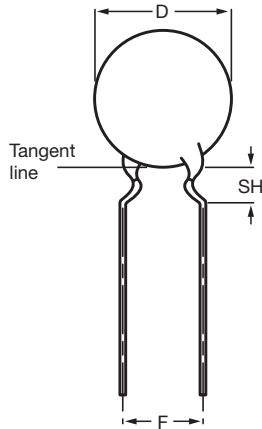


## Ceramic Disc Capacitors Class 1, 500 V<sub>DC</sub>, Narrow Tolerance



Capacitor with 5 mm (0.20") lead spacing

QUICK REFERENCE DATA	
DESCRIPTION	CLASS 1 (NP0, N750)
Voltage (V <sub>DC</sub> )	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

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



RoHS  
COMPLIANT

### 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<sub>RMS</sub>; 1.0 pF to 150 pF

1 kHz, 1 V<sub>RMS</sub> ± 0.2 V<sub>RMS</sub> for capacitance values higher than 1000 pF

### RATED VOLTAGE DC

500 V

### DIELECTRIC STRENGTH

250 % of rated voltage

### INSULATION RESISTANCE AT 500 V<sub>DC</sub>

≥ 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<sup>-4</sup> 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.

# D Series Narrow Tolerance



Vishay BCcomponents

Ceramic Disc Capacitors  
Class 1, 500 V<sub>DC</sub>, Narrow Tolerance

ORDERING INFORMATION CLASS 1, 500 V <sub>DC</sub> , KINKED					
C (pF)	TOL. (%)	D <sub>MAX.</sub> (mm)	LEAD SPACING (mm)	SH <sup>(1)</sup> (mm)	CLEAR TEXT CODE
					13 <sup>TH</sup> DIGIT: T = REEL; U = AMMO; 3 = BULK 16 <sup>TH</sup> DIGIT: R = RoHS COMPLIANT
<b>CLASS 1 NP0</b>					
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	± 2	6.5	5.0	4.0	D689C20C0HL6.J5.
10					D100G20C0GL6.J5.
15					D150G20C0GL6.J5.
22					D220G25C0GL6.J5.
33					D330G25C0GL6.J5.
47					D470G29C0GL6.J5.
68					D680G33C0GL6.J5.
100					D101G39C0GL6.J5.
150					D151G47C0GL6.J5.
150					

ORDERING INFORMATION CLASS 1, 500 V <sub>DC</sub> , KINKED						
C (pF)	TOL. (%)	D <sub>MAX.</sub> (mm)	LEAD SPACING (mm)	SH <sup>(1)</sup> (mm)	CLEAR TEXT CODE	
					13 <sup>TH</sup> DIGIT: T = REEL; U = AMMO; 3 = BULK 16 <sup>TH</sup> DIGIT: R = RoHS COMPLIANT	
<b>CLASS 1 N750</b>						
6.8	± 0.25	5	5	4.0	D689C20U2JL6.J5.	
10	± 2				D100G20U2JL6.J5.	
15					D150G20U2JL6.J5.	
22					D220G20U2JL6.J5.	
33					D330G25U2JL6.J5.	
47		D470G29U2JL6.J5.				
68		D680G33U2JL6.J5.				
100		D101G39U2JL6.J5.				
150		D151G47U2JL6.J5.				
150			12			D151G47U2JL6.J5.

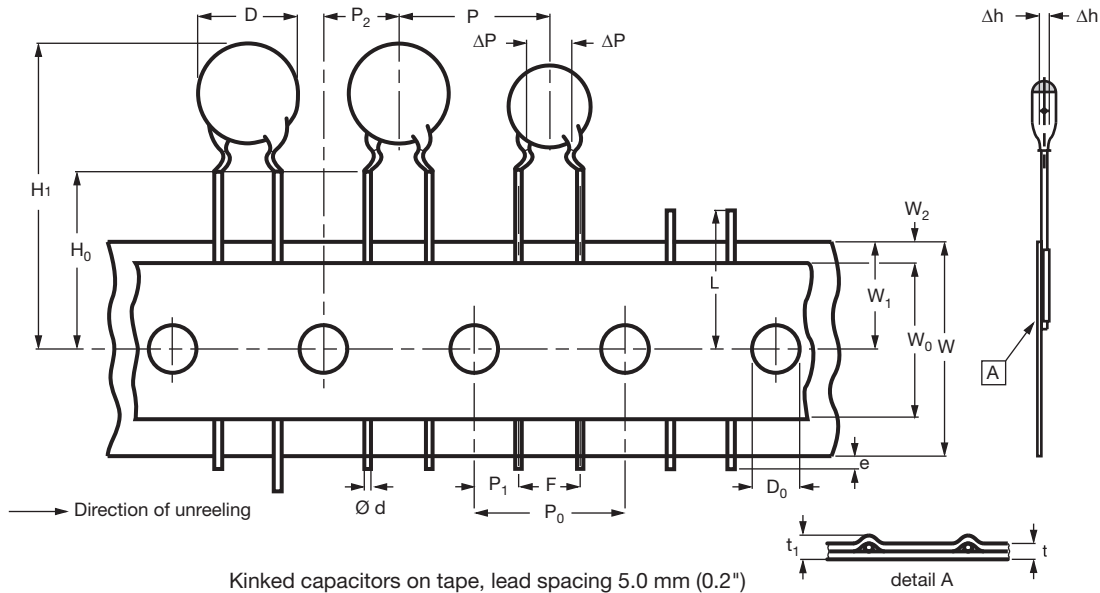
**Notes**

- <sup>(1)</sup> SH = seated height
- Maximum thickness 4.0 mm
- Lead style codes refer to inward kinked leads. Other styles available on request
- Other capacitance values E12 series available

PACKAGING				
D <sub>MAX.</sub> (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 ammpack.



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 <sub>0</sub> <sup>(1)</sup>	Feed-hole pitch	12.7	± 0.3
ΔP	Plane deviation	1.0 maximum	-
P <sub>1</sub> <sup>(2)</sup>	Feed-hole center to lead center	3.85	± 0.7
P <sub>2</sub> <sup>(2)</sup>	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 <sub>0</sub>	Hold-down tape width	5.0 minimum	-
W <sub>1</sub>	Hole position	9.0	0.75 - 0.5
W <sub>2</sub>	Hold-down tape margin	3.0 maximum	-
H <sub>0</sub>	Height to seating plane	16.0	± 0.5
H <sub>1</sub>	Maximum component height	32.0	-
e	Lead end protrusion	1.0 maximum	-
L	Maximum length of snapped lead	11.0	-
D <sub>0</sub>	Feed-hole diameter	4.0	± 0.2
t	Total tape thickness	0.9 maximum	-
t <sub>1</sub>	Maximum thickness of tape and wires	1.5 maximum	-

**Notes**

- (1) Cumulative pitch error: ± ≤ 1 mm/20 pitches
- (2) Obliquity maximum 3°

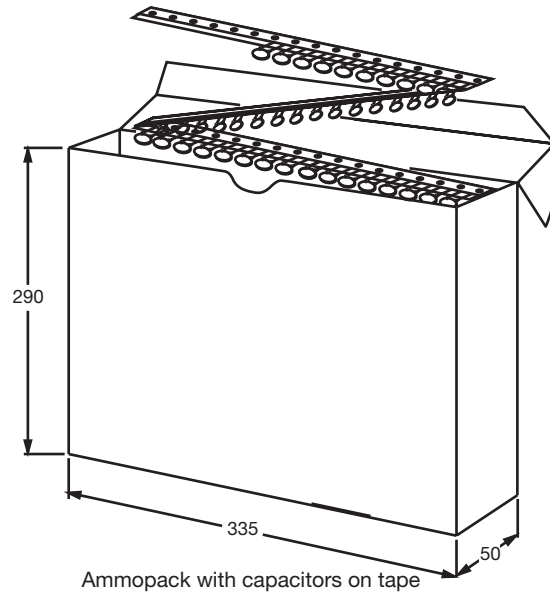
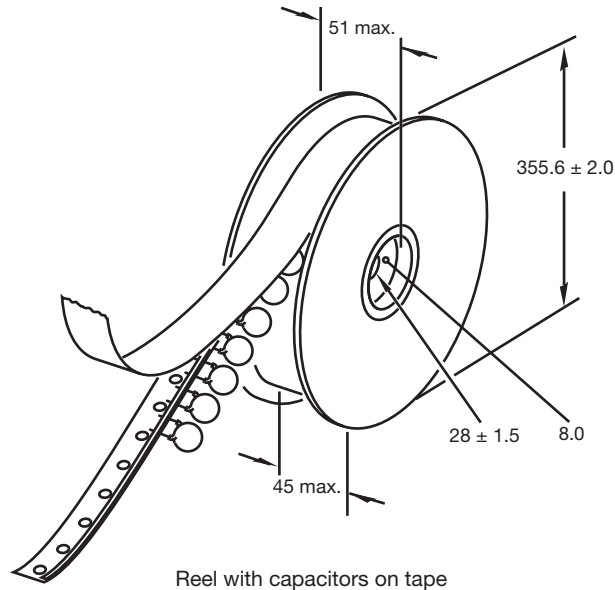
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## REEL AND TAPE DATA in millimeters





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