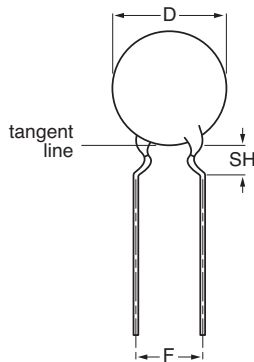


## Ceramic Disc Capacitors Class 1, 500 V (DC) Narrow Tolerance



Capacitors with 5 mm (0.20") lead spacing

### FEATURES

- Low losses
- High stability
- High capacitance in small size
- Kinked (preferred) or straight leads
- Lead (Pb)-free available



**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 to 30 mm. Encapsulation is made of phenolic resin.

### TEMPERATURE COEFFICIENTS:

Class 1 NP0; N750

### SECTIONAL SPECIFICATIONS:

Class 1 IEC 60 384-8,  
EIA 198

### CLIMATIC CATEGORY:

Class 1 55/125/21

### OPERATING TEMPERATURE RANGE:

Class 1 - 55 to + 125 °C

### MARKING

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

### CAPACITANCE RANGE:

Class 1, at 1 MHz, 1.2 V (RMS); 1.0 pF to 330 pF  
1 kHz,  $1 \pm 0.2$  V (RMS) for capacitance values higher than 1000 pF

### RATED DC VOLTAGE:

500 V

### DIELECTRIC STRENGTH:

250 % of rated voltage

### INSULATION RESISTANCE AT 500 V (DC):

$\geq 10\,000\text{ M}\Omega$

### TOLERANCE ON CAPACITANCE:

$\pm 0.25\text{ pF}$ ;  $\pm 2\%$

### DISSIPATION FACTOR:

Class 1,  $C \leq 30\text{ pF}$ ;  $\leq 20 \times (10/C + 0.7) \times 10^{-4}$  maximum

Class 1,  $C > 30\text{ pF}$ ;  $\leq 0.2\%$

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



# HV 500 V Narrow Tolerance

Ceramic Disc Capacitors  
Class 1, 500 V (DC) Narrow Tolerance

Vishay BCcomponents

ORDERING INFORMATION, CLASS 1, 500 V (DC), KINKED						
C (pF)	TOL. (%)	D <sub>max</sub> (mm)	LEAD SPACING F (mm)	SH <sup>(2)</sup> (mm)	CLEAR TEXT CODE	
					13 <sup>th</sup> DIGIT: T = REEL; U = AMMO; 3 = BULK 16 <sup>th</sup> 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 %	6.5			D100G20C0GL6.J5.	
15					D150G20C0GL6.J5.	
22					D220G25C0GL6.J5.	
33					D330G25C0GL6.J5.	
47					D470G29C0GL6.J5.	
68					D680G33C0GL6.J5.	
100					D101G39C0GL6.J5.	
150					D151G47C0GL6.J5.	

ORDERING INFORMATION, CLASS 1, 500 V (DC), KINKED						
C (pF)	TOL. (%)	D <sub>max</sub> (mm)	LEAD SPACING F (mm)	SH <sup>(2)</sup> (mm)	CLEAR TEXT CODE	
					13 <sup>th</sup> DIGIT: T = REEL; U = AMMO; 3 = BULK 16 <sup>th</sup> DIGIT: R = RoHS COMPLIANT	
CLASS 1 N750						
6.8	± 0.25	5.0	5.0	4.0	D689C20U2JL6.J5.	
10	± 2 %				5.0	D100G20U2JL6.J5.
15						D150G20U2JL6.J5.
22						D220G20U2JL6.J5.
33		D330G25U2JL6.J5.				
47		D470G29U2JL6.J5.				
68		D680G33U2JL6.J5.				
100		D101G39U2JL6.J5.				
150		D151G47U2JL6.J5.				

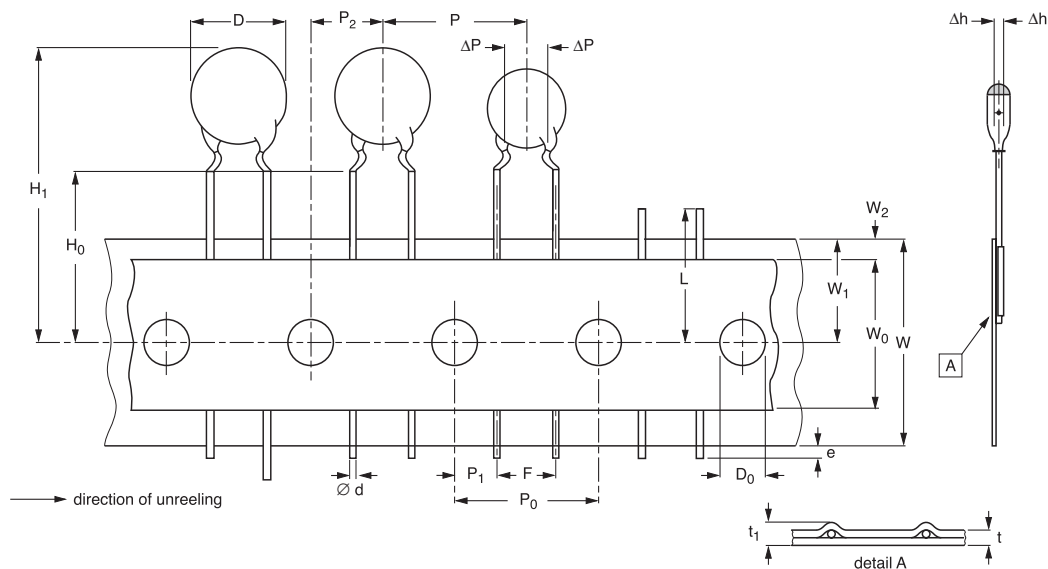
## Notes

- Maximum thickness 3.5 mm.
- SH = seated height.
- 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 ammopack.



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

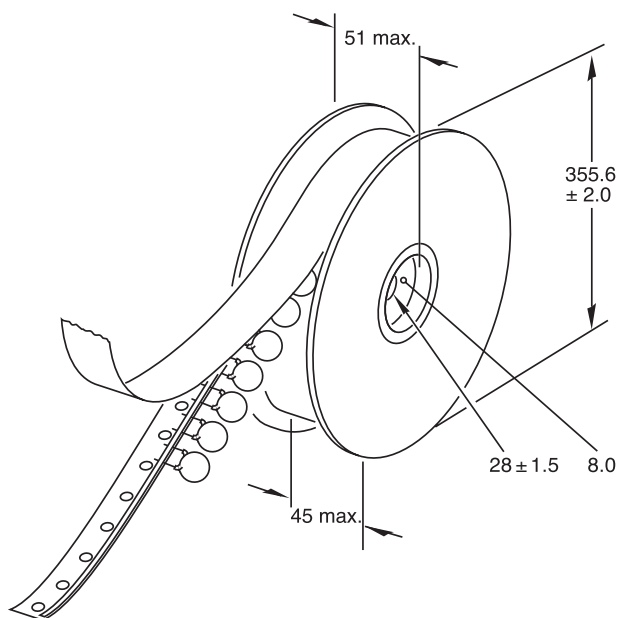
DIMENSIONS OF TAPE			
SYMBOL	PARAMETER	DIMENSIONS (mm)	
		NOMINAL	TOLERANCE
D	body diameter	11.0 maximum	-
d	lead diameter	0.6	± 0.05
P	pitch between capacitors	12.7	± 1.0
P <sub>0</sub>	feed-hole pitch	12.7	± 0.3; note 1
ΔP	plane deviation	1.0 maximum	-
P <sub>1</sub>	feed-hole centre to lead centre	3.85	± 0.7; note 2
P <sub>2</sub>	feed-hole centre to component centre	6.35	± 1.3; note 2
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

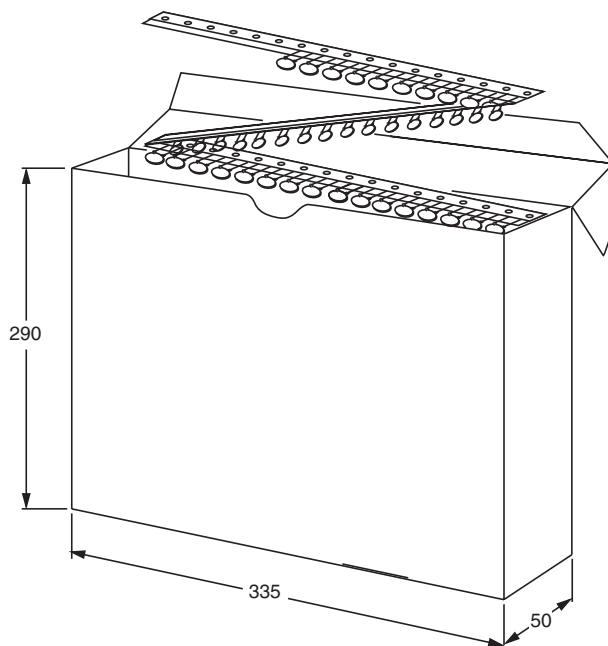
1. Cumulative pitch error:  $\pm \leq 1 \text{ mm}/20 \text{ pitches}$ .
2. Obliquity maximum 3°.



## REEL AND TAPE DATA in millimeters



Reel with capacitors on tape



Ammopack with capacitors on tape



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