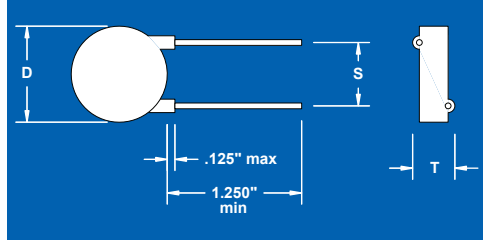


High Voltage Disc Ceramic Capacitors

3 KV to 20 KV Leaded and Coated (-55°C to 85°C and 125°C)



General Information

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.

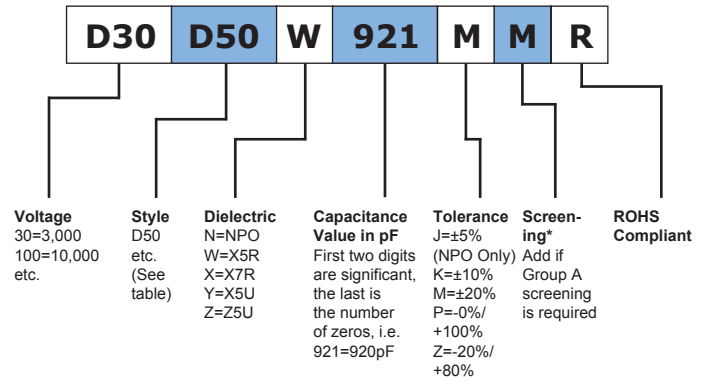
Installation

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-airing of encapsulates is recommended.

During installation soldering we recommend attaching a heat sink to the lead between the soldering iron and capacitor. 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.

Part Number & Ordering Information



Lead Type

Solder plated, copper-clad steel
 ROHS Compliant - 100% Tin (CCFE) -
 D30, D40: 0.025" dia. (22GA) [0.64mm dia.]
 D50 & larger: 0.032" dia. (20GA) [0.81mm dia.]

Marking

Capacitance & Tolerance
 Voltage
 Logo
 Date Code
 (Order of markings may vary depending on size of the capacitor).

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

VOLTAGE RATING (KV)	MAX THICKNESS INCHES [MM]	MAX MENISCUS (M) [MM]
3	.210 [5.33]	.125 [3.18]
5	.250 [6.35]	.125 [3.18]
7.5	.310 [7.87]	.150 [3.81]
10	.365 [9.27]	.170 [4.32]
15	.475 [12.07]	.175 [4.45]
20	.575 [14.61]	.175 [4.45]

SPECIFICATIONS	DIELECTRIC TYPE (EIA DESIGNATION)				
	NPO	X5R	X7R	X5U	Z5U
TEMPERATURE RANGE	-55°C to 125°C	-55°C to 85°C	-55°C to 125°C	-55°C to 85°C	10°C to 85°C
TEMPERATURE COEFFICIENT	± 30 ppm/°C	±15%	±15%	+22%/ -56%	+22%/ -56%
VOLTAGE COEFFICIENT	0	-20% max @ Rated Voltage	-20% max @ Rated Voltage	-50% max @ Rated Voltage	-50% max @ Rated Voltage
VOLTAGE RANGE	3kV to 20kV	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	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	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	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	2.5% max
AGING RATE	0	-2% max/decade hour	-2% max/decade hour	-3% max/decade hour	-3% max/decade hour

High Voltage Disc Ceramic Capacitors

Disc Style	D Max.	S ± .030	NPO (PF)		X5R (PF)		X7R (PF)		X5U (PF)		Z5U (PF)	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
3kVDC												
D30	.30	.250	8.4	12	270	370	260	350	500	670	1000	1300
D40	.40	.250	12	24	410	780	380	730	730	1400	1500	2900
D50	.50	.375	28	46	920	1500	870	1400	1700	2700	3400	5600
D60	.60	.375	38	61	1300	2000	1200	1900	2200	3600	6000	7300
D70	.70	.500	63	95	2100	3100	2000	2900	3700	5600	7500	11000
D80	.80	.500	94	110	3100	3800	2900	3500	5500	6800	11000	13000
D90	.90	.500	110	160	3700	5300	3500	5000	6600	9500	13000	19000
D100	1.00	.500	150	200	5000	6500	4700	6200	9000	12000	18000	13000
D120	1.20	.500	200	310	6600	10000	6200	9500	12000	18000	24000	36000
D140	1.40	.625	310	350	10000	12000	9600	12000	19000	22000	37000	45000
5kVDC												
D30	.30	.250	5.1	6.9	160	220	150	210	300	400	600	820
D40	.40	.250	7.3	15	250	473	230	440	440	850	900	1700
D50	.50	.375	17	28	560	920	520	860	1000	1600	2100	3300
D60	.60	.375	23	37	760	1200	700	1100	1400	2200	3600	4300
D70	.70	.500	38	57	1300	1800	1200	1800	2300	3400	4500	6700
D80	.80	.500	57	69	1900	2300	1800	2100	3400	4000	6800	8200
D90	.90	.500	69	97	2200	3100	2100	3000	4000	5700	8100	11000
D100	1.00	.500	92	120	3000	3900	2900	3700	5500	7100	11000	14000
D120	1.20	.500	120	180	3900	6100	3800	5700	7200	11000	14000	22000
D140	1.40	.625	190	230	6200	7500	5800	7000	11000	13000	22000	27000
7.5kVDC												
D30	.30	.250	3.4	4.6	110	150	100	150	200	270	400	540
D40	.40	.250	5.0	9.6	170	310	150	300	300	570	600	1100
D50	.50	.375	12	19	370	610	350	580	670	1100	1400	2200
D60	.60	.375	15	25	510	800	470	750	900	1450	2400	2900
D70	.70	.500	25	38	830	1200	780	1200	1500	2200	3000	4500
D80	.80	.500	37	46	1300	1500	1200	1400	2200	2700	4500	5400
D90	.90	.500	45	65	1500	2100	1400	2000	2700	3800	5400	7600
D100	1.00	.500	60	80	2000	2600	1900	2500	3700	4700	7300	9500
D120	1.20	.500	80	120	2600	3300	2500	3800	4800	7400	9500	14000
D140	1.40	.625	120	150	4100	5000	3800	4700	7400	9000	15000	18000
10kVDC												
D30	.30	.250	2.5	3.5	84	110	78	110	150	200	300	410
D40	.40	.250	3.8	7.2	120	230	110	220	220	420	450	850
D50	.50	.375	8.5	14.0	280	480	260	430	500	820	1000	1600
D60	.60	.375	12	18	380	600	350	560	680	1000	1800	2100
D70	.70	.500	19	28	620	940	580	880	1100	1700	2300	3400
D80	.80	.500	28	34	930	1100	870	1100	1700	2000	3400	4100
D90	.90	.500	34	48	1100	1600	1000	1500	2000	2900	4000	5700
D100	1.00	.500	46	60	1500	2000	1400	1800	2700	3500	5500	7100
D120	1.20	.500	60	93	2000	3000	1900	2800	3600	5500	7200	11000
D140	1.40	.625	94	110	3100	3700	2900	3500	5600	6800	11000	13000
15kVDC												
D30	.30	.250	1.6	2.3	55	76	52	71	100	130	200	270
D40	.40	.250	2.4	4.8	52	160	76	150	150	280	300	570
D50	.50	.375	5.7	9.4	180	300	180	290	330	550	700	1100
D60	.60	.375	7.7	12	250	400	230	370	450	720	1200	1400
D70	.70	.500	12	20	410	620	390	590	750	1100	1500	2200
D80	.80	.500	19	23	620	760	580	710	1100	1360	2300	2700
D90	.90	.500	23	32	740	1000	690	1000	1300	1900	2700	3800
D100	1.00	.500	30	40	1000	1300	950	1200	1800	2400	3700	4700
D120	1.20	.500	40	60	1300	2000	1300	1900	2400	3600	4800	7300
D140	1.40	.625	60	77	2100	2500	1900	2300	3700	4500	7500	9000
20kVDC												
D30	.30	.250	1.4	1.7	44	55	42	52	80	100	150	200
D40	.40	.250	2.0	3.5	66	110	62	100	120	200	230	420
D50	.50	.375	4.6	6.8	150	220	140	210	270	400	500	830
D60	.60	.375	6.2	8.9	200	290	190	270	360	520	890	1000
D70	.70	.500	10	14	330	450	310	430	600	820	1200	1700
D80	.80	.500	15	17	500	550	470	520	900	1000	1700	2000
D90	.90	.500	18	23	600	770	560	720	1100	1400	2000	2800
D100	1.00	.500	24	30	800	960	760	900	1500	1700	2800	3000
D120	1.20	.500	32	45	1000	1500	1000	1400	1900	2600	3600	5500
D140	1.40	.625	50	56	1700	1800	1600	1700	3000	3300	5600	6800

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