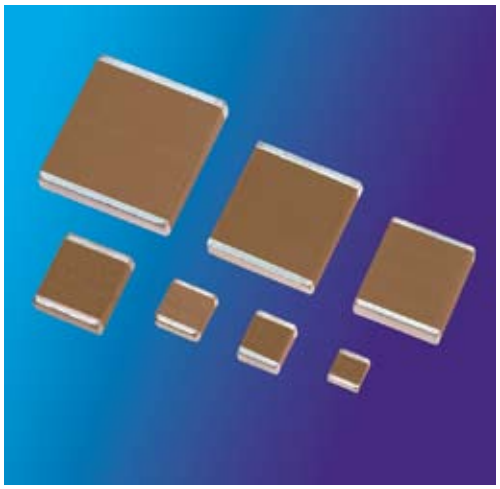
Large Size Capacitor Chips 50 - 5,000 VDC



Key Features

- Rated Working Voltages from 50 to 15,000 VDC
- Low ESR Ceramic Out-performs Tantalums
- Compact MLC Designs Smaller Than Film or Disc
- MIL-PRF-55681 & Hi-Rel Screened Versions Available
- Custom Sizes, Voltages, and Values Available

Applications

- Power Supplies
- Voltage Multipliers
- Data Isolation
- Surge Protection
- Industrial Control Circuits
- Custom Applications

Maximum Capacitance vs DC Voltage Rating

S49 / 1825

	Inches	(mm)
L	.180 ±.010	(4.57 ±.25)
W	.250 ±.010	(6.35 ±.25)
T	.140 Max.	(3.56 Max)
E/B	.025 ±.015	(0.64±.38)

	50 V	100 V	250 V	500 V	1K V	2K V	3K V	4K V	5K V
NPO	473	383	273	273	153	562	222	102	271
X7R	185	105	125	334	104	223	822	202	821

S47 / 2220

	Inches	(mm)
L	.225 ±.015	(5.72 ±.38)
W	.200 ±.015	(5.08 ±.38)
T	.150 Max.	(3.81 Max)
E/B	.025 ±.015	(0.64±.38)

	50 V	100 V	250 V	500 V	1K V	2K V	3K V	4K V	5K V
NPO	683	473	333	273	183	682	272	122	391
X7R	185	125	105	564	184	273	822	332	152

S48 / 2225

	Inches	(mm)
L	.225 ±.010	(5.72 ±.25)
W	.255 ±.015	(6.48 ±.38)
T	.150 Max.	(3.81 Max)
E/B	.025 ±.015	(0.64±.38)

	50 V	100 V	250 V	500 V	1K V	2K V	3K V	4K V	5K V
NPO	753	563	393	333	223	822	472	222	681
X7R	225	225	125	824	224	473	153	563	222

Available capacitance values include the following significant retma values and their multiples
1.0 1.2 1.5 1.8 2.2 2.7 3.3 3.9 4.7 5.6 6.8 8.2 (1.0 = 1.0, 10, 100, 1000, etc.)

How to Order

251	S48	W	105	K	V	4	

VOLTAGE
500 = 50 V
101 = 100 V
201 = 200 V
251 = 250 V
501 = 500 V
102 = 1000 V
202 = 2000 V
302 = 3000 V
402 = 4000 V
502 = 5000 V

CASE SIZE
See Chart

DIELECTRIC
N = NPO
W = X7R

CAPACITANCE
1st two digits are significant; third digit denotes number of zeros.
101 = 100 pF
103 = 0.01 µF
105 = 1.00 µF
106 = 10.0 µF

TOLERANCE
J = ± 5%
K = ± 10%
M = ± 20%
Z = +80% -20%

TERMINATION
V = Ni barrier w/ 100% Sn Plating
Y = Palladium-Silver

MARKING
4 = Unmarked
3 = Specified
6 = EIA "J" Code

PART MODIFIER
E = 7" Reel Taped
H = High Rel Testing (Customer Specified)
S = Special Part

Part number written: 630H51W475KY4

Maximum Capacitance vs DC Voltage Rating

H42 / 1515

	Inches	(mm)
L	.150 ±.015	(3.81 ±.38)
W	.150 ±.015	(3.81 ±.38)
T	.150 Max.	(3.81 Max)
E/B	.025 ±.015	(0.64±.38)

	500 V	1K V	2K V	3K V	4K V	5K V
NPO	472	152	681	331	151	101
X7R	683	223	332	222	681	331

H47 / 2520

	Inches	(mm)
L	.250 ±.018	(6.35 ±.46)
W	.200 ±.015	(5.08 ±.38)
T	.150 Max.	(3.81 Max)
E/B	.025 ±.015	(0.64±.38)

	500 V	1K V	2K V	3K V	4K V	5K V
NPO	223	332	152	681	331	221
X7R	224	683	153	682	222	102

H51 / 3530

	Inches	(mm)
L	.350 ±.035	(8.89 ±.89)
W	.300 ±.030	(7.62 ±.76)
T	.200 Max	(5.08 Max)
E/B	.025 ±.015	(0.64±.38)

	500 V	1K V	2K V	3K V	4K V	5K V
NPO	563	472	332	152	102	471
X7R	474	154	473	333	103	682

H54 / 3640

	Inches	(mm)
L	.360 ± .030	(9.14 ± .76)
W	.400 ± .030	(10.16 ±.76)
T	.200 Max	(5.08 Max)
E/B	.025 ±.015	(0.64±.38)

	50 V	100 V	250 V	500 V	1K V	2K V	3K V	4K V	5K V
NPO	224	184	154	683	822	332	222	152	681
X7R	825	565	475	155	474	683	473	153	822

Available capacitance values include the following significant retma values and their multiples:
1.0 1.2 1.5 1.8 2.2 2.7 3.3 3.9 4.7 5.6 6.8 8.2 (1.0 = 1.0, 10, 100, 1000, etc.)
Consult factory for sizes, values, & voltages not shown.

Electrical Characteristics

Meets the standard NPO & X7R dielectric specifications listed on page 28 & 29 except
Dielectric Withstanding Voltage DWV = 750 VDC for 500 WVDC rated units,
DWV = 945 VDC for 630 WVDC rated units,
DWV = 1.2 X rated WVDC for ratings ≥ 1,000 WVDC

NOTE: Circuit applications above 1KVDC may require surface coating to prevent external arcing.