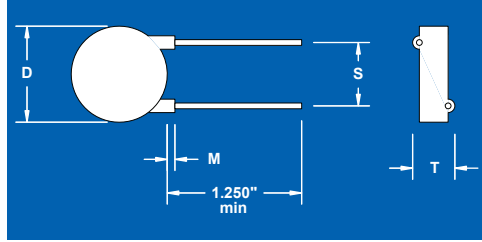


Negative Compensating, Low Loss High Voltage Disc Ceramic Capacitors

3 KV to 20 KV Leaded and Coated (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.

Applications include but are not limited to Switch Mode Power Supplies, High Frequency Power Supplies, Snubber applications and Rapid Pulse applications.

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.

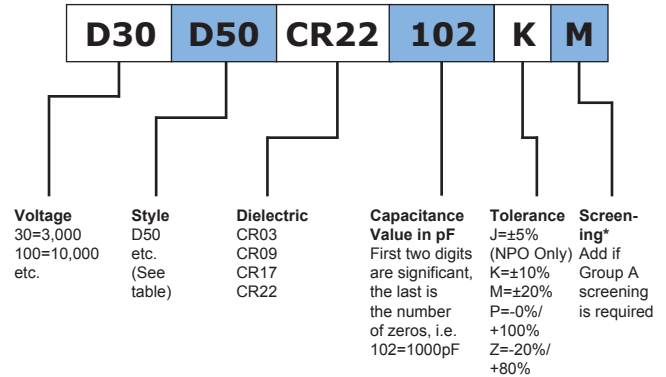
Installation

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
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)				
	CR01	CR03	CR09	CR17	CR22
TEMPERATURE RANGE	-55°C to 125°C	-55°C to 125°C	-55°C to 125°C	-55°C to 125°C	-55°C to 125°C
TEMPERATURE COEFFICIENT	N750 (P3K) -750 ppm/°C ± 10% Max	N1500 (P3K) -1500 ppm/°C ± 17% Max	N2200 (R3L) -2200 ppm/°C ± 24% Max	N4700 (T3M) -4700 ppm/°C ± 52% Max	N5600 (U3N) -5600 ppm/°C ± 59% Max
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 @ 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	0.1% Max	0.1% Max	0.1% Max	0.1% Max
AGING RATE	0	0	0	0	0

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High Voltage Disc Ceramic Capacitors

Disc STYLE	D MAX.	S ± .030	CR01 (PF)		CR03 (PF)		CR09 (PF)		CR17 (PF)		CR22 (PF)	
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
3kVDC												
D30	.30	.250	14	18	37	50	100	130	190	250	230	300
D40	.40	.250	20	37	55	100	150	280	280	530	330	630
D50	.50	.375	45	73	130	200	340	550	640	1000	750	1200
D60	.60	.375	80	96	220	260	600	720	1200	1300	1400	1600
D70	.70	.500	100	150	280	410	750	1100	1500	2100	1700	2500
D80	.80	.500	150	180	420	500	1200	1300	2200	2500	2500	3000
D90	.90	.500	180	250	500	700	1400	1900	2600	3600	3000	4200
D100	1.00	.500	250	310	670	870	1900	2300	3500	4400	4100	5200
D120	1.20	.500	320	480	880	1300	2400	3600	4500	6900	5300	8100
D140	1.40	.625	500	600	1400	1600	3800	4500	7100	8500	8300	10000
5kVDC												
D30	.30	.250	8.0	10	22	30	60	82	120	150	140	180
D40	.40	.250	12	22	33	62	89	170	170	320	200	370
D50	.50	.375	27	44	74	120	210	330	390	620	450	730
D60	.60	.375	48	57	140	150	360	430	680	820	800	960
D70	.70	.500	60	90	170	240	450	670	850	1200	1000	1500
D80	.80	.500	90	100	250	300	680	820	1300	1500	1500	1800
D90	.90	.500	110	150	300	420	810	1100	1600	2100	1800	2500
D100	1.00	.500	150	190	410	520	1100	1400	2100	2600	2500	3100
D120	1.20	.500	190	290	530	800	1500	2200	2700	4100	3200	4800
D140	1.40	.625	300	360	820	990	2300	2700	4300	5100	5000	6000
7.5kVDC												
D30	.30	.250	5.5	7.0	15	20	40	54	76	100	89	120
D40	.40	.250	8.0	15	22	41	60	110	120	210	140	250
D50	.50	.375	18	29	50	81	140	220	260	410	300	490
D60	.60	.375	32	38	87	100	240	280	450	540	530	640
D70	.70	.500	40	60	110	160	300	450	570	850	670	1000
D80	.80	.500	60	72	170	200	450	540	850	1000	1000	1200
D90	.90	.500	72	100	200	280	540	760	1100	1400	1200	1700
D100	1.00	.500	98	120	270	340	730	950	1400	1700	1700	2100
D120	1.20	.500	130	190	350	530	950	1400	1800	2700	2200	3200
D140	1.40	.625	200	240	550	660	1500	1800	2900	3400	3300	4000
10kVDC												
D30	.30	.250	4.0	5.0	11	15	30	41	57	77	67	91
D40	.40	.250	6.0	11	17	31	45	85	84	160	99	180
D50	.50	.375	14	22	37	60	110	160	200	310	230	360
D60	.60	.375	24	28	66	79	180	210	340	410	400	480
D70	.70	.500	30	45	83	120	230	330	430	640	500	750
D80	.80	.500	45	54	130	150	340	410	640	770	750	910
D90	.90	.500	54	76	150	210	410	570	760	1000	900	1200
D100	1.00	.500	73	95	210	260	550	710	1100	1300	1300	1500
D120	1.20	.500	95	140	270	400	720	1100	1400	2000	1600	2400
D140	1.40	.625	150	180	410	490	1200	1300	2200	2500	2500	3000
15kVDC												
D30	.30	.250	3.0	3.5	7.5	10	20	27	38	51	45	60
D40	.40	.250	4.0	7.5	11	20	30	56	56	100	66	120
D50	.50	.375	9.0	14	25	40	68	110	130	200	150	240
D60	.60	.375	16	19	44	53	120	140	230	270	270	320
D70	.70	.500	20	30	55	82	150	220	290	420	340	500
D80	.80	.500	30	36	83	100	230	270	430	510	500	600
D90	.90	.500	36	51	99	140	270	380	510	720	600	850
D100	1.00	.500	49	63	140	170	370	470	690	890	810	1000
D120	1.20	.500	64	97	180	260	480	730	900	1300	1100	1600
D140	1.40	.625	99	120	280	330	750	900	1500	1700	1700	2000
20kVDC												
D30	.30	.250	2.0	2.5	5.5	7.5	15	20	29	38	34	45
D40	.40	.250	3.0	5.5	8.5	15	23	42	42	80	50	94
D50	.50	.375	7.0	11	19	30	51	83	96	150	120	180
D60	.60	.375	12	14	33	39	89	100	170	200	200	240
D70	.70	.500	15	22	42	62	120	160	220	320	250	370
D80	.80	.500	23	27	62	75	170	200	320	380	380	450
D90	.90	.500	27	38	74	100	210	280	380	540	450	630
D100	1.00	.500	37	47	110	130	280	350	520	670	610	790
D120	1.20	.500	48	73	140	200	360	550	680	1000	800	1200
D140	1.40	.625	75	90	210	240	560	670	1100	1200	1300	1500

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