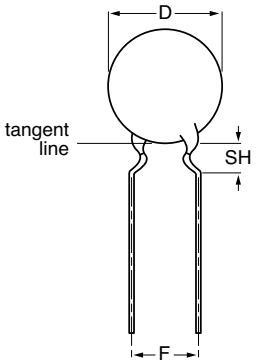
Ceramic Disc Capacitors
Class 1, 100 V (DC) Narrow Tolerance



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.

CAPACITANCE RANGE:

Class 1, at 1 MHz, 1.2 V (RMS); 1.5 to 560 pF
1 kHz, 1 ± 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 100V (DC):

≥ 10 000 MΩ

TOLERANCE ON CAPACITANCE:

± 0.25 pF; ± 0.5 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 %

TEMPERATURE COEFFICIENTS:

Class 1 NP0; P100; N150; N750

SECTIONAL SPECIFICATIONS:

Class 1 IEC 60 384-8,

EIA 198

CLIMATIC CATEGORY:

Class 1 55/125/56

OPERATING TEMPERATURE RANGE:

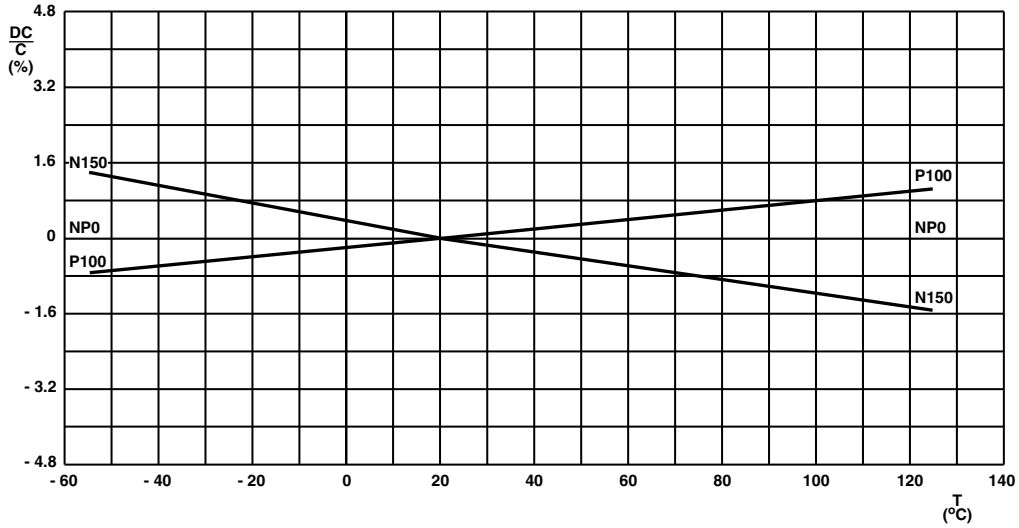
Class 1 - 55 to + 125 °C

MARKING

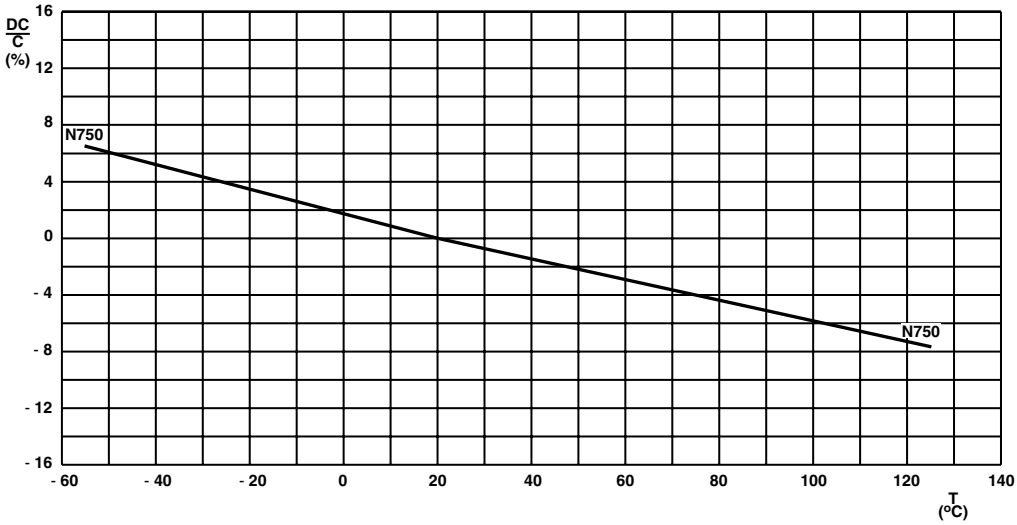
Marking indicates capacitance value and tolerance in accordance with “EIA 198”.

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

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	-



Capacitance change as a function of temperature



Capacitance change as a function of temperature

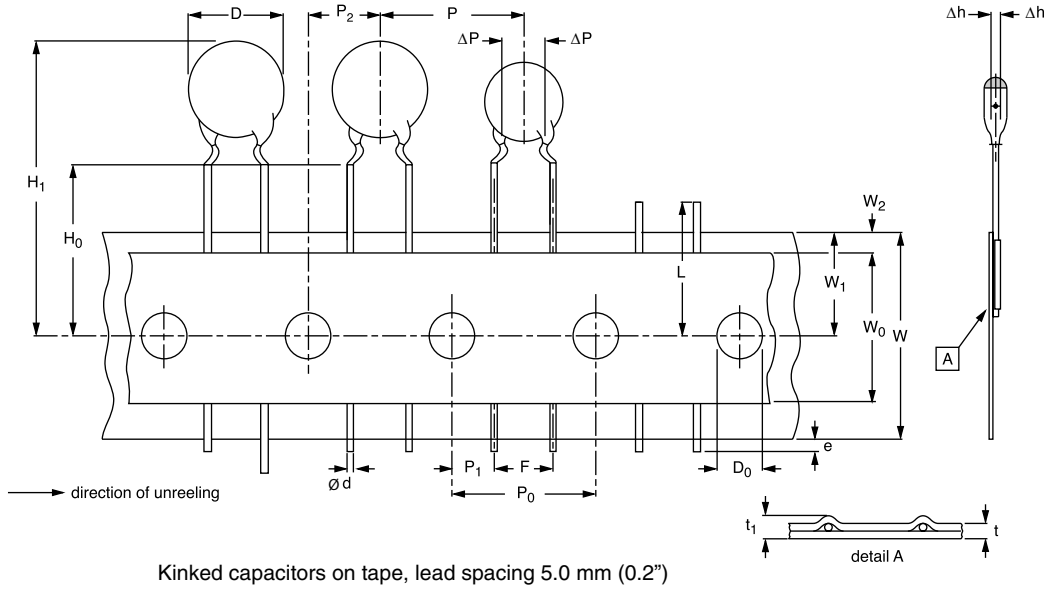
ORDERING INFORMATION, CLASS 1, 100 V (DC), KINKED					
C (pF)	TOL. (%)	D_{max} (mm)	LEAD SPACING(2) F (mm)	SH(3) (mm)	CLEAR TEXT CODE 13th DIGIT: T = REEL; U = AMMO; 3 = BULK 16th DIGIT: R = RoHS COMPLIANT
CLASS 1 P100					
1.5	± 0.25 pF	5.0	5.0	4.0	D159C20M7GH6.J5.
2.2					D229C20M7GH6.J5.
3.3					D339C20M7GH6.J5.
4.7					D479C20M7GH6.J5.
6.8					D689C20M7GH6.J5.
10	± 2 %	6.5			D100G25M7GH6.J5.
15		7.5			D150G29M7GH6.J5.
22		8.5			D220G33M7GH6.J5.
33		10.0			D330G39M7GH6.J5.
47		11.0			D470G43M7GH6.J5.
CLASS 1 NP0					
1.5	± 0.25 pF	5.0	5.0	4.0	D159C20C0KH6.J5.
1.8					D189C20C0KH6.J5.
2.2					D229C20C0JH6.J5.
3.3					D339C20C0JH6.J5.
4.7					D479C20C0HH6.J5.
6.8					D689C20C0HH6.J5.
10	± 2 %				D100G20C0GH6.J5.
15					D150G20C0GH6.J5.
22					D220G20C0GH6.J5.
33					D330G20C0GH6.J5.
47		6.5			D470G25C0GH6.J5.
68					D680G25C0GH6.J5.
100		7.5			D101G29C0GH6.J5.
150		8.5			D151G33C0GH6.J5.
220		11.0			D221G43C0GH6.J5.
CLASS 1 N150					
3.9	± 0.25 pF	5.0	5.0	4.0	D399C20P2JH6.J5.
4.7					D479C20P2HH6.J5.
6.8					D689C20P2HH6.J5.
10	± 2 %				D100G20P2GH6.J5.
15					D150G20P2GH6.J5.
22					D220G20P2GH6.J5.
33					D330G20P2GH6.J5.
47		6.5			D470G25P2GH6.J5.
68					D680G25P2GH6.J5.
100		7.5			D101G29P2GH6.J5.
150		10.0			D151G39P2GH6.J5.
220		11.0			D221G43P2GH6.J5.

ORDERING INFORMATION, CLASS 1, 100 V (DC), KINKED					
C (pF)	TOL. (%)	D_{max} (mm)	LEAD SPACING(2) F (mm)	SH(3) (mm)	CLEAR TEXT CODE 13th DIGIT: T = REEL; U = AMMO; 3 = BULK 16th DIGIT: R = RoHS COMPLIANT
CLASS 1 N750					
6.8	± 0.25 pF	5.0	5.0	4.0	D689C20U2JH6.J5.
10	± 2 %				D100G20U2JH6.J5.
15					D150G20U2JH6.J5.
22					D220G20U2JH6.J5.
33					D330G20U2JH6.J5.
47					D470G20U2JH6.J5.
68		6.5			D680G25U2JH6.J5.
100		7.5			D101G29U2JH6.J5.
150		8.5			D151G33U2JH6.J5.
220		10.0			D221G39U2JH6.J5.
330		12.0			D331G47U2JH6.J5.

Notes
1. Maximum thickness 4.0 mm.
2. 2.5 mm lead spacing is available on request. Straight leads leadstyle L2. Digit 14 (L) and 15 (2) Clear Text Code.
3. SH = seated height.
4. Lead style codes refer to inward kinked leads. Other styles available on request.

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

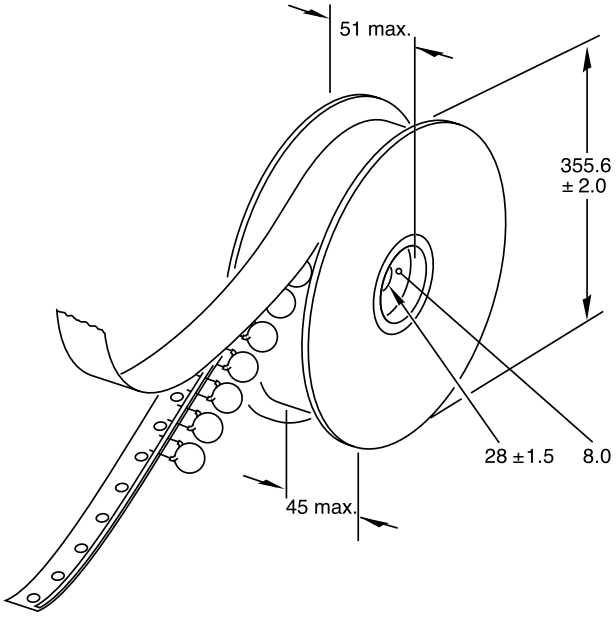


Kinked capacitors on tape, lead spacing 5.0 mm (0.2")

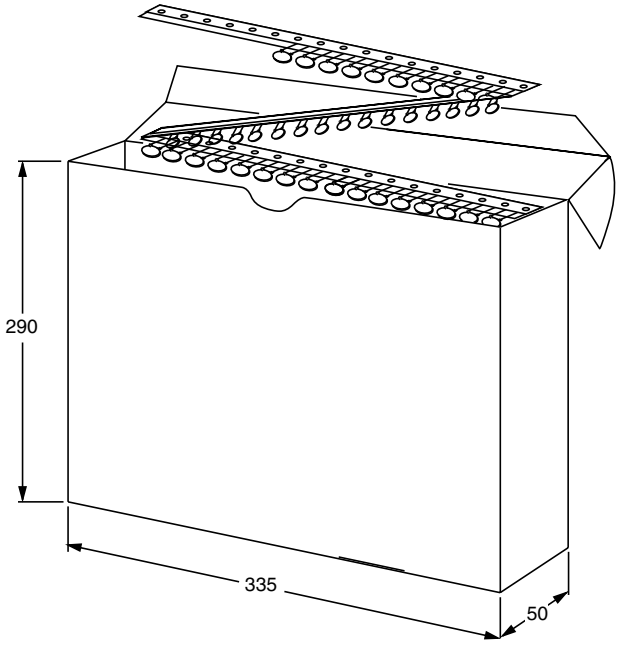
DIMENSIONS OF TAPE			
SYMBOL	PARAMETER	DIMENSIONS (mm)	
		NOMINAL	TOLERANCE
D	body diameter	11.0 maximum	-
d	lead diameter	0.6	± 0.05
P	pitch between capacitors	12.7	± 1.0
P_0	feed-hole pitch	12.7	± 0.3; note 1
ΔP	plane deviation	1.0 maximum	-
P_1	feed-hole centre to lead centre	3.85	± 0.7; note 2
P_2	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
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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