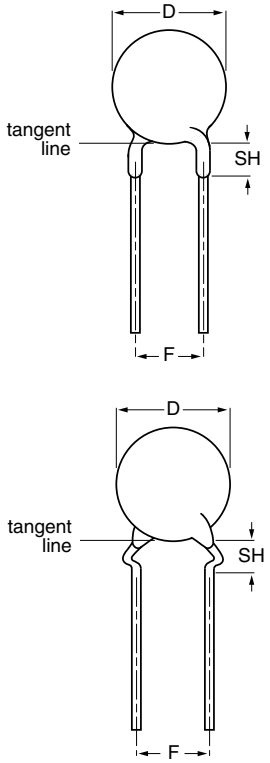
Ceramic Disc Capacitors
Class 1, 3 kV (DC)



Capacitors with 7.5 mm (0.30 inch) and 10 mm (0.40 inch) lead spacing

FEATURES

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

RoHS COMPLIANT

APPLICATIONS

- DC high voltage
- Pulse high voltage
- LCD backlight inverter

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 7.5 mm (0.300 inch) or 10 mm (0.400 inch) and a lead length from 4 to 30 mm. The standard tolerance on capacitance is ± 5 % or ± 10 % for class 1 capacitors. Encapsulation is made of gold-coloured epoxy-resin, flammable resistant in accordance with *"UL94V-0"*.

CAPACITANCE RANGE:

Class 1, at 1 MHz, 1.2 V (RMS); 4.9 to 100 pF

OPERATING TEMPERATURE RANGE:

Class1 C0G; U2J, U2M - 55 to + 125 °C

TEMPERATURE COEFFICIENTS:

Class 1

SECTIONAL SPECIFICATIONS:

Class 1 IEC 60 384-8,
EIA 198

CLIMATIC CATEGORY:

Class 1 C0G; U2J, U2M 55/125/21

MARKING

Straight and kinked leaded versions are gold coloured Marking indicates capacitance value and tolerance in accordance with "EIA 198", and voltage.

RATED DC VOLTAGE:

3 kV

DIELECTRIC STRENGTH:

According to IEC384-8, 1.5 x Ur + 500 Vdc (5 kVdc)

INSULATION RESISTANCE AT 500 V (DC):

≥ 10 000 MΩ

TOLERANCE ON CAPACITANCE:

± 5 %; ± 10 %;

Other tolerances available on request

DISSIPATION FACTOR:

Class 1, C ≤ 30 pF; ≤ 20 x (10/C + 0.7) x 10^{-4} max·

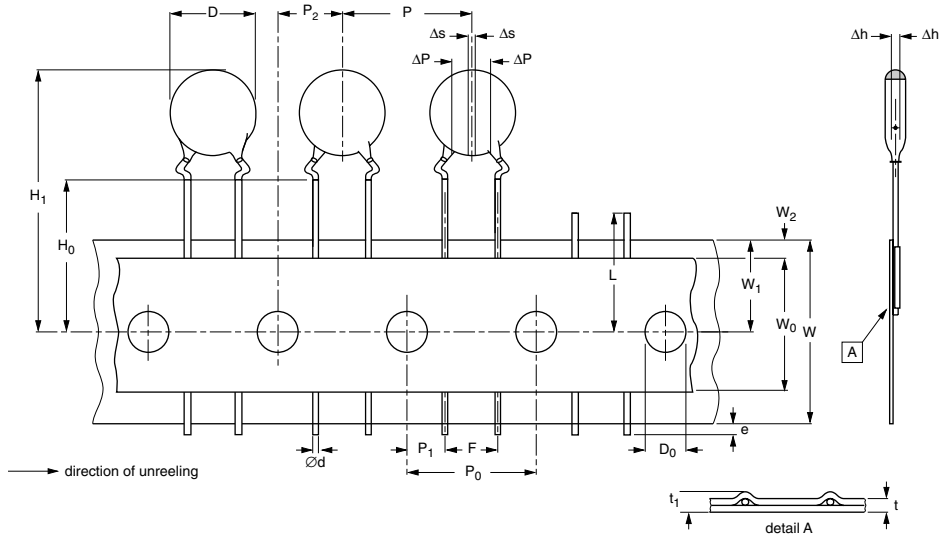
Class 1, C > 30 pF; ≤ 0.2 %

ORDERING INFORMATION, 3 KV (DC), KINKED					
C (pF)	TOL. (%)	D_{max} (mm)	LEAD SPACING F (mm)	SH[2] (mm)	CLEAR TEXT CODE 13th DIGIT: T = REEL; U = AMMO; 3 = BULK 16th DIGIT: R = RoHS COMPLIANT
CLASS 1					
4.9	± 0.5 pF	6.5	7.5	4.0	S499D25C0HR6.K7R
10	± 5				S100J25U2JR6.K7R
15	± 5				S150J25U2JR6.K7R
22	± 5				S220J25U2MR6.K7R
33	± 5				S330J25U2MR6.K7R
47	± 5	7.5			S470J29U2MR6.K7R
68	± 5	8.0			S680J31U2MR6.K7R
100	± 5	9.0			S101J35U2MR6.K7R

Notes
1. Maximum thickness 5.0 mm.
2. SH = seated height.
3. Refer to outward kinked leads. Other styles available on request (straight or inline kinked leads).

PACKAGING					
PACKAGING TYPE	SIZE CODE	LEAD SPACE (mm)	VOLTAGE (VDC)	SPQ	BOX DIMENSIONS L × W × H (mm)
Bulk (long lead L ≥ 25.4 mm	20 to 47	≥ 7.5	3 kV	1000	245 x 120 x 65
				1000	
				1000	
	53 to 75			500	
	84 to 96			250	
Tape and reel	≤ 47			1000	370 x 370 x 60
Ammopack	≤ 47			1500	360 x 330 x 55

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

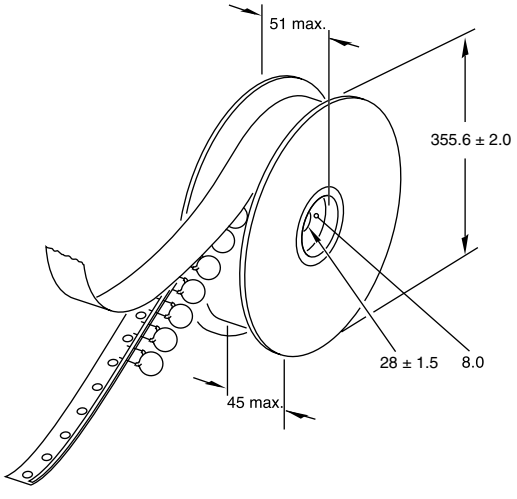


Kinked capacitors on tape, lead spacing 7.5 mm (0.30")

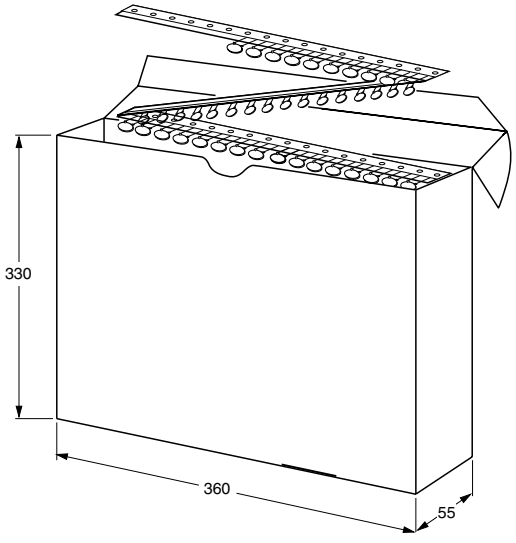
DIMENSIONS OF TAPE			
SYMBOL	PARAMETER	DIMENSIONS (mm)	
		NOMINAL	TOLERANCE
D	body diameter	14.0 max.	-
d	lead diameter	0.6	± 0.05
P	pitch between capacitors	15	± 1.0
P_0	feed-hole pitch	15	± 0.3; note 1
ΔP	plane deviation	1.0 max.	-
P_1	feed-hole centre to lead centre	3.75	± 0.7; note 2
P_2	feed-hole centre to component centre	7.5	± 1.3; note 2
F	lead spacing	7.5	+ 0.6/- 0.4
Δh	component alignment	0	± 1.0
W	tape width	18.0	+ 1.0 - 0.5
W_0	hold-down tape width	5.0 min.	-
W_1	hole position	9.0	+ 0.75 - 0.5
W_2	hold-down tape margin	3.0 max.	-
H_0	height to seating plane	16.0	± 0.5
H_1	maximum component height	40	-
e	lead end protrusion	1.0 max.	-
L	maximum length of snipped lead	11.0	-
D_0	feed-hole diameter	4.0	± 0.2
t	total tape thickness	0.9 max.	–
t_1	maximum thickness of tape and wires	1.5 max.	–

Notes
1. Cumulative pitch error: ± ≤ 1 mm/20 pitches.
2. Obliquity maximum 3°.

REEL AND TAPE DATA in millimeters



Reel with capacitors on tape



Ammopack with capacitors on tape

Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.