD17ED270J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
27	CDV18EF270J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
30	CD17ED300J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
30	CDV18EF300J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
33	CD17ED330J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
33	CDV18EF330J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
36	CD17ED360J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
36	CDV18EF360J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
39	CD17ED390J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
39	CDV18EF390J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
43	CD17ED430J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
43	CDV18EF430J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
47	CD17ED470J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
47	CDV18EF470J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
50	CD17ED500J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
50	CDV18EF500J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
51	CD17ED510J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
51	CDV18EF510J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
56	CD17ED560J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
56	CDV18EF560J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
62	CD17ED620J03	500	.450 (11.4)	.360 (9.1)	.170 (4.3)	.234 (5.9)	.025 (.6)
62	CDV18EF620J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
68	CD17ED680J03	500	.450 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)
68	CDV18EF680J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
75	CD17ED750J03	500	.450 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)
75	CDV18EF750J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
82	CD17ED820J03	500	.450 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)
82	CDV18EF820J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
91	CD17FD910J03	500	.460 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)
91	CDV18FF910J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
100	CD17FD101J03	500	.460 (11.4)	.360 (9.1)	.180 (4.6)	.234 (5.9)	.025 (.6)
100	CDV18FF101J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
110	CD17FD111J03	500	.460 (11.4)	.370 (9.4)	.180 (4.6)	.234 (5.9)	.025 (.6)
110	CDV18FF111J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
120	CD17FD121J03	500	.460 (11.7)	.370 (9.4)	.180 (4.6)	.234 (5.9)	.025 (.6)
120	CDV18FF121J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
130	CD17FD131J03	500	.460 (11.7)	.370 (9.4)	.180 (4.6)	.234 (5.9)	.025 (.6)
130	CDV18FF131J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
150	CD17FD151J03	500	.460 (11.7)	.370 (9.4)	.190 (4.8)	.234 (5.9)	.025 (.6)
150	CDV18FF151J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
160	CD17FD161J03	500	.460 (11.7)	.370 (9.4)	.190 (4.8)	.234 (5.9)	.025 (.6)
160	CDV18FF161J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
180	CD17FD181J03	500	.460 (11.7)	.370 (9.4)	.190 (4.8)	.234 (5.9)	.025 (.6)
180	CDV18FF181J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
200	CD17FD201J03	500	.460 (11.7)	.380 (9.7)	.190 (4.8)	.234 (5.9)	.025 (.6)
200	CDV18FF201J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
220	CD17FD221J03	500	.460 (11.7)	.380 (9.7)	.200 (5.1)	.234 (5.9)	.025 (.6)
220	CDV18FF221J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
240	CD17FD241J03	500	.460 (11.7)	.380 (9.7)	.200 (5.1)	.234 (5.9)	.025 (.6)
240	CDV18FF241J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
250	CD17FD251J03	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
270	CD17FD271J03	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
270	CD18FD271J03	500	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
270	CDV18FF271J03	1000	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
300	CD17FD301J03	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
300	CD18FD301J03	500	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
300	CDV18FF301J03	1000	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
330	CD17FD331J03	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
330	CD18FD331J03	500	.640 (16.3)	.500 (12.7)	.190 (4.8)	.344 (8.7)	.032 (.8)
330	CDV18FF331J03	1000	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
360	CD17FD361J03	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
360	CD18FD361J03	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
360	CDV18FF361J03	1000	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
390	CD17FD391J03	500	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
390	CD18FD391J03	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
390	CDV18FF391J03	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
430	CD17FD431J03	500	.470 (11.9)	.400 (10.2)	.220 (5.6)	.234 (5.9)	.025 (.6)
430	CD18FD431J03	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
430	CDV18FF431J03	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
470	CD17FD471J03	500	.470 (11.9)	.400 (10.2)	.220 (5.6)	.234 (5.9)	.025 (.6)
470	CD18FD471J03	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
470	CDV18FF471J03	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
500	CD17FD501J03	500	.470 (11.9)	.400 (10.2)	.220 (5.6)	.234 (5.9)	.025 (.6)
500	CD18FD501J03	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
510	CD17FD511J03	500	.470 (11.9)	.400 (10.2)	.220 (5.6)	.234 (5.9)	.025 (.6)
510	CD18FD511J03	500	.640 (16.3)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
510	CDV18FF511J03	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
560	CD17FC561J03	300	.460 (11.7)	.380 (9.7)	.210 (5.3)	.234 (5.9)	.025 (.6)
560	CD18FD561J03	500	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
560	CDV18FF561J03	1000	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
620	CD17FC621J03	300	.460 (11.7)	.380 (9.7)	.210 (5.3)	.234 (5.9)	.025 (.6)
620	CD18FD621J03	500	.650 (16.5)	.510 (13.0)	.200 (5.1)	.344 (8.7)	.032 (.8)
620	CDV18FF621J03	1000	.660 (16.8)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
680	CD17FC681J03	300	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
680	CD18FD681J03	500	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
680	CDV18FF681J03	1000	.660 (16.8)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
750	CD17FC751J03	300	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
750	CD18FD751J03	500	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
750	CDV18FF751J03	1000	.660 (16.8)	.530 (13.5)	.230 (5.8)	.344 (8.7)	.032 (.8)
820	CD17FC821J03	300	.470 (11.9)	.390 (9.9)	.210 (5.3)	.234 (5.9)	.025 (.6)
820	CD18FD821J03	500	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
820	CDV18FF821J03	1000	.660 (16.8)	.530 (13.5)	.230 (5.8)	.344 (8.7)	.032 (.8)
910	CD17FA911J03	100	.470 (11.9)	.390 (9.9)	.220 (5.6)	.234 (5.9)	.025 (.6)
910	CD18FD911J03	500	.650 (16.5)	.510 (13.0)	.210 (5.3)	.344 (8.7)	.032 (.8)
1000	CD17FA102J03	100	.480 (12.2)	.400 (10.2)	.230 (5.8)	.234 (5.9)	.025 (.6)
1000	CD18FD102J03	500	.650 (16.5)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
1100	CD17FA112J03	100	.490 (12.4)	.420 (10.7)	.240 (6.1)	.234 (5.9)	.025 (.6)
1100	CD18FD112J03	500	.650 (16.5)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
1200	CD17FA122J03	100	.490 (12.4)	.420 (10.7)	.240 (6.1)	.234 (5.9)	.025 (.6)
1200	CD18FD122J03	500	.660 (16.8)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
1300	CD18FD132J03	500	.660 (16.8)	.520 (13.2)	.220 (5.6)	.344 (8.7)	.032 (.8)
1500	CD17FA152J03	100	.500 (12.7)	.430 (10.9)	.250 (6.4)	.234 (5.9)	.025 (.6)
1500	CD18FD152J03	500	.660 (16.8)	.520 (13.2)	.230 (5.8)	.344 (8.7)	.032 (.8)
1600	CD18FD162J03	500	.660 (16.8)	.530 (13.5)	.230 (5.8)	.344 (8.7)	.032 (.8)
1800	CD18FD182J03	500	.670 (17.0)	.530 (13.5)	.240 (6.1)	.344 (8.7)	.032 (.8)
2000	CD18FD202J03	500	.670 (17.0)	.530 (13.5)	.240 (6.1)	.344 (8.7)	.032 (.8)
2200	CD18FD222J03	500	.670 (17.0)	.530 (13.5)	.250 (6.4)	.344 (8.7)	.032 (.8)
2400	CD18FD242J03	500	.670 (17.0)	.540 (13.7)	.260 (6.6)	.344 (8.7)	.032 (.8)
2500	CD18FD252J03	500	.680 (17.3)	.540 (13.7)	.260 (6.6)	.344 (8.7)	.032 (.8)
2700	CD18FD272J03	500	.680 (17.3)	.540 (13.7)	.270 (6.9)	.344 (8.7)	.032 (.8)
3000	CD18FD302J03	500	.680 (17.3)	.550 (14.0)	.280 (7.1)	.344 (8.7)	.032 (.8)
3300	CD18FD332J03	500	.680 (17.3)	.550 (14.0)	.290 (7.4)	.344 (8.7)	.032 (.8)
3600	CD18FD362J03	500	.680 (17.3)	.560 (14.2)	.300 (7.6)	.344 (8.7)	.032 (.8)
3900	CD18FD392J03	500	.690 (17.5)	.560 (14.2)	.310 (7.9)	.344 (8.7)	.032 (.8)
4300	CD18FD432J03	500	.690 (17.5)	.570 (14.5)	.330 (8.4)	.344 (8.7)	.032 (.8)
4700	CD18FD472J03	500	.700 (17.8)	.580 (14.7)	.350 (8.9)	.344 (8.7)	.032 (.8)
5000	CD18FD502J03	500	.710 (18.0)	.590 (15.0)	.370 (9.4)	.344 (8.7)	.032 (.8)
5100	CD18FD512J03	500	.710 (18.0)	.590 (15.0)	.370 (9.4)	.344 (8.7)	.032 (.8)