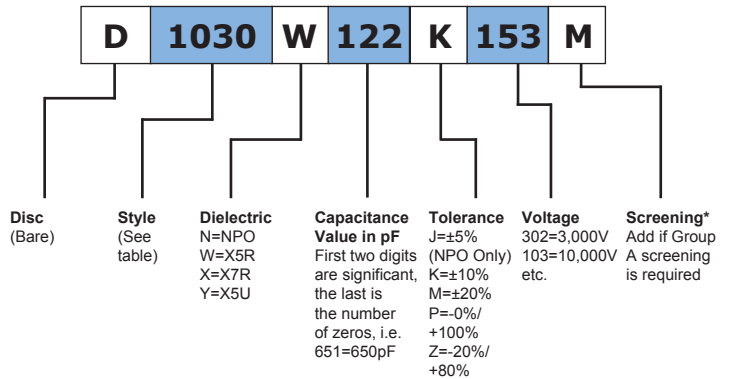


Part Number & Ordering Information



General Information

Bare disc capacitors are designed and manufactured under strict quality control guidelines in order to insure performance and reliability for high voltage applications.

Double action pressing is utilized to minimize density gradients and produce uniform fired ceramic density.

Capacitors are available screened to Mil-Prf-49467 established reliability specification (except corona). Contact factory if corona testing is required.

Testing & Screening Information

- Dielectric Withstanding Voltage to Mil-Prf-49467, Mil-Std-202, MTD 302.
- Insulation Resistance 25°C to Mil-Prf-49467, Mil-Std-202, MTD 302.
- Capacitance/Dissipation Factor to Mil-Prf-49467, Mil-Std-202, MTD 305.
- Group A & B inspection to Mil-Prf-49467, DSCC 87125, DSCC 89087, and NASA GSFC S-311-P-15C, where applicable.

Installation

Higher-voltage parts may require further encapsulation to prevent surface breakdown. Parts should be cleaned and oven dried at 85°C before further encapsulation. Silicone rubbers or an epoxy may be used. De-aging of encapsulates is recommended.

Components should be preheated to approximately 120°C prior to heat sink attachment.

Testing higher-voltage parts before encapsulation may be done in a suitable dielectric fluid such as FC-40.

Termination Type

100% Silver

VOLTAGE RATING (KV)	MAX THICKNESS INCHES [MM]	NOMINAL THICKNESS INCHES [MM]
3	0.075 [1.9]	0.060 [1.5]
5	0.125 [3.2]	0.100 [2.5]
7.5	0.180 [4.6]	0.150 [3.8]
10	0.235 [6.0]	0.200 [5.1]
15	0.350 [8.9]	0.300 [7.6]
20	0.460 [11.7]	0.400 [10.2]

SPECIFICATIONS	DIELECTRIC TYPE (EIA DESIGNATION)			
	NPO	X5R	X7R	X5U
TEMPERATURE RANGE	-55°C to 125°C	-55°C to 85°C	-55°C to 125°C	-55°C to 85°C
TEMPERATURE COEFFICIENT	± 30 ppm/°C	±15%	±15%	+22%/-56%
VOLTAGE RANGE	3kV to 20kV	3kV to 20kV	3kV to 20kV	3kV to 20kV
DIELECTRIC WITHSTANDING VOLTAGE TEST	3kV to 20kV 1.5x rated	3kV to 20kV 1.5x rated	3kV to 20kV 1.5x rated	3kV to 20kV 1.5x rated
IR @ 25°C	100,000MΩ or 1,000MΩ - μF whichever is less	100,000MΩ or 1,000MΩ - μF whichever is less	100,000MΩ or 1,000MΩ - μF whichever is less	100,000MΩ or 1,000MΩ - μF whichever is less
IR @ EVALUATED TEMPERATURE	10,000MΩ or 100MΩ - μF whichever is less @ 125°C	10,000MΩ or 100MΩ - μF whichever is less @ 85°C	10,000MΩ or 100MΩ - μF whichever is less @ 125°C	10,000MΩ or 100MΩ - μF whichever is less @ 85°C
DISSIPATION FACTOR @ 1kHz, 25°C	0.1% max	2.5% max	2.5% max	2.5% max
AGING RATE	0	-2% max/decade hour	-2% max/decade hour	-3% max/decade hour
COEFFICIENT OF THERMAL EXPANSION @ 25°C	9x10 ⁻⁶ in/in/°C	11x10 ⁻⁶ in/in/°C	11x10 ⁻⁶ in/in/°C	11x10 ⁻⁶ in/in/°C

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High Voltage Bare Disc Ceramic Capacitor

Disc STYLE	D Max.	NPO		X5R		X7R		X5U		
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
3kVDC										
D0606	0.220	8.4	10	270	340	260	320	500	600	
D0706	0.245	9.7	12	320	370	300	350	570	670	
D0806	0.275	12	15	410	500	380	470	730	900	
D1006	0.330	20	24	640	780	600	730	1200	1400	
D1206	0.400	28	34	920	1100	870	1100	1700	2000	
D1406	0.460	38	46	1300	1500	1200	1400	2200	2700	
D1606	0.525	50	61	1600	2000	1500	1900	3000	3600	
D1806	0.590	63	77	2100	2500	2000	2400	3700	4600	
D2006	0.650	78	95	2600	3100	2400	2900	4600	5600	
D2206	0.710	94	110	3100	3800	2900	3500	5600	6800	
D2406	0.775	110	140	3700	4500	3500	4200	6600	8100	
D2606	0.840	130	160	4300	5300	4100	5000	7800	9500	
D2906	0.930	150	200	5000	6500	4700	6200	9000	12000	
D3206	1.030	200	240	6600	8000	6200	7500	12000	14000	
D3606	1.150	230	310	7400	10000	7000	9500	13000	18000	
5kVDC										
D0610	0.220	5.1	6.2	160	200	150	190	300	370	
D0710	0.245	5.8	6.9	190	220	180	210	350	400	
D0810	0.275	7.3	9.2	250	300	230	280	410	540	
D1010	0.330	12	15	390	473	370	440	700	850	
D1210	0.400	17	21	560	680	520	640	1000	1200	
D1410	0.460	23	28	760	920	700	860	1400	1600	
D1610	0.525	30	37	990	1200	930	1100	1800	2200	
D1810	0.590	38	47	1300	1500	1200	1400	2300	2800	
D2010	0.650	47	57	1500	1800	1500	1800	2800	3400	
D2210	0.710	57	69	1900	2300	1800	2100	3400	4000	
D2410	0.775	69	83	2200	2700	2100	2600	4000	4900	
D2610	0.840	79	97	2600	3100	2500	3000	4700	5700	
D2910	0.930	92	120	3000	3900	2900	3700	5500	7100	
D3210	1.030	120	150	3900	4800	3800	4500	7200	8700	
D3610	1.150	140	180	4500	6100	4200	5700	8000	11000	
D4010	1.280	190	230	6200	7500	5800	7000	11000	13000	
7.5kVDC										
D0615	0.220	3.4	4.1	110	140	110	130	200	240	
D0715	0.245	3.9	4.6	130	150	120	150	230	270	
D0815	0.275	5.0	6.1	170	200	150	190	300	360	
D1015	0.330	7.8	9.6	260	310	240	300	460	570	
D1215	0.400	12	14	370	460	350	430	670	820	
D1415	0.460	15	19	510	610	470	580	900	1100	
D1615	0.525	20	25	660	800	620	750	1200	1450	
D1815	0.590	25	31	830	1000	780	960	1500	1800	
D2015	0.650	31	38	1000	1200	970	1200	1900	2200	
D2215	0.710	37	46	1300	1500	1200	1400	2200	2700	
D2415	0.775	45	55	1500	1800	1400	1700	2700	3300	
D2615	0.840	53	65	1700	2100	1600	2000	3100	3800	
D2915	0.930	60	80	2000	2600	1900	2500	3700	4700	
D3215	1.030	80	98	2600	3200	2500	3000	4800	5800	
D3615	1.150	90	120	3000	4000	2800	3800	5300	7400	
D4015	1.280	120	150	4100	5000	3800	4700	7400	9000	
10kVDC										
D0620	0.220	2.5	3.1	84	100	78	95	150	180	
D0720	0.245	2.9	3.5	96	110	90	110	170	200	
D0820	0.275	3.8	4.6	120	150	110	140	220	270	
D1020	0.330	5.9	7.2	190	230	180	220	350	420	
D1220	0.400	8.5	10	280	340	260	320	500	610	
D1420	0.460	12	14	380	480	350	430	680	820	
D1620	0.525	15	18	500	600	470	560	890	1000	
D1820	0.590	19	23	620	770	580	720	1100	1400	
D2020	0.650	24	28	770	940	730	880	1400	1700	
D2220	0.710	28	34	930	1100	870	1100	1700	2000	
D2420	0.775	34	41	1100	1400	1000	1300	2000	2400	
D2620	0.840	40	48	1300	1600	1200	1500	2400	2900	
D2920	0.930	46	60	1500	2000	1400	1800	2700	3500	
D3220	1.030	60	73	2000	2400	1900	2300	3600	4300	
D3620	1.150	68	93	2200	3000	2100	2800	4000	5500	
D4020	1.280	94	110	3100	3700	2900	3500	5600	6800	
15kVDC										
D0630	0.220	1.6	2.1	55	68	52	64	100	120	
D0730	0.245	1.9	2.3	64	76	60	71	120	130	
D0830	0.275	2.4	3.1	52	100	76	94	150	180	
D1030	0.330	3.9	4.8	130	160	120	150	230	280	
D1230	0.400	5.7	6.9	180	230	180	210	340	410	
D1430	0.460	7.7	9.4	250	300	230	290	450	550	
D1630	0.525	10	12	330	400	310	370	600	720	
D1830	0.590	12	16	410	510	390	480	750	920	
D2030	0.650	16	20	520	620	490	590	930	1100	
D2230	0.710	19	23	620	760	580	710	1100	1360	
D2430	0.775	23	28	740	910	690	850	1300	1600	
D2630	0.840	26	32	870	1000	820	1000	1600	1900	
D2930	0.930	30	40	1000	1300	950	1200	1800	2400	
D3230	1.030	40	49	1300	1600	1300	1500	2400	2900	
D3630	1.150	45	60	1500	2000	1400	1900	2700	3600	
D4030	1.280	60	77	2100	2500	1900	2300	3700	4500	
20kVDC										
D1040	0.330	3.2	3.5	100	110	98	100	190	200	
D1240	0.400	4.6	5	150	170	140	160	270	300	
D1440	0.460	6.2	6.8	200	220	190	210	360	400	
D1640	0.525	8.1	8.9	270	290	250	270	480	520	
D1840	0.590	10	11	330	370	310	350	600	670	
D2040	0.650	13	14	410	450	390	430	750	820	
D2240	0.710	15	17	500	550	470	520	900	1000	
D2440	0.775	18	20	600	660	560	620	1100	1200	
D2640	0.840	21	23	700	770	660	720	1300	1400	
D2940	0.930	24	30	810	960	760	900	1500	1700	
D3240	1.030	32	36	1000	1200	1000	1100	1900	2100	
D3640	1.150	36	45	1200	1500	1100	1400	2200	2600	
D4040	1.280	50	56	1700	1800	1600	1700	3000	3300	

Custom voltages, sizes, and capacitance values are available. Contact Factory.