

Ceramic Disc Capacitors

Safety Standard Approved Disc Capacitor

FEATURES

- Complying with "EN 132 400" and "IEC 60384-14, 2nd edition, including amendment 1.1995"
- High reliability
- Vertical (inline) kinked or straight leads.


APPLICATIONS

- X1, Y1 according to IEC 60384-14.2
- Across-the-line
- Line by-pass
- Antenna coupling.

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.

The capacitors may be supplied with vertical (inline) kinked leads having a lead spacing of 10.0 mm. Encapsulation is made of flammable resistant epoxy resin in accordance with "UL94V-0".

CAPACITANCE RANGE:

10pF to 4700pF

RATED VOLTAGE U_R :

IEC 60384-14.2:

(X1): 760V (AC), 50Hz

(Y1): 500V (AC), 50Hz

250V (AC), 50/60Hz, UL1414 and CSA 22.2

TEST VOLTAGE:

Component Test (100%):

4000V (AC), 50Hz, 2 seconds

Random sampling test (destructive test):

4000V (AC), 50Hz, 60 seconds

Voltage proof of coating (destructive test):

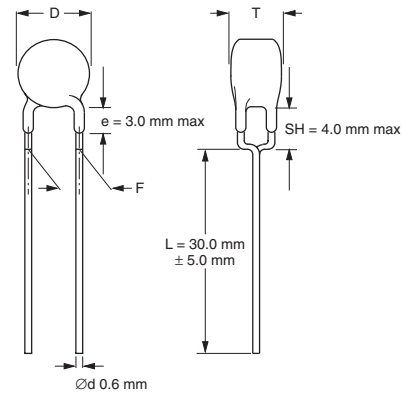
4000V (AC), 50Hz, 60 seconds

INSULATION RESISTANCE:

10000 M Ω minimum

TOLERANCE OF CAPACITANCE:

$\pm 20\%$ (Code M); $\pm 10\%$ (Code K)



Capacitors with 10 mm lead spacing.

DISSIPATION FACTOR:

25×10^{-3} maximum

CATEGORY TEMPERATURE RANGE:

-40 °C to + 125 °C

TEMPERATURE CHARACTERISTICS:

See Ordering Information Tables

CLIMATIC CATEGORY:

40/125/21 according to EN60068-1

COATING:

according to UL 94V-0

epoxy resin, isolating, flame retardant

WEEE/RoHS:

Components in accordance with EU Directive 2002/95/EC

APPROVALS:

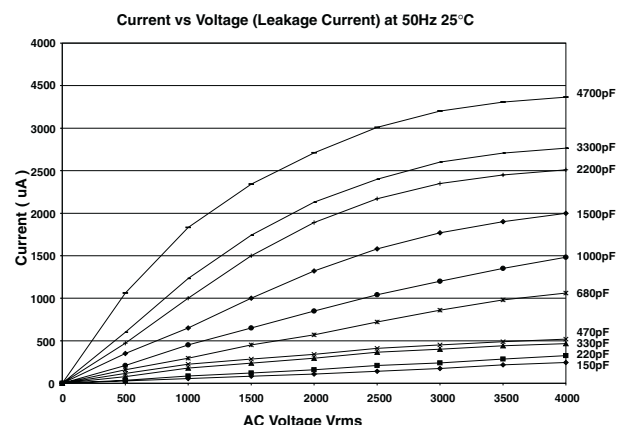
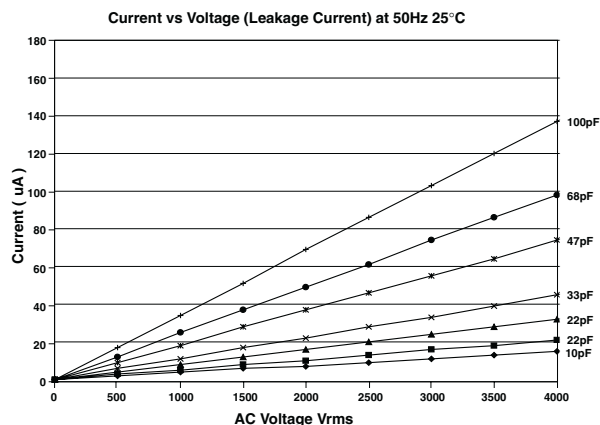
ENEC VDE (DE1-32019)

UL 1414 file E183844

CSA 22.2

PACKAGING:

Bulk; tape and reel; taped ammpack



The capacitors meet the essential requirements of "EIA 198". Unless stated otherwise all electrical values apply at an ambient temperature of $25 \pm 3^\circ\text{C}$, at normal atmospheric conditions

ORDERING INFORMATION							
C (pF)	TOL. (%)	TEMP. COEFFICIENT	BODY DIAMETER D _{max} (mm)	BODY THICK T _{max} (mm)	LEAD SPACING F (mm)	CLEAR TEXT CODE	CATALOG NUMBER
						15 th DIGIT*: T = REEL; U = AMMO; 3 = BULK; ⁽²⁾	8 th AND 9 th DIGIT*: 70 = REEL; 71 = AMMO; 72 = BULK; ⁽³⁾
10	±10	U2J (N750)	8	5.0 max.	10.0	VY1100K31U2JQ6*V0	2252 816 **006
15						VY1150K31U2JQ6*V0	2252 816 **106
22						VY1220K31U2JQ6*V0	2252 816 **206
33		Y5S (2C3)				VY1330K31Y5SQ6*V0	2252 816 **306
47						VY1470K31Y5SQ6*V0	2252 816 **406
68						VY1680K31Y5SQ6*V0	2252 816 **606
100						VY1101K31Y5SQ6*V0	2252 816 **016
150						VY1151K31Y5SQ6*V0	2252 816 **116
220						VY1221K31Y5SQ6*V0	2252 816 **216
330						VY1331K31Y5SQ6*V0	2252 816 **316
470						VY1471M31Y5UQ6*V0	2252 816 **417
680	±20	Y5U (2E3)	VY1681M31Y5UQ6*V0	2252 816 **617			
1000			9	VY1102M35Y5UQ6*V0	2252 816 **027		
1500			10.5	VY1152M41Y5UQ6*V0	2252 816 **127		
2200			12	VY1222M47Y5UQ6*V0	2252 816 **227		
2700			13	VY1272M51Y5UQ6*V0	2252 816 **277		
3300			15	VY1332M59Y5UQ6*V0	2252 816 **327		
3900			15.5	VY1392M61Y5UQ6*V0	2252 816 **377		
4700			16.0	VY1472M63Y5UQ6*V0	2252 816 **427		

Notes

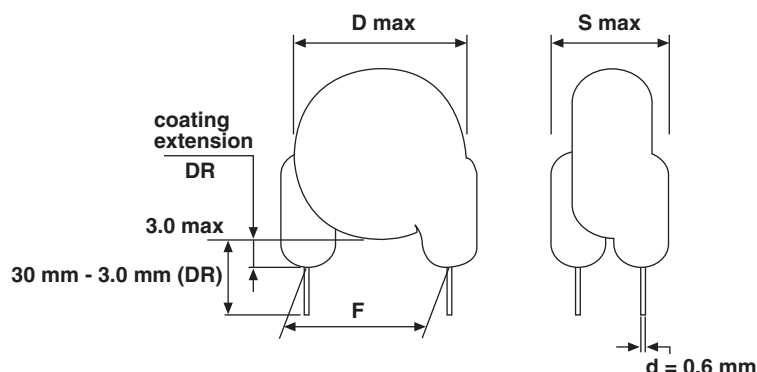
1. Straight leads are available on request.
2. 15th digit of the clear text code number to be completed with the packaging code.
3. 8th and 9th digit of the catalog number to be completed with the packaging code.
4. Coating extension DR valid for straight leads only
5. On request available: ± 10 % tolerance
6. On request available: leadspacing 12.5mm

LEADSPACING 10.0 mm

PACKAGING					
CAPACITANCE VALUE	SIZE CODE	BODY DIAMETER D _{max}	PACKAGING QUANTITIES		
			BULK	REEL	AMMO
10pF to 2200pF	31 ~ 47	12.0	1000	500	750
3300pF to 4700pF	51 ~ 63	16.0	500	500	750

Note

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

STRAIGHT LEADS

Ceramic Disc Capacitors Safety Standard Approved Disc Capacitor

Vishay BCcomponents

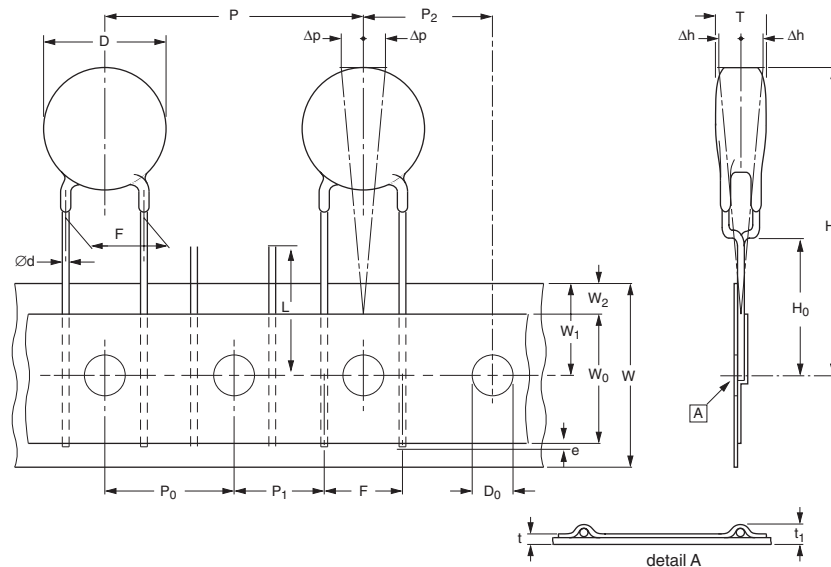


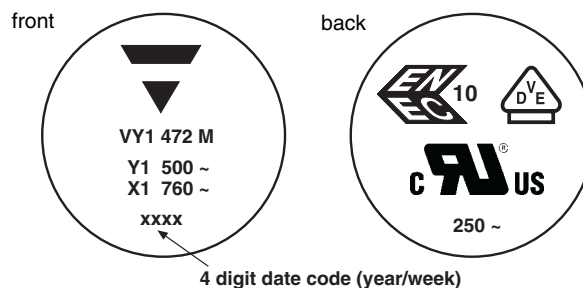
Fig.2 lead spacing 10 mm, Sprocket hole pitch 25.4 mm for lead spacing 10.0 mm

STANDARD RECOGNITION

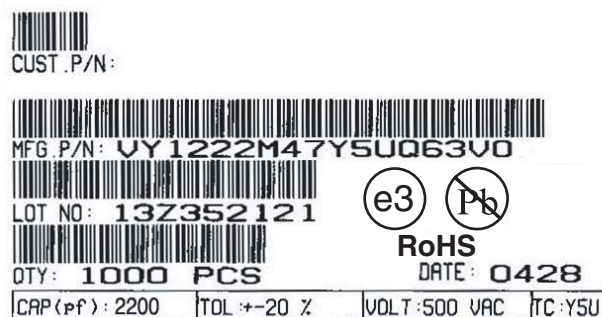
IEC 60384 - 14/2nd Issue (1993) incl. Am.1 (1995) - Safety Tests
EN 132 400 (1994) - Safety Tests

UL 1414 - Across-the-line, antenna-coupling and line-by-pass component
CSA C22.2 - Across-the-line, line to ground and antenna isolation capacitor
CCC - Chinese Safety Standard is available on request

MARKING: 2 SIDES (EXAMPLE)



LABEL (EXAMPLE)

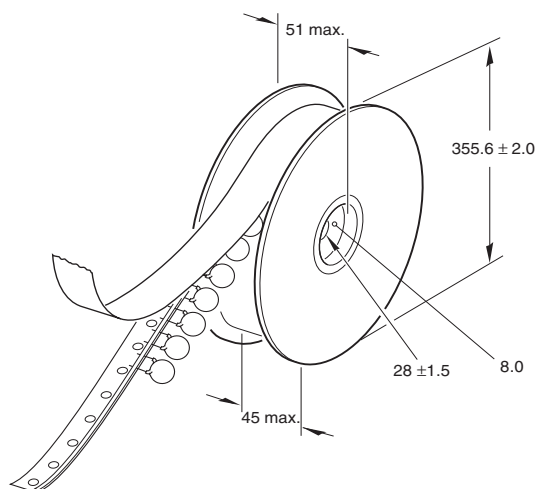


DIMENSIONS OF TAPE

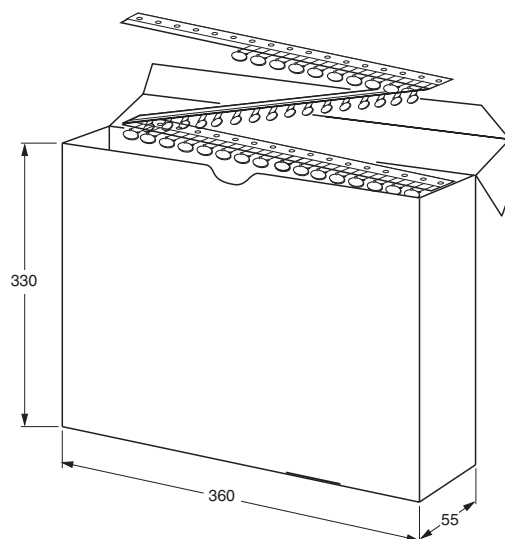
SYMBOL	PARAMETER	DIMENSIONS (mm)
		Fig.2
D 1)	body diameter	22.0 max.
d	lead diameter	0.6 ± 0.05
P	pitch of component	25.4 ± 1
P ₀ 2)	pitch of sprocket hole	12.7 ± 0.3
P ₁ 3)	distance, hole centre to lead	7.7 ± 1.0
P ₂ 3)	distance, hole to centre of component	12.7 ± 1.5
F	lead spacing	10 (± 1.0)
Δh	average deviation across tape	± 1.0 max.
ΔP	average deviation in direction of reeling	± 1.0 max.
W	carrier tape width	18.0 + 1 - 0.5
W ₀	hold-down tape width	5.0 min.
W ₁	position of sprocket hole	9.0 + 0.75 - 0.5
W ₂	distance of hold-down tape	3.0 max.
H ₁	maximum component height	40.0
H ₀	height to seating plane	16.0 ± 0.5
H ₀	height to seating plane straight leads	20.0 ± 0.5
L	length of cut leads	11.0 max.
l	length of lead protrusion	1.0 max.
D ₀	diameter of sprocket hole	4.0 ± 0.2
t	total tape thickness	0.9 max.

Notes

1. see ordering information table
2. Cumulative pitch error: ± 1 mm/20 pitches.
3. Obliquity maximum 3°.

REEL AND TAPE DATA in millimeters

Reel with capacitors on tape.



Ammopack with capacitors on tape.



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