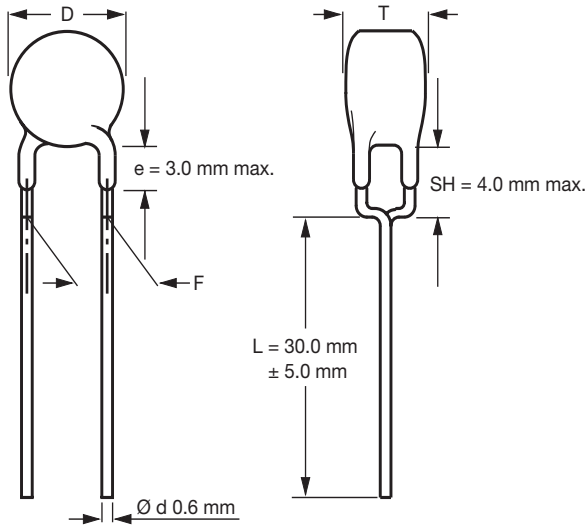


AC Line Rated Disc Capacitors Class X1, 760 V_{AC}, Class Y1, 500 V_{AC}



Capacitors with 10 mm lead spacing

QUICK REFERENCE DATA						
DESCRIPTION	CLASS X1 (U2J)	CLASS X1 (Y5S)	CLASS X1 (Y5U)	CLASS Y1 (U2J)	CLASS Y1 (Y5S)	CLASS Y1 (Y5U)
Voltage (V _{AC})	760			500	250	500
Min. Capacitance (pF)	10	33	470	10	33	470
Max. Capacitance (pF)	22	330	4700	22	330	4700
Mounting	Through hole					

OPERATING TEMPERATURE RANGE

- 40 °C to + 125 °C

TEMPERATURE CHARACTERISTICS

See Ordering Information tables

CLIMATIC CATEGORY

40/125/21 according to EN 60068-1

COATING

According to UL 94 V-0

Epoxy resin, isolating, flame retardant

APPROVALS

ENEC VDE (DE1-32019)

UL 1414 file E183844

CSA 22.2

PACKAGING

Bulk, tape and reel, taped ammpack

FEATURES

- Complying with IEC 60384-14, 3rd edition
- High reliability
- Vertical (inline) kinked or straight leads
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE
Available

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 "UL 94 V-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 Hz/60 Hz, UL 1414 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)

DISSIPATION FACTOR

2.5 % maximum



ORDERING INFORMATION												
C (pF)	TOL. (%)	TEMP. COEFFICIENT	BODY DIAMETER D _{MAX.} (mm)	BODY THICKNESS T _{MAX.} (mm)	LEAD SPACING F (mm)	CLEAR TEXT CODE						
						15 TH DIGIT: T = REEL; U = AMMO; 3 = BULK ⁽¹⁾						
						RoHS COMPLIANT	RoHS AND HALOGEN-FREE					
10	± 10	U2J (N750)	8.0	5.0	10.0	VY1100K31U2JQ6*V0	VY1100K31U2JG6*V0					
15						VY1150K31U2JQ6*V0	VY1150K31U2JG6*V0					
22						VY1220K31U2JQ6*V0	VY1220K31U2JG6*V0					
33		Y5S (2C3)				VY1330K31Y5SQ6*V0	VY1330K31Y5SG6*V0					
47						VY1470K31Y5SQ6*V0	VY1470K31Y5SG6*V0					
68						VY1680K31Y5SQ6*V0	VY1680K31Y5SG6*V0					
100						VY1101K31Y5SQ6*V0	VY1101K31Y5SG6*V0					
150						VY1151K31Y5SQ6*V0	VY1151K31Y5SG6*V0					
220						VY1221K31Y5SQ6*V0	VY1221K31Y5SG6*V0					
330						VY1331K31Y5SQ6*V0	VY1331K31Y5SG6*V0					
470	± 20	Y5U (2E3)	9.0	5.0	10.0	VY1471M31Y5UQ6*V0	VY1471M31Y5UG6*V0					
680						VY1681M31Y5UQ6*V0	VY1681M31Y5UG6*V0					
1000						VY1102M35Y5UQ6*V0	VY1102M35Y5UG6*V0					
1500						VY1152M41Y5UQ6*V0	VY1152M41Y5UG6*V0					
2200						VY1222M47Y5UQ6*V0	VY1222M47Y5UG6*V0					
3300						VY1332M59Y5UQ6*V0	VY1332M59Y5UG6*V0					
3900						VY1392M61Y5UQ6*V0	VY1392M61Y5UG6*V0					
4700						VY1472M63Y5UQ6*V0	VY1472M63Y5UG6*V0					
								10.5			VY1152M41Y5UQ6*V0	VY1152M41Y5UG6*V0
								12.0			VY1222M47Y5UQ6*V0	VY1222M47Y5UG6*V0
			15.0			VY1332M59Y5UQ6*V0	VY1332M59Y5UG6*V0					
			15.5			VY1392M61Y5UQ6*V0	VY1392M61Y5UG6*V0					
			16.0			VY1472M63Y5UQ6*V0	VY1472M63Y5UG6*V0					

Notes

⁽¹⁾ 15th digit of the clear text code number to be completed with the packaging code

- Straight leads are available on request
- Coating extension DR valid for straight leads only
- On request available: ± 10 % tolerance
- On request available: Leads spacing 12.5 mm

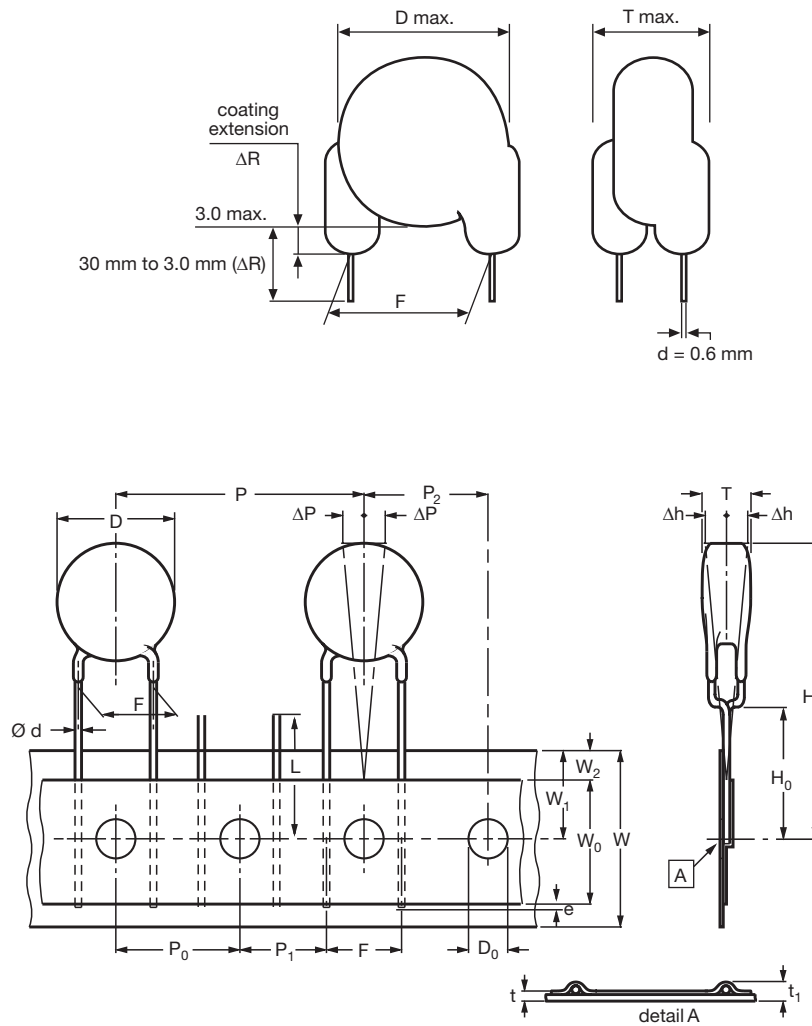
LEADSPACING 10.0 mm

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

Note

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

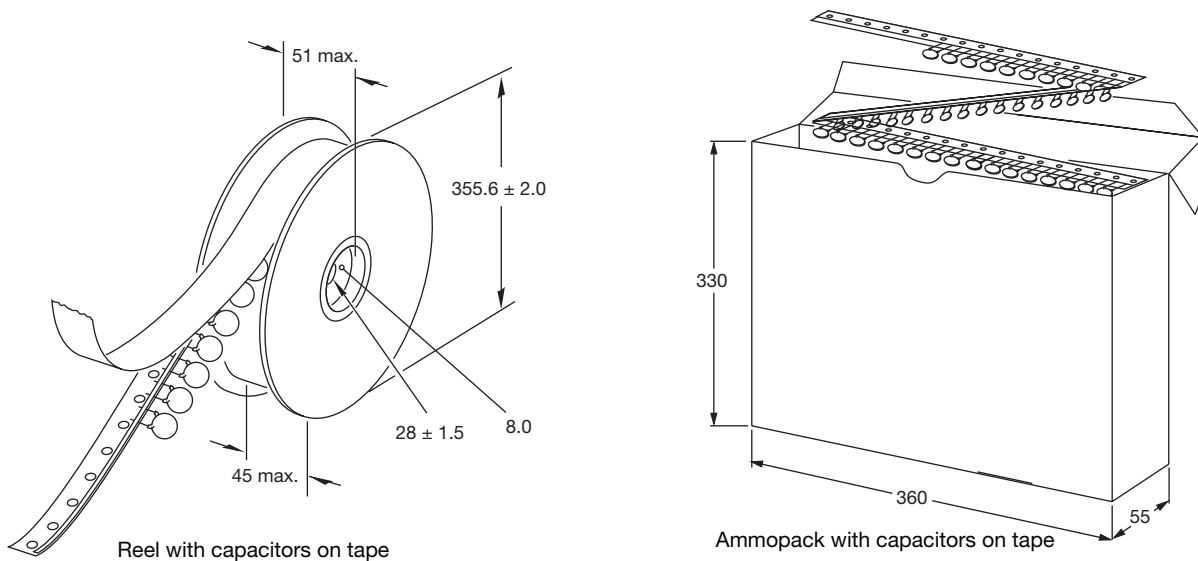
STRAIGHT LEADS



DIMENSIONS OF TAPE		
SYMBOL	PARAMETER	DIMENSIONS (mm)
		FIG. 2
D ⁽¹⁾	Body diameter	16.0 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 center to lead	7.7 ± 1.0
P ₂ ⁽³⁾	Distance, hole to center 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 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 (for kinked leads)	16.0 ± 0.5
H ₀	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 ₀	Diameter of sprocket hole	4.0 ± 0.2
t	Total tape thickness	0.9 max.

Notes

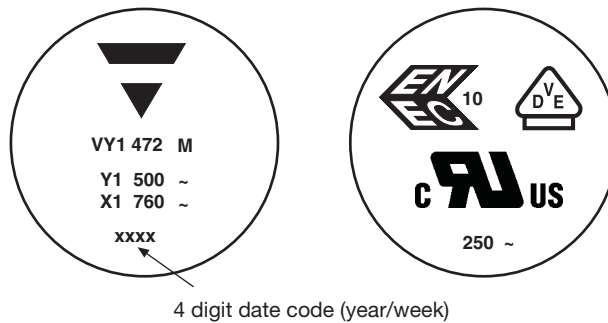
- (1) See ordering information table
- (2) Cumulative pitch error: ± 1 mm/20 pitches
- (3) Obliquity maximum 3°

REEL AND TAPE DATA in millimeters


STANDARD RECOGNITION

IEC 60384 - 14/3rd issue (2005) - 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
 CQC - China Quality Certification Centre-Safety Tests

MARKING: 2 SIDES (EXAMPLE)

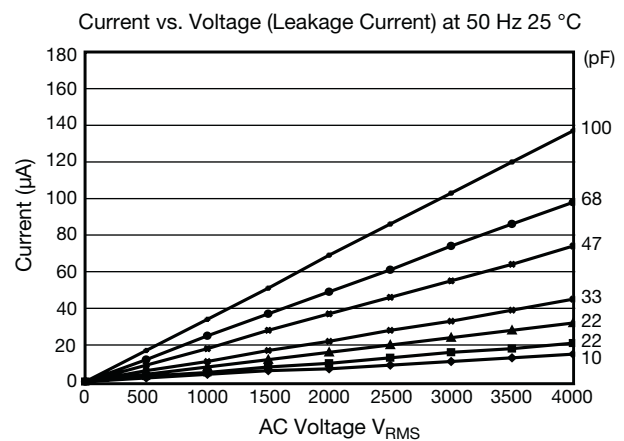
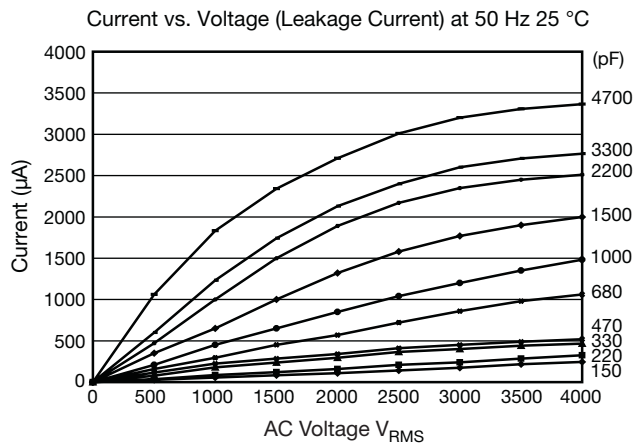


4 digit date code (year/week)

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



Note

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



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