



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

FEATURES

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



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.



Capacitors with 5 mm (0.20") lead spacing.

CAPACITANCE RANGE:

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

RATED DC VOLTAGE:

500 V

DIELECTRIC STRENGTH:

250 % of rated voltage

INSULATION RESISTANCE AT 500V (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, $C > 30\text{ pF}$; $\leq 20 \times 10^{-4}$

TEMPERATURE COEFFICIENTS:

Class 1 NP0; P100; N150; N750; N1500

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".

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

Vishay BCcomponents

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ORDERING INFORMATION, CLASS 1, 500 V (DC), KINKED																
C (pF)	TOL. (%)	D _{max} (mm)	LEAD SPACING F (mm)	SH ⁽²⁾ (mm)	CLEAR TEXT CODE	PACKAGING CODE 8 th AND 9 th DIGIT ⁽³⁾			CATALOG NUMBER ⁽⁴⁾ 3 rd DIGIT: 5 = STANDARD, 8 = RoHS COMPLIANT							
					13 th DIGIT: T = REEL; U = AMMO; 3 = BULK 16 th DIGIT: R = RoHS COMPLIANT	REEL	AMMO	BULK								
CLASS 1 P100																
1.5	± 0.25	5.0	5.0	4.0	D159C20M7GL6.J5.	06	08	10	22.2 598 ..144							
2.2					D229C20M7GL6.J5.				22.2 598 ..244							
3.3					D339C20M7GL6.J5.				22.2 598 ..344							
4.7					D479C20M7GL6.J5.				22.2 598 ..444							
6.8	± 2 %	6.5			D689C25M7GL6.J5.				22.2 598 ..644							
10		7.5			D100G29M7GL6.J5.				22.2 598 ..004							
15		8.5			D150G33M7GL6.J5.				22.2 598 ..104							
22		10.0			D220G39M7GL6.J5.				22.2 598 ..204							
33		12.0			D330G47M7GL6.J5.				22.2 598 ..304							
CLASS 1 NP0																
1.0	± 0.25	5.0	5.0	4.0	D109C20C0KL6.J5.	06	08	10	22.2 508 ..044							
1.5					D159C20C0KL6.J5.				22.2 508 ..144							
2.2					D229C20C0JL6.J5.				22.2 508 ..244							
3.3					D339C20C0JL6.J5.				22.2 508 ..344							
4.7					D479C20C0HL6.J5.				22.2 508 ..444							
6.8					D689C20C0HL6.J5.				22.2 508 ..644							
10	± 2 %				6.5				D100G20C0GL6.J5.	22.2 508 ..004						
15									D150G20C0GL6.J5.	22.2 508 ..104						
22									D220G25C0GL6.J5.	22.2 508 ..204						
33									D330G25C0GL6.J5.	22.2 508 ..304						
47		D470G29C0GL6.J5.							22.2 508 ..404							
68		D680G33C0GL6.J5.							22.2 508 ..604							
100		D101G39C0GL6.J5.							22.2 508 ..014							
150		D151G47C0GL6.J5.							22.2 508 ..114							
CLASS 1 N150																
2.2		± 0.25							5.0	5.0	4.0	D229C20P2JL6.J5.	06	08	10	22.2 518 ..244
3.3					D339C20P2JL6.J5.							22.2 518 ..344				
4.7					D479C20P2HL6.J5.							22.2 518 ..444				
6.8					D689C20P2HL6.J5.							22.2 518 ..644				
10		± 2 %			6.5							D100G20P2GL6.J5.				22.2 518 ..004
15	D150G20P2GL6.J5.		22.2 518 ..104													
22	D220G25P2GL6.J5.		22.2 518 ..204													
33	D330G25P2GL6.J5.		22.2 518 ..304													
47	D470G29P2GL6.J5.		22.2 518 ..404													
68	D680G33P2GL6.J5.		22.2 518 ..604													
100	D101G43P2GL6.J5.		22.2 518 ..014													



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C (pF)	TOL. (%)	D _{max} (mm)	LEAD SPACING F (mm)	SH ⁽²⁾ (mm)	CLEAR TEXT CODE	PACKAGING CODE 8 th AND 9 th DIGIT ⁽³⁾			CATALOG NUMBER ⁽⁴⁾ 3 rd DIGIT: 5 = STANDARD, 8 = RoHS COMPLIANT
					13 th DIGIT: T = REEL; U = AMMO; 3 = BULK 16 th DIGIT: R = RoHS COMPLIANT	REEL	AMMO	BULK	
CLASS 1 N750									
6.8	± 0.25	5.0	5.0	4.0	D689C20U2JL6.J5.	06	08	10	22.2 558 ..644
10	± 2 %				D100G20U2JL6.J5.				22.2 558 ..004
15					D150G20U2JL6.J5.				22.2 558 ..104
22					D220G20U2JL6.J5.				22.2 558 ..204
33		6.5			D330G25U2JL6.J5.				22.2 558 ..304
47		7.5			D470G29U2JL6.J5.				22.2 558 ..404
68		8.5			D680G33U2JL6.J5.				22.2 558 ..604
100		10.0			D101G39U2JL6.J5.				22.2 558 ..014
150		12.0			D151G47U2JL6.J5.				22.2 558 ..114
CLASS 1 N1500									
8.2	± 0.25 pF	5.0	5.0	4.0	D829C20P3KL6.J5.	06	08	10	22.2 588 ..844
10	± 2 %				D100G20P3KL6.J5.				22.2 588 ..004
15					D150G20P3KL6.J5.				22.2 588 ..104
22					D220G20P3KL6.J5.				22.2 588 ..204
33					D330G20P3KL6.J5.				22.2 588 ..304
47					D470G20P3KL6.J5.				22.2 588 ..404
68		6.5			D680G25P3KL6.J5.				22.2 588 ..604
100		7.5			D101G29P3KL6.J5.				22.2 588 ..014
150		8.5			D151G33P3KL6.J5.				22.2 588 ..114
220	10.0	D221G39P3KL6.J5.			22.2 588 ..214				
330	12.0	D331G47P3KL6.J5.			22.2 588 ..314				

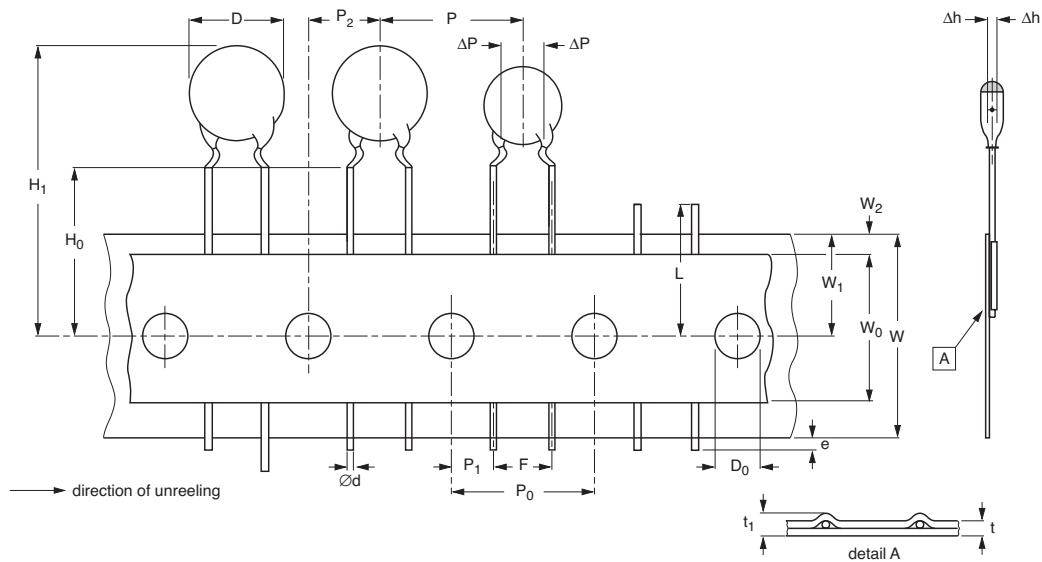
Notes

- Maximum thickness 4.0 mm.
- SH = seated height.
- Packaging codes refer to inward kinked leads. Other styles available on request.
- 3rd digit to complete RoHS catalog number. 8th and 9th digit of the catalog number to be completed with the packaging code.
- Other capacitance 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").

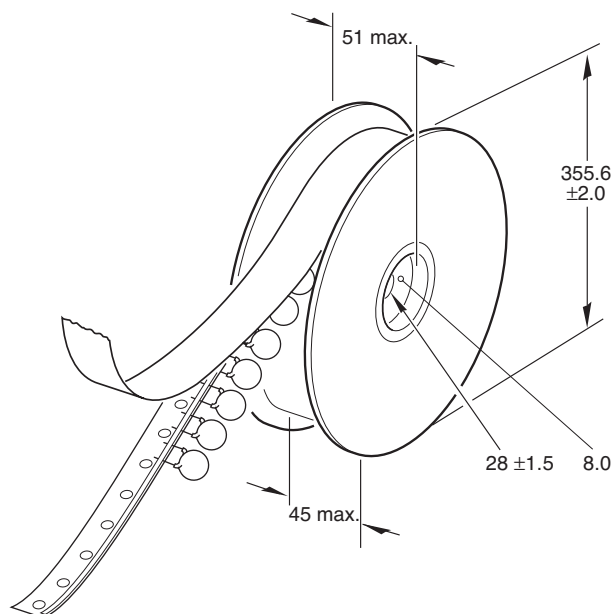
DIMENSIONS OF TAPE			
SYMBOL	PARAMETER	DIMENSIONS (mm)	
		NOMINAL	TOLERANCE
D	body diameter	11.0 maximum	-
d	lead diameter	0.6	± 0.05
P	pitch between capacitors	12.7	± 1.0
P ₀	feed-hole pitch	12.7	± 0.3; note 1
ΔP	plane deviation	1.0 maximum	-
P ₁	feed-hole centre to lead centre	3.85	± 0.7; note 2
P ₂	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
Δs	deviation along tape, left or right	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 snapped 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

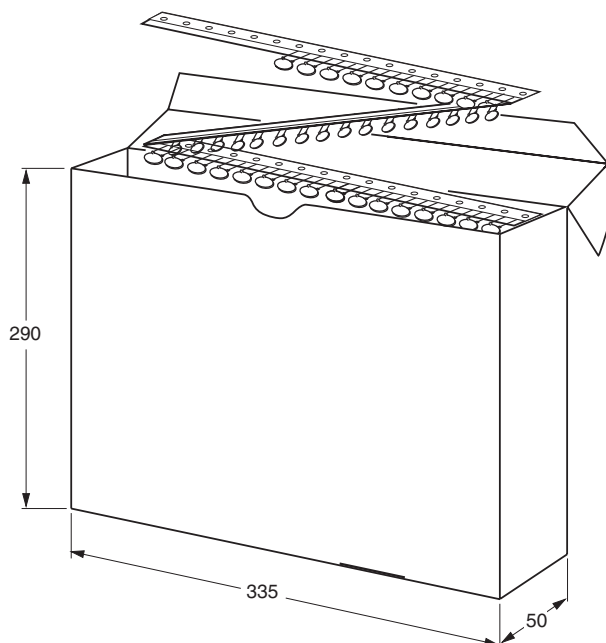
1. Cumulative pitch error: $\pm \leq 1$ mm /20 pitches.
2. Obliquity maximum 3°.



REEL AND TAPE DATA in millimeters



Reel with capacitors on tape.



Ammopack with capacitors on tape.



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