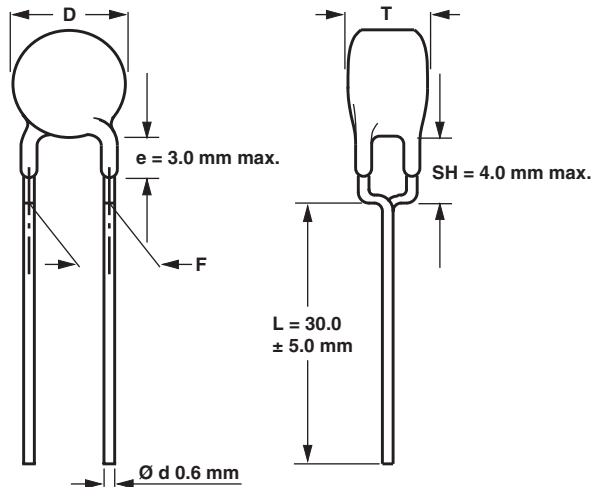


## Ceramic Disc Capacitors

### Safety Standard Approved Disc Capacitors



Capacitors with 10 mm lead spacing

**DISSIPATION FACTOR**

2.5 % 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**

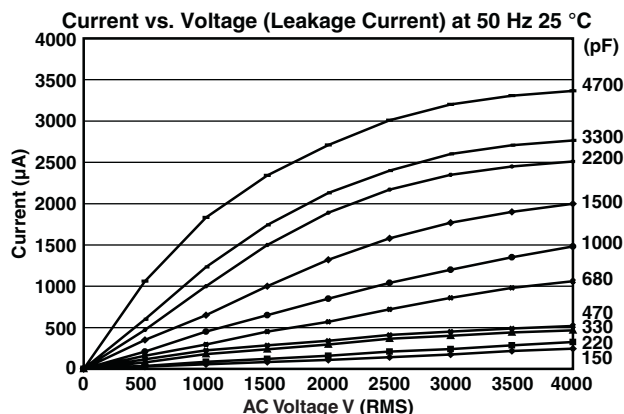
ENEC VDE (DE1-32019)

UL 1414 file E183844

CSA 22.2

**PACKAGING**

Bulk; Tape and reel; Taped ammpack


**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**

10 pF to 4700 pF

**RATED VOLTAGE  $U_R$** 

IEC 60384-14.2:

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

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

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

**TEST VOLTAGE**

Component Test (100 %):

4000 V (AC), 50 Hz, 2 s

Random sampling test (destructive test):

4000 V (AC), 50 Hz, 60 s

Voltage proof of coating (destructive test):

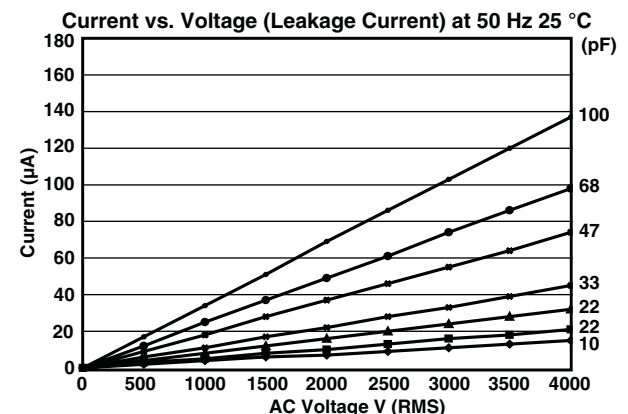
4000 V (AC), 50 Hz, 60 s

**INSULATION RESISTANCE**

10 000 MΩ minimum

**TOLERANCE OF CAPACITANCE**

± 20 % (Code M); ± 10 % (Code K)



The capacitors meet the essential requirements of “EIA 198”. Unless stated otherwise all electrical values apply at an ambient temperature of  $25 \pm 3$  °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					
						15 <sup>th</sup> DIGIT (*): T = REEL; U = AMMO; 3 = BULK (1)					
10	± 10	U2J (N750)	8	5.0	10.0	VY1100K31U2JQ6*V0					
15						VY1150K31U2JQ6*V0					
22						VY1220K31U2JQ6*V0					
33						VY1330K31Y5SQ6*V0					
47						VY1470K31Y5SQ6*V0					
68		Y5S (2C3)				VY1680K31Y5SQ6*V0					
100						VY1101K31Y5SQ6*V0					
150						VY1151K31Y5SQ6*V0					
220						VY1221K31Y5SQ6*V0					
330						VY1331K31Y5SQ6*V0					
470	± 20	Y5U (2E3)	9	5.0	10.0	VY1471M31Y5UQ6*V0					
680						VY1681M31Y5UQ6*V0					
1000						VY1102M35Y5UQ6*V0					
1500						VY1152M41Y5UQ6*V0					
2200						VY1222M47Y5UQ6*V0					
3300						VY1332M59Y5UQ6*V0					
3900						VY1392M61Y5UQ6*V0					
4700						VY1472M63Y5UQ6*V0					
								10.5			VY1102M35Y5UQ6*V0
								12			VY1152M41Y5UQ6*V0
			15			VY1222M47Y5UQ6*V0					
			15.5			VY1332M59Y5UQ6*V0					
			16.0			VY1392M61Y5UQ6*V0					
						VY1472M63Y5UQ6*V0					

**Notes:**

- 15th digit of the clear text code number to be completed with the packaging code
- Straight leads are available on request
- Coating extension  $\Delta R$  valid for straight leads only
- On request available:  $\pm 10\%$  tolerance
- On request available: Leads spacing 12.5 mm

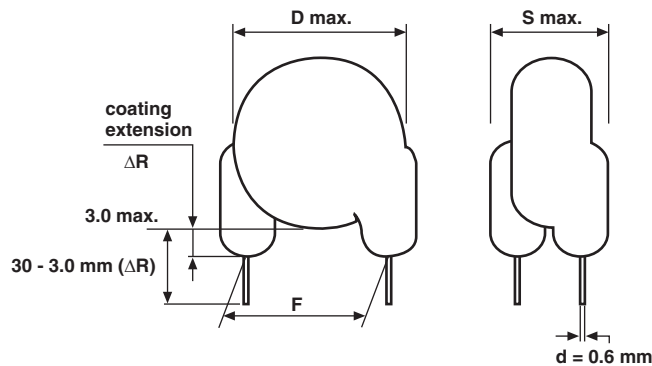
**LEADSPACING 10.0 mm**

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

**Note:**

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

**STRAIGHT LEADS**



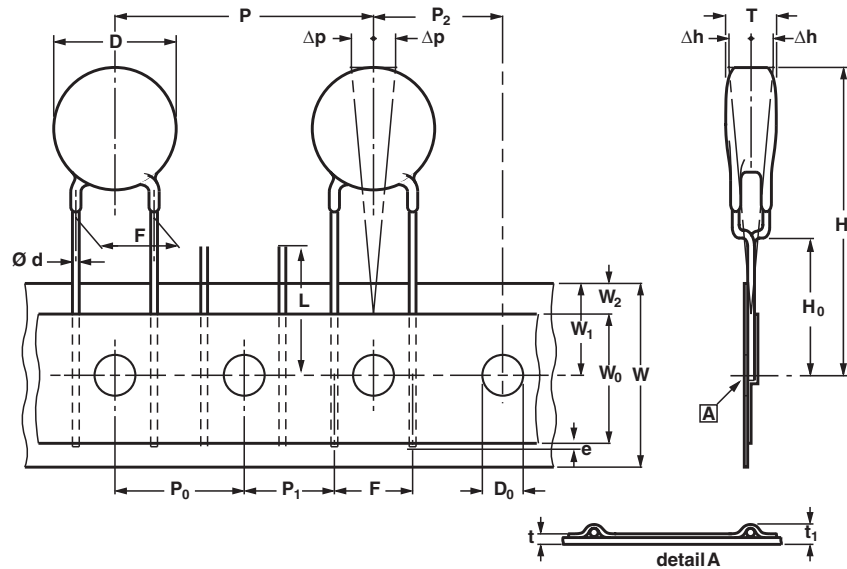


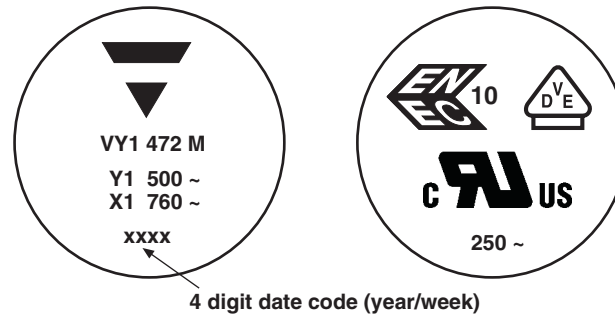
Fig. 2 Lead spacing 10 mm, sprocket hole pitch 25.04 mm for lead spacing

**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)**

PN: VY1471M31Y5UQ6XT0 Lot1: 14Z551S12 DC1: 0601  
 QTY: 225 Lot2: DC2:  
 PO: Batch: 200601CN  
 SO: Region: 9520 SL: 0010  
 Ser.No: 0601H69340

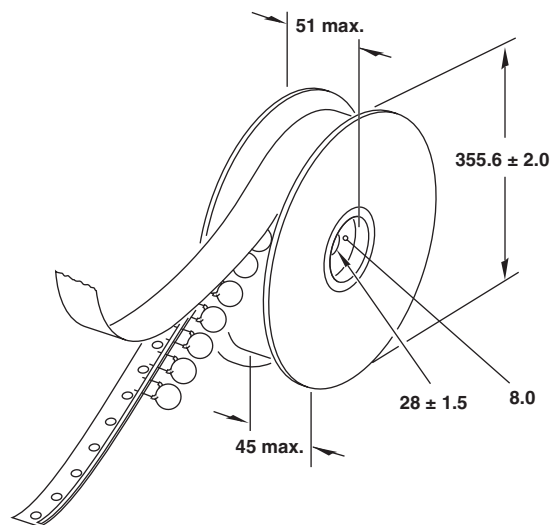
1/1

DIMENSIONS OF TAPE		
SYMBOL	PARAMETER	DIMENSIONS (mm)
		Fig. 2
D <sup>(1)</sup>	Body diameter	16.0 max.
d	Lead diameter	0.6 ± 0.05
P	Pitch of component	25.4 ± 1
P <sub>0</sub> <sup>(2)</sup>	Pitch of sprocket hole	12.7 ± 0.3
P <sub>1</sub> <sup>(3)</sup>	Distance, hole centre to lead	7.7 ± 1.0
P <sub>2</sub> <sup>(3)</sup>	Distance, hole to centre of component	12.7 ± 1.5
F	Lead spacing	10.0 + 0.6/- 0.4
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 <sub>0</sub>	Hold-down tape width	5.0 min.
W <sub>1</sub>	Position of sprocket hole	9.0 + 0.75 - 0.5
W <sub>2</sub>	Distance of hold-down tape	3.0 max.
H <sub>1</sub>	Maximum component height	40.0
H <sub>0</sub>	Height to seating plane (for kinked leads)	16.0 ± 0.5
H <sub>0</sub>	Height to seating plane (for straight leads)	20.0 ± 0.5
L	Length of cut leads	11.0 max.
l	Length of lead protrusion	1.0 max.
D <sub>0</sub>	Diameter of sprocket hole	4.0 ± 0.2
t	Total tape thickness	0.9 max.

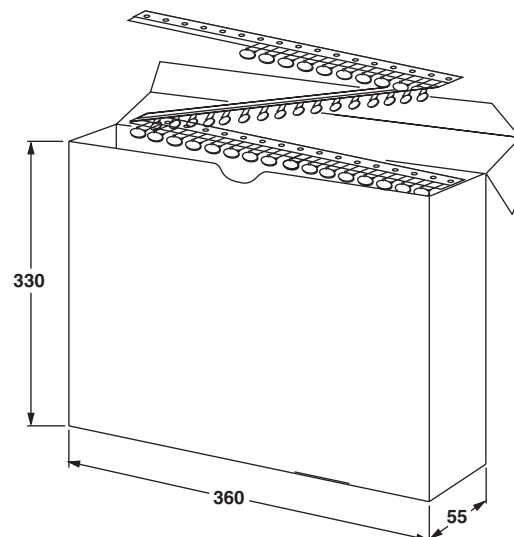
**Notes:**

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



Ampopack with capacitors on tape



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