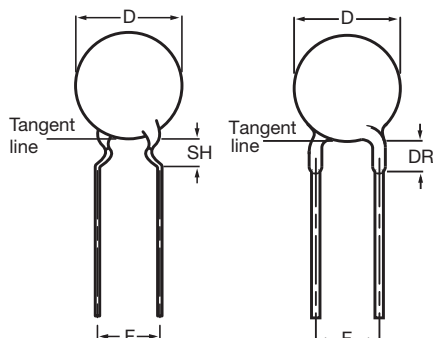


Ceramic Disc Capacitors Class 1, 100 V_{DC}, Narrow Tolerance



Capacitors with 5 mm (0.20") and 2.5 mm (0.10") lead spacing

QUICK REFERENCE DATA	
DESCRIPTION	CLASS 1 (NP0, N750)
Voltage (V _{DC})	100
Min. Capacitance (pF)	1.5
Max. Capacitance (pF)	330
Mounting	Through hole

MARKING

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

OPERATING TEMPERATURE RANGE

Class 1, - 55 to + 125 °C

TEMPERATURE COEFFICIENTS

Class 1, NP0; N750

SECTIONAL SPECIFICATIONS

Class 1, IEC 60 384-8,
EIA 198

CLIMATIC CATEGORY

Class 1, 55/125/56

FEATURES

- 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 (0.20") and 2.5 mm (0.10") and a lead length from 4 mm to 30 mm. Encapsulation is made of phenolic resin.

CAPACITANCE RANGE

1.5 pF to 330 pF; Class 1, at 1 MHz, 1.2 V_{RMS};

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

RATED DC VOLTAGE

100 V

DIELECTRIC STRENGTH

250 % of rated voltage

INSULATION RESISTANCE AT 100 V_{DC}

≥ 10 000 MΩ

TOLERANCE ON CAPACITANCE

± 0.25 pF; ± 0.5 pF; ± 2 %

DISSIPATION FACTOR

Class 1, C ≤ 30 pF; ≤ 20 × (10/C + 0.7) × 10⁻⁴ maximum

Class 1, C > 30 pF; ≤ 0.2 %



RoHS
COMPLIANT

Note

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



D Series Narrow Tolerance

Ceramic Disc Capacitors
Class 1, 100 V_{DC}, Narrow Tolerance

Vishay BCcomponents

ORDERING INFORMATION, CLASS 1, 100 V _{DC} , KINKED AND STRAIGHT						
C (PF)	TOL. (%)	D _{MAX.} (mm)	LEAD SPACING F (mm)	SH/DR _{MAX.} ⁽¹⁾ (mm)	CLEAR TEXT CODE	
					13 TH DIGIT: T = REEL; U = AMMO; 3 = BULK	
CLASS 1 NP0						
1.5	± 0.25 pF	5.0	5.0	4.0	D159C20C0KH6.J5R	
			2.5	1.5	D159C20C0KH6.L2R	
1.8			5.0	4.0	D189C20C0KH6.J5R	
			2.5	1.5	D189C20C0KH6.L2R	
2.2			5.0	4.0	D229C20C0JH6.J5R	
			2.5	1.5	D229C20C0JH6.L2R	
3.3			5.0	4.0	D339C20C0JH6.J5R	
			2.5	1.5	D339C20C0JH6.L2R	
4.7			5.0	4.0	D479C20C0HH6.J5R	
			2.5	1.5	D479C20C0HH6.L2R	
6.8			5.0	4.0	D689C20C0HH6.J5R	
			2.5	1.5	D689C20C0HH6.L2R	
10	± 2		5.0	4.0	D100G20C0GH6.J5R	
			2.5	1.5	D100G20C0GH6.L2R	
15			5.0	4.0	D150G20C0GH6.J5R	
			2.5	1.5	D150G20C0GH6.L2R	
22			5.0	4.0	D220G20C0GH6.J5R	
			2.5	1.5	D220G20C0GH6.L2R	
33			5.0	4.0	D330G20C0GH6.J5R	
			2.5	1.5	D330G20C0GH6.L2R	
47	± 2		6.5	5.0	4.0	D470G25C0GH6.J5R
				2.5	1.5	D470G25C0GH6.L2R
68				5.0	4.0	D680G25C0GH6.J5R
				2.5	1.5	D680G25C0GH6.L2R
100		7.5	5.0	4.0	D101G29C0GH6.J5R	
			2.5	1.5	D101G29C0GH6.L2R	
150		8.5	5.0	4.0	D151G33C0GH6.J5R	
			2.5	1.5	D151G33C0GH6.L2R	
220		11.0	5.0	4.0	D221G43C0GH6.J5R	
			2.5	1.5	D221G43C0GH6.L2R	
CLASS 1 N750						
6.8		± 0.25 pF	5.5	5.0	4.0	D689C20U2JH6.J5R
	± 2	2.5		1.5	D689C20U2JH6.L2R	
10		5.0		4.0	D100G20U2JH6.J5R	
		2.5		1.5	D100G20U2JH6.L2R	
15		5.0		4.0	D150G20U2JH6.J5R	
		2.5		1.5	D150G20U2JH6.L2R	
22		5.0		4.0	D220G20U2JH6.J5R	
		2.5		1.5	D220G20U2JH6.L2R	
33		5.0		4.0	D330G20U2JH6.J5R	
		2.5		1.5	D330G20U2JH6.L2R	
47		5.0		4.0	D470G20U2JH6.J5R	
		2.5		1.5	D470G20U2JH6.L2R	
68		6.5		5.0	4.0	D680G25U2JH6.J5R
				2.5	1.5	D680G25U2JH6.L2R

D Series Narrow Tolerance

Vishay BCcomponents

Ceramic Disc Capacitors
Class 1, 100 V_{DC}, Narrow Tolerance



ORDERING INFORMATION, CLASS 1, 100 V_{DC}, KINKED AND STRAIGHT

C (PF)	TOL. (%)	D _{MAX.} (mm)	LEAD SPACING F (mm)	SH/DR _{MAX.} ⁽¹⁾ (mm)	CLEAR TEXT CODE
					13 TH DIGIT: T = REEL; U = AMMO; 3 = BULK
CLASS 1 N 750					
100	± 2	7.5	5.0	4.0	D101G29U2JH6.J5R
			2.5	1.5	D101G29U2JH6.L2R
150		8.5	5.0	4.0	D151G33U2JH6.J5R
			2.5	1.5	D151G33U2JH6.L2R
220		10	5.0	4.0	D221G39U2JH6.J5R
			2.5	1.5	D221G39U2JH6.L2R
330		12	5.0	4.0	D331G47U2JH6.J5R
			2.5	1.5	D331G47U2JH6.L2R

Note

⁽¹⁾ SH = seated height; DR = run down

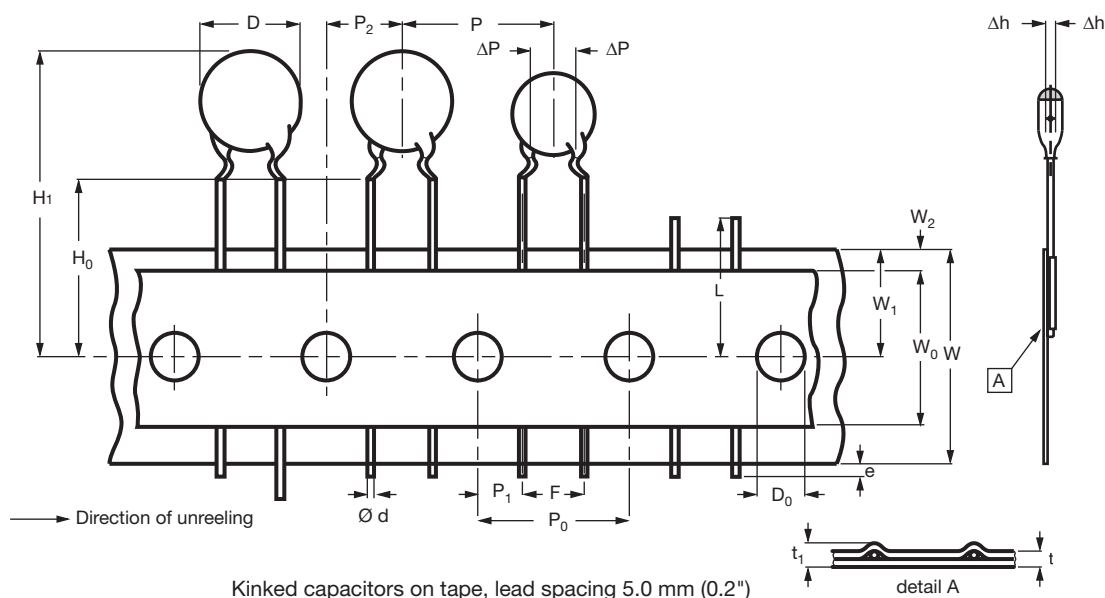
- 1. Maximum thickness 3.5 mm
- Lead style codes refer to inward kinked leads and straight leads

PACKAGING

D _{MAX.} (mm)	SIZE CODE	PACKAGING QUANTITIES		
		BULK	REEL	AMMO
5.0 (0.20")	20	1000	2500	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



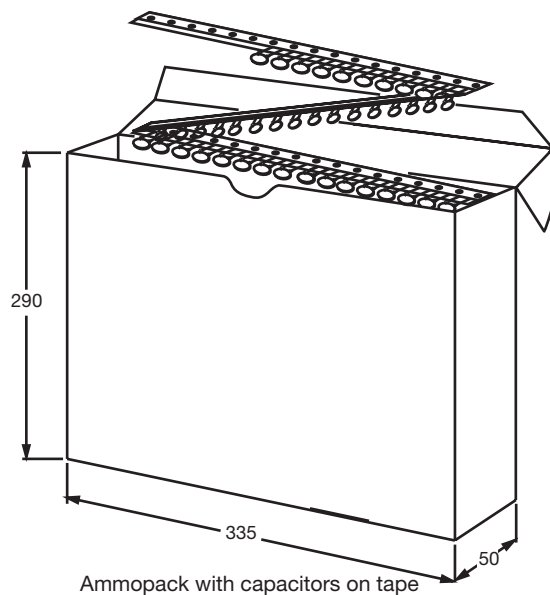
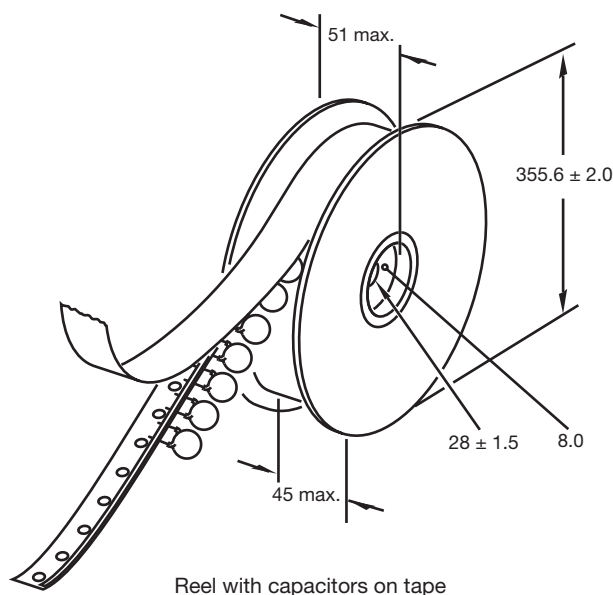
DIMENSION OF TAPE			
SYMBOL	PARAMETER	DIMENSIONS (mm)	
		NOMINAL	TOLERANCE
D	Body diameter	11.0 maximum	-
d	Lead diameter	0.6	± 0.05
P	Pitch between capacitors	12.7	± 1.0
P ₀ ⁽¹⁾	Feed-hole pitch	12.7	± 0.3
ΔP	Plane deviation	1.0 maximum	-
P ₁ ⁽²⁾	Feed-hole center to lead center	3.85	± 0.7
P ₂ ⁽²⁾	Feed-hole 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 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: $\pm \leq 1 \text{ mm}/20 \text{ pitches}$

⁽²⁾ Obliquity maximum 3°

REEL AND TAPE DATA in millimeters



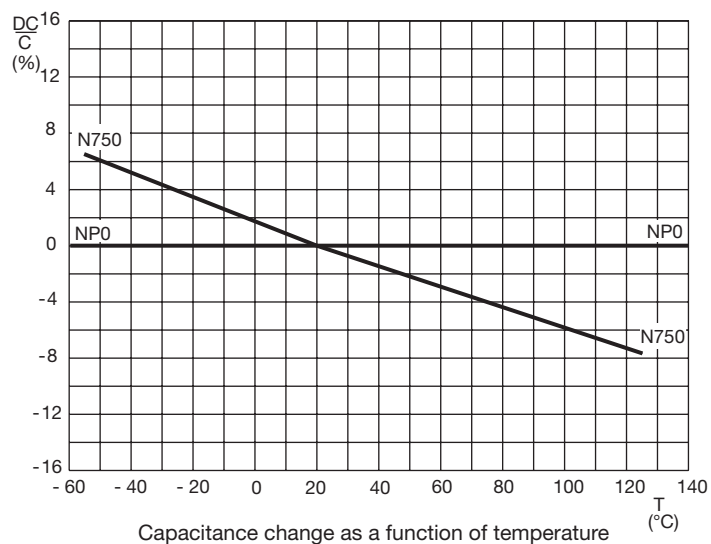
D Series Narrow Tolerance

Vishay BCcomponents

Ceramic Disc Capacitors
Class 1, 100 V_{DC}, Narrow Tolerance



TEMPERATURE COEFFICIENT IN ACCORDANCE WITH RS198		
C = 0.0	0 = - 1	G = ± 30
M = 1.0	1 = - 10	H = ± 60
P = 1.5	2 = - 100	J = ± 120
R = 2.2	3 = - 1000	K = ± 250
S = 3.3	5 = + 1	L = ± 500
T = 4.7	6 = + 10	M = ± 1000
U = 7.5	7 = + 100	N = ± 2500
-	8 = + 1000	-





Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.