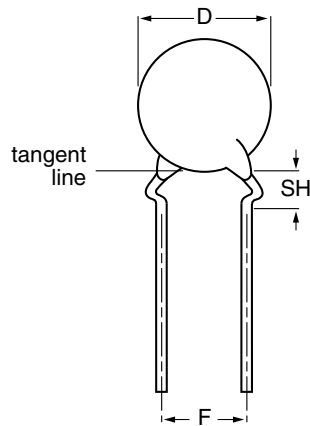
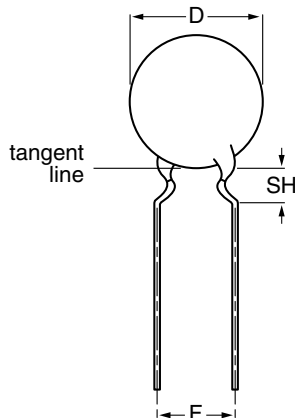


Ceramic Disc Capacitors

Class 2, low loss 500 V, 1 kV, 2 kV and 3 kV



Capacitors with 5 mm (0.20"), 7.5 mm (0.30") and 10 mm (0.40") lead spacing



Capacitors with 5 mm (0.20") and 7.5 mm (0.30") lead spacing

FEATURES

- High reliability
- Low losses
- High capacitance in small size
- Kinked (preferred) or straight leads
- Lead (Pb)-free available


RoHS
COMPLIANT

APPLICATIONS

In electronic circuits where low losses and high capacitance per volume are essential, for example:

- SMPS
- HF ballast
- Snubber and high voltage circuits

DESIGN

The capacitors consist of a ceramic disc both sides of which are silver-plated. Connection leads are made of tinned copper having a diameter of 0.6 mm or 0.8 mm.

The capacitors may be supplied with kinked or straight leads with a lead spacing of 5 mm (0.200"), 7.5 mm (0.300") or 10 mm (0.400") and a lead length from 4 to 30 mm. The standard tolerance on capacitance is $\pm 10\%$. Encapsulation is made of gold coloured epoxy-resin, flammable resistant in accordance with "UL94V-0".

CAPACITANCE RANGE:

100 to 4700 pF

RATED DC VOLTAGE:

500 V; 1 kV; 2 kV; 3 kV

DIELECTRIC STRENGTH:

200 % of rated voltage

INSULATION RESISTANCE AT 500 V (DC):

$\geq 10\,000\ \text{M}\Omega$

TOLERANCE ON CAPACITANCE:

$\pm 10\%$, other tolerances available on request

DISSIPATION FACTOR:

0.5 % Max

TEMPERATURE COEFFICIENT:

Y5P

OPERATING TEMPERATURE RANGE:

- 30 to + 125 °C

SECTIONAL SPECIFICATIONS:

Class 2 IEC 60384-9, EIA 198

CLIMATIC CATEGORY:

30/85/21

MARKING

Marking indicates capacitance value and tolerance in accordance with "EIA 198" and voltage marks.

Examples of marking code

Disc size (D_{max}) ≤ 6.5 mm:

RP = low loss with T.C. Y5P

101 k

2 kV

Disc size (D_{max}) ≥ 7.5 mm:

BC

RP

102 k

3 kV

The capacitors meet the essential requirements of "IEC 60384-9 and EIA 198". Unless stated otherwise all electrical values apply at an ambient temperature of 25 ± 3 °C, at normal atmospheric conditions



ORDERING INFORMATION					
C (pF)	TOL. (%)	D _{max} (mm)	LEAD SPACING F (mm)	SH ⁽²⁾ (mm)	CLEAR TEXT CODE
					13 th DIGIT: T = REEL; U = AMMO; 3 = BULK 16 th DIGIT: R = RoHS COMPLIANT
500 V					
100	± 10	5.0	5.0	4.0	F101K25Y5PL6.J5.
120					F121K25Y5PL6.J5.
150					F151K25Y5PL6.J5.
180					F181K25Y5PL6.J5.
220					F221K25Y5PL6.J5.
270					F271K25Y5PL6.J5.
330					F331K25Y5PL6.J5.
390					F391K25Y5PL6.J5.
470					F471K25Y5PL6.J5.
560					6.5
680		F681K25Y5PL6.J5.			
820		F821K25Y5PL6.J5.			
1000		F102K29Y5PL6.J5.			
1200		8.5	5.0	4.0	F122K33Y5PL6.J5.
1500					F152K33Y5PL6.J5.
1800		10.0	5.0	4.0	F182K39Y5PL6.J5.
2200					F222K39Y5PL6.J5.
2700		11.0	5.0	4.0	F272K43Y5PL6.J5.
3300					F332K47Y5PL6J7.
3900		13.5	7.5	4.0	F392K53Y5PL6J7.
1 kV					
100	± 10	6.5	5.0	4.0	F101K25Y5PN6.J5.
120					F121K25Y5PN6.J5.
150					F151K25Y5PN6.J5.
180					F181K25Y5PN6.J5.
220					F221K25Y5PN6.J5.
270					F271K25Y5PN6.J5.
330					F331K25Y5PN6.J5.
390					F391K25Y5PN6.J5.
470					F471K25Y5PN6.J5.
560					7.5
680		F681K29Y5PN6.J5.			
820		F821K33Y5PN6.J5.			
1000		F102K33Y5PN6.J5.			
1200		10.0	5.0	4.0	F122K39Y5PN6.J5.
1500					F152K39Y5PN6.J5.
1800		11.0	5.0	4.0	F182K39Y5PN6.J5.
2200					F222K43Y5PN6.J5.
2700		13.5	5.0	4.0	F272K53Y5PN6J7.
3300					F332K59Y5PN6J7.
3900		15.0	7.5	4.8	F392K59Y5PN6J7.



ORDERING INFORMATION					
C (pF)	TOL. (%)	D _{max} (mm)	LEAD SPACING F (mm)	SH ⁽²⁾ (mm)	CLEAR TEXT CODE
					13 th DIGIT: T = REEL; U = AMMO; 3 = BULK 16 th DIGIT: R = RoHS COMPLIANT
2 kV					
100	± 10	6.5	5.0	4.0	F101K25Y5PP6.K5.
120					F121K25Y5PP6.K5.
150					F151K25Y5PP6.K5.
180					F181K25Y5PP6.K5.
220					F221K25Y5PP6.K5.
270					F271K29Y5PP6.K5.
330		7.5	5.0	4.0	F331K29Y5PP6.K5.
390					F391K29Y5PP6.K5.
470					F471K29Y5PP6.K5.
560					F561K33Y5PP6.K5.
680		8.5	5.0	4.0	F681K33Y5PP6.K5.
820					F821K43Y5PP6.K5.
1000		11.0	5.0	4.0	F102K43Y5PP6.K5.
1200					F122K43Y5PP6.K5.
1500		12.0	5.0	4.0	F152K47Y5PP63K7.
1800					F182K59Y5PP63K7.
2200		15.0	7.5	4.8	F222K59Y5PP63K7.
2700					F272K69Y5PP63K7.
3300		17.5	7.5	4.8	F332K69Y5PP63K7.
3900					F392K75Y5PP83K0.
4700	19.0	10.0	4.8	F472K75Y5PP83K0.	
3 kV					
100	± 10	8.5	7.5	4.0	F101K33Y5PR6.K7.
120					F121K33Y5PR6.K7.
150					F151K33Y5PR6.K7.
180					F181K33Y5PR6.K7.
220					F221K33Y5PR6.K7.
270					F271K33Y5PR6.K7.
330					F331K33Y5PR6.K7.
390					F391K33Y5PR6.K7.
470					F471K33Y5PR6.K7.
560					F561K33Y5PR6.K7.
680		11.0	7.5	4.0	F681K43Y5PR6.K7.
820					F821K43Y5PR6.K7.
1000					F102K43Y5PR63K7.
1200					F122K53Y5PR63K7.
1500		13.5	7.5	4.8	F152K59Y5PR63K7.
1800					F182K59Y5PR63K7.
2200		15.0	7.5	4.8	F222K59Y5PR63K7.
2700					F272K75Y5PR83K0.
2700		19.0	10.0	4.8	F272K75Y5PR83K0.

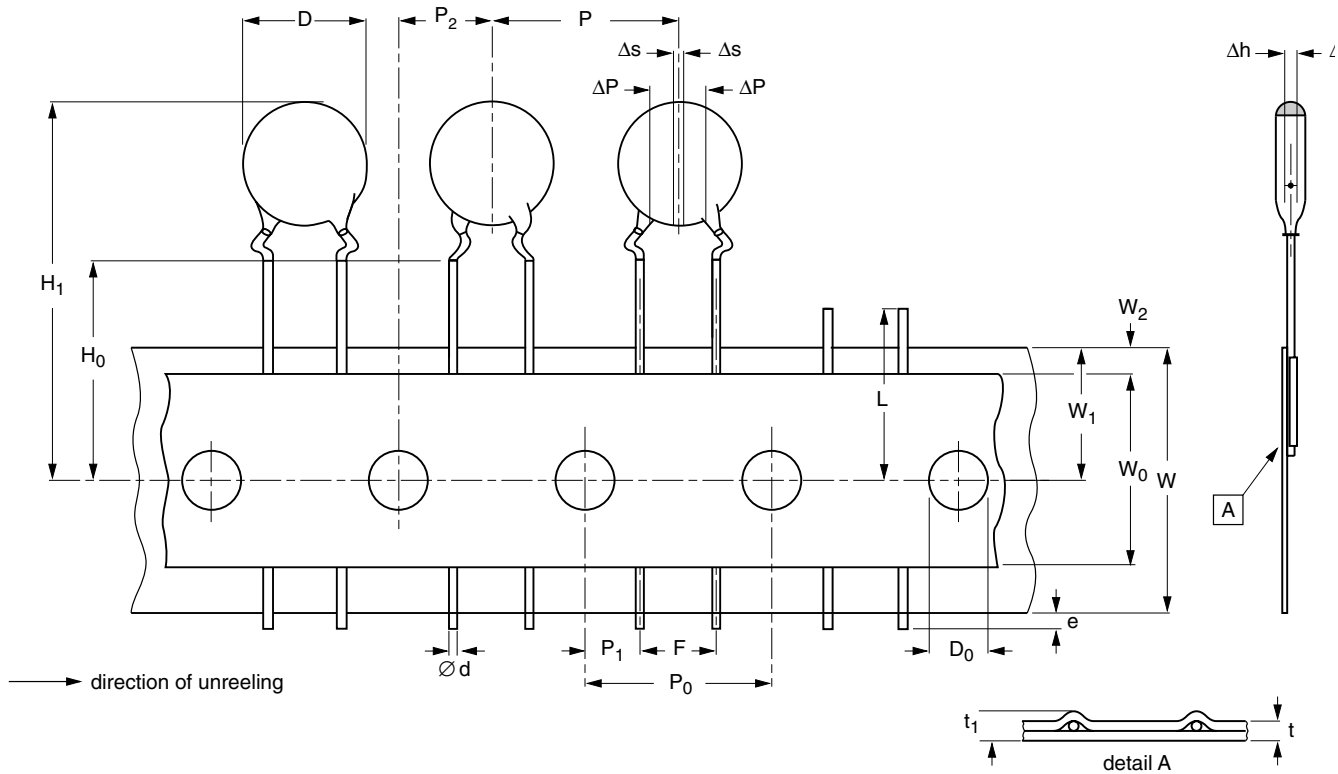
Notes

1. Maximum thickness: 500 V = 3.5 mm; 1 kV = 4.5 mm; 2 kV = 5.0 mm; 3 kV = 6.0 mm.
2. SH = seated height.
3. Lead style codes refer to kinked leads. Other styles available on request.

PACKAGING					
PACKAGING TYPE	SIZE CODE	LEAD SPACE (mm)	VOLTAGE (VDC)	SPQ	BOX DIMENSIONS L x W x H (mm)
Bulk (long lead $L \geq 25.4$ mm)	20 to 47	all	all	1000	245 x 120 x 65
				1000	
	53 to 75			500	
	84 to 96			250	
Tape and reel	≤ 47	≤ 6.4	$500 \leq WV \leq 2000$	2500	370 x 370 x 60
				2000	
				1000	
	≥ 53	≥ 7.5	all	1000	
	≥ 53	≥ 7.5	all	500	
Ammopack	≤ 47	≤ 6.4	$500 \leq WV < 2000$	2000	335 x 240 x 50
				2000	335 x 290 x 50
				1500	360 x 330 x 55
	≥ 53	≥ 7.5	all	1500	335 x 290 x 50
				500	

Note

The capacitors are supplied in bulk packaging (cardboard boxes), in tape on reel or in ammpack.



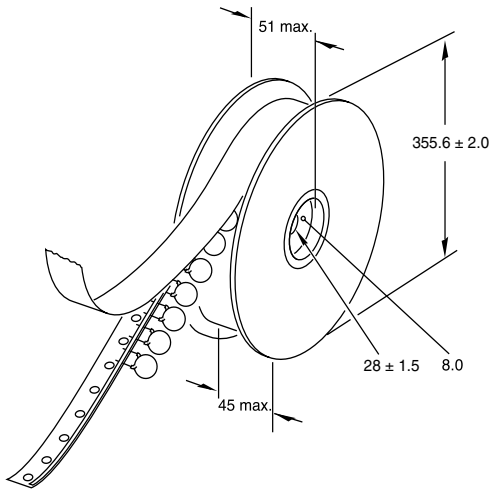


DIMENSIONS OF TAPE			
SYMBOL	PARAMETER	DIMENSIONS (mm)	
		FEED-HOLE PITCH $P_0 = 12.7$	FEED-HOLE PITCH $P_0 = 15.0$
D	body diameter	11.0 max.	14.0 max.
d	lead diameter	0.6 ± 0.05	0.6 ± 0.05
P	pitch between capacitors	12.7 ± 1.0	15.0 ± 1.0
P_0	feed-hole pitch	12.7 ± 0.3 ; note 1	15.0 ± 0.3 ; note 1
ΔP	plane deviation	1.0 max.	1.0 max.
P_1	feed-hole centre to lead centre	3.85 ± 0.7 ; note 2	3.75 ± 0.7 ; note 2
P_2	feed-hole centre to component centre	6.35 ± 1.3 ; note 2	7.5 ± 1.5 ; note 2
F	lead spacing	$5.0 + 0.6 / - 0.4$	$7.5 + 0.6 / - 0.4$
Δh	component alignment	0 ± 1.0	0 ± 1.0
W	tape width	$18.0 + 1.0 / - 0.5$	$18.0 + 1.0 / - 0.5$
W_0	hold-down tape width	5.0 min.	5.0 min.
W_1	hole position	$9.0 + 0.75 / - 0.5$	$9.0 + 0.75 / - 0.5$
W_2	hold-down tape margin	3.0 max.	3.0 max.
H_0	height to seating plane	16.0 ± 0.5	16.0 ± 0.5
H_1	maximum component height	32.0	40.0
e	lead end protrusion	1.0 max.	1.0 max.
L	maximum length of snapped lead	11.0	11.0
D_0	feed-hole diameter	4.0 ± 0.2	4.0 ± 0.2
t	total tape thickness	0.9 max.	0.9 max.
t_1	maximum thickness of tape and wires	1.5 max.	1.5 max.

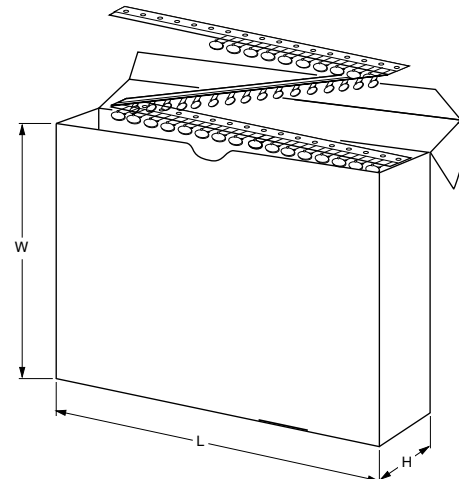
Notes

1. Cumulative pitch error: $\pm \leq 1 \text{ mm}/20 \text{ pitches}$.
2. Obliquity maximum 3° .

REEL AND TAPE DATA in millimeters



Reel with capacitors on tape



Ampack with capacitors on tape

DIMENSIONS OF AMMOPACK			
PARAMETER	DISC SIZE (D_{max})		UNIT
	6.5 to 11.0 mm	12.0 to 13.5 mm	
Taping pitch	12.7	15.0	mm
L	335	360	mm
W	290	330	mm
H	50	55	mm



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