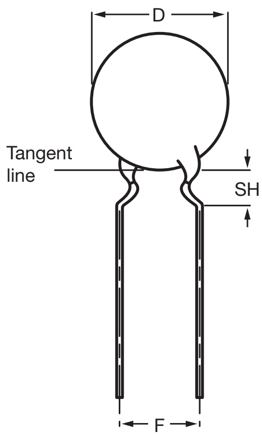
Ceramic Disc Capacitors
Class 1, 500 V_{DC}, Narrow Tolerance



Capacitor with 5 mm (0.20") lead spacing

QUICK REFERENCE DATA	
DESCRIPTION	**CLASS 1 (NP0, N750)**
Voltage (V_{DC})	500
Min. Capacitance (pF)	1.0
Max. Capacitance (pF)	150
Mounting	Through hole

MARKING

Marking indicates capacitance value and tolerance in accordance with “EIA 198”.

OPERATING TEMPERATURE RANGE

Class 1, - 55 °C to + 125 °C

TEMPERATURE COEFFICIENTS

Class 1, NP0; N750

SECTIONAL SPECIFICATIONS

Class 1, IEC 60 384-8,

EIA 198

CLIMATIC CATEGORY

Class 1, 55/125/21

FEATURES

RoHS COMPLIANT

- Low losses
- High stability
- High capacitance in small size
- Kinked (preferred) or straight leads
- Compliant to RoHS directive 2002/95/EC

APPLICATIONS

- Bypassing
- Coupling
- Resonant circuit

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 have inward kinked leads with a spacing of 5 mm (0.200") and a lead length from 4 mm to 30 mm. Encapsulation is made of phenolic resin.

CAPACITANCE RANGE

Class 1, at 1 MHz, 1.2 V_{RMS}; 1.0 pF to 150 pF

1 kHz, 1 V_{RMS} ± 0.2 V_{RMS} for capacitance values higher than 1000 pF

RATED VOLTAGE DC

500 V

DIELECTRIC STRENGTH

250 % of rated voltage

INSULATION RESISTANCE AT 500 V_{DC}

≥ 10 000 MΩ

TOLERANCE ON CAPACITANCE

± 0.25 pF; ± 2 %

DISSIPATION FACTOR

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

Class 1, C > 30 pF; ≤ 0.2 %

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.

Ceramic Disc Capacitors
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ORDERING INFORMATION CLASS 1, 500 V_{DC}, KINKED					
C (pF)	TOL. (%)	$D_{MAX.}$ (mm)	LEAD SPACING (mm)	SH [(1)] (mm)	CLEAR TEXT CODE 13TH DIGIT: T = REEL; U = AMMO; 3 = BULK 16TH DIGIT: R = RoHS COMPLIANT
CLASS 1 NP0					
1.0	± 0.25 pF	5.0	5.0	4.0	D109C20C0KL6.J5.
1.5					D159C20C0KL6.J5.
2.2					D229C20C0JL6.J5.
3.3					D339C20C0JL6.J5.
4.7					D479C20C0HL6.J5.
6.8					D689C20C0HL6.J5.
10	± 2				D100G20C0GL6.J5.
15					D150G20C0GL6.J5.
22		6.5			D220G25C0GL6.J5.
33					D330G25C0GL6.J5.
47		7.5			D470G29C0GL6.J5.
68		8.5			D680G33C0GL6.J5.
100		10			D101G39C0GL6.J5.
150		12			D151G47C0GL6.J5.

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CLASS 1 N750					
6.8	± 0.25	5	5	4.0	D689C20U2JL6.J5.
10	± 2				D100G20U2JL6.J5.
15					D150G20U2JL6.J5.
22					D220G20U2JL6.J5.
33		6.5			D330G25U2JL6.J5.
47		7.5			D470G29U2JL6.J5.
68		8.5			D680G33U2JL6.J5.
100		10			D101G39U2JL6.J5.
150		12			D151G47U2JL6.J5.

Notes

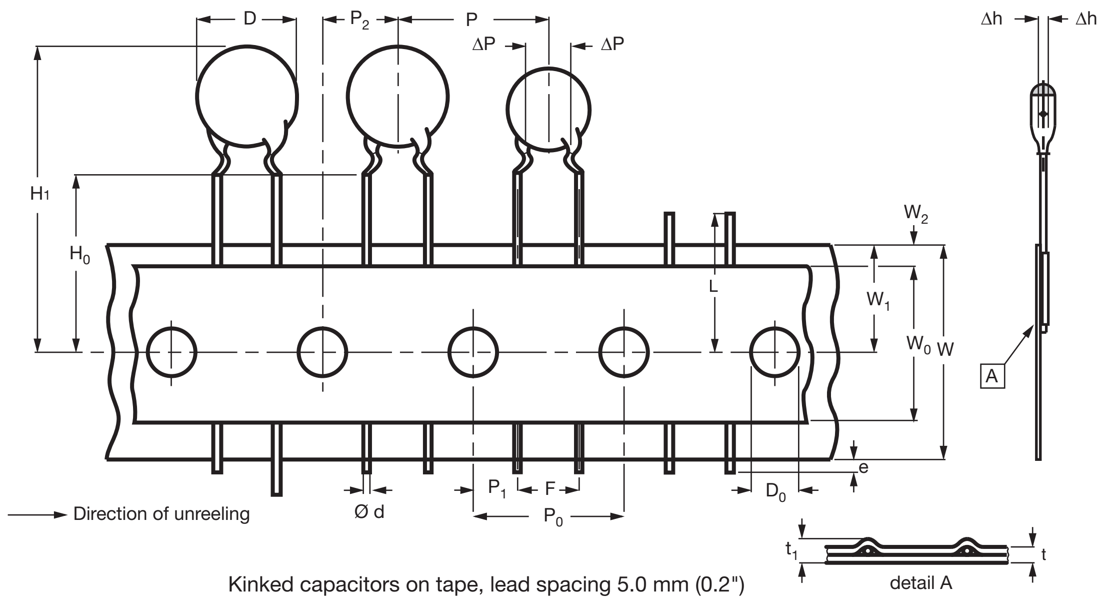
(1) SH = seated height

- Maximum thickness 4.0 mm
- Lead style codes refer to inward kinked leads. Other styles available on request
- Other capacitances values E12 series available

PACKAGING				
$D_{MAX.}$ (mm)	SIZE CODE	PACKAGING QUANTITIES		
		BULK	REEL	AMMO
5.0 (0.20")	20	1000	2000	2000
6.5 (0.25")	25			
7.5 (0.29")	29			
8.5 (0.33")	33			
10.0 (0.39")	39			
11.0 (0.43")	43			
12.0 (0.47")	47			

Note

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



Kinked capacitors on tape, lead spacing 5.0 mm (0.2")

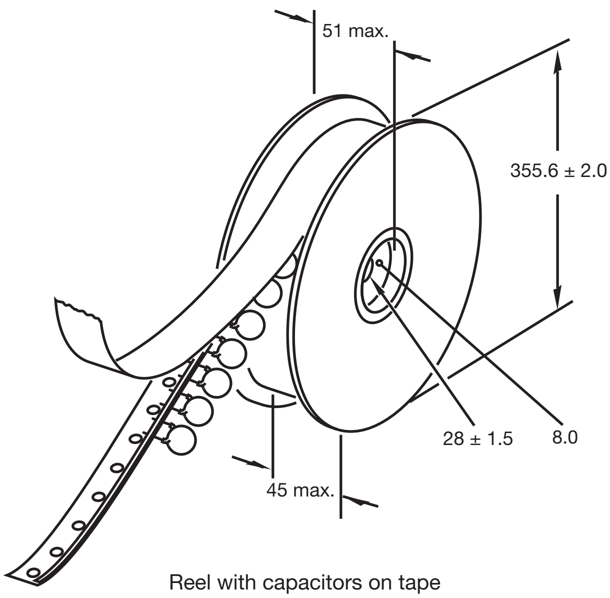
DIMENSIONS OF TAPE			
SYMBOL	PARAMETER	DIMENSIONS (mm)	
		NOMINAL	TOLERANCE
D	Body diameter	11.0 maximum	-
d	Lead diameter	0.6	± 0.05
P	Pitch between capacitors	12.7	± 1.0
P_0 (1)	Feed-hole pitch	12.7	± 0.3
ΔP	Plane deviation	1.0 maximum	-
P_1 (2)	Feed-hole center to lead center	3.85	± 0.7
P_2 (2)	Feed-hole center to component center	6.35	± 1.3
F	Lead spacing	5.0	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 minimum	-
W_1	Hole position	9.0	0.75 - 0.5
W_2	Hold-down tape margin	3.0 maximum	-
H_0	Height to seating plane	16.0	± 0.5
H_1	Maximum component height	32.0	-
e	Lead end protrusion	1.0 maximum	-
L	Maximum length of snipped lead	11.0	-
D_0	Feed-hole diameter	4.0	± 0.2
t	Total tape thickness	0.9 maximum	-
t_1	Maximum thickness of tape and wires	1.5 maximum	-

Notes

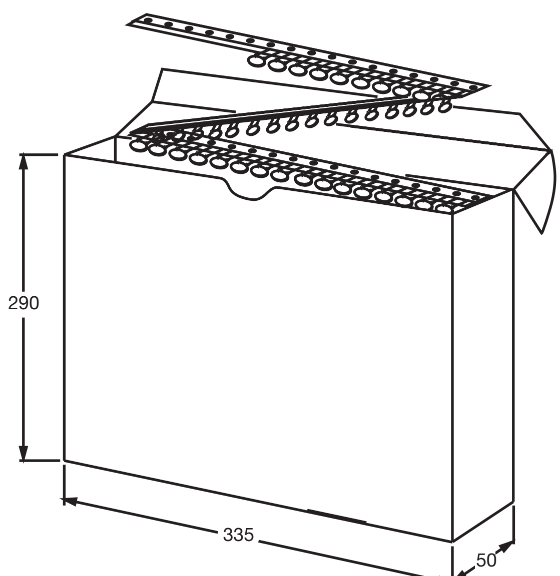
(1) Cumulative pitch error: ± ≤ 1 mm/20 pitches

(2) Obliquity maximum 3°

REEL AND TAPE DATA in millimeters



Reel with capacitors on tape



Ammopack with capacitors on tape

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