

1. TAPING INFORMATION

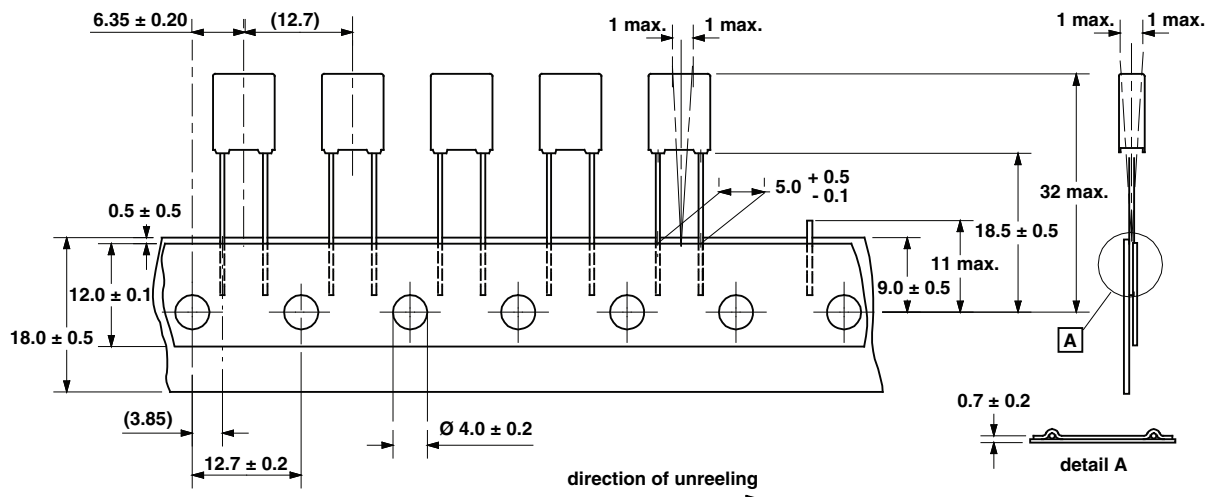
REMARK VALID FOR ALL TAPED FILM CAPACITORS, AXIAL AND RADIAL, AMMO AND REEL:

For all taped film capacitors a maximum of 3 slices per 1000 pieces are permitted

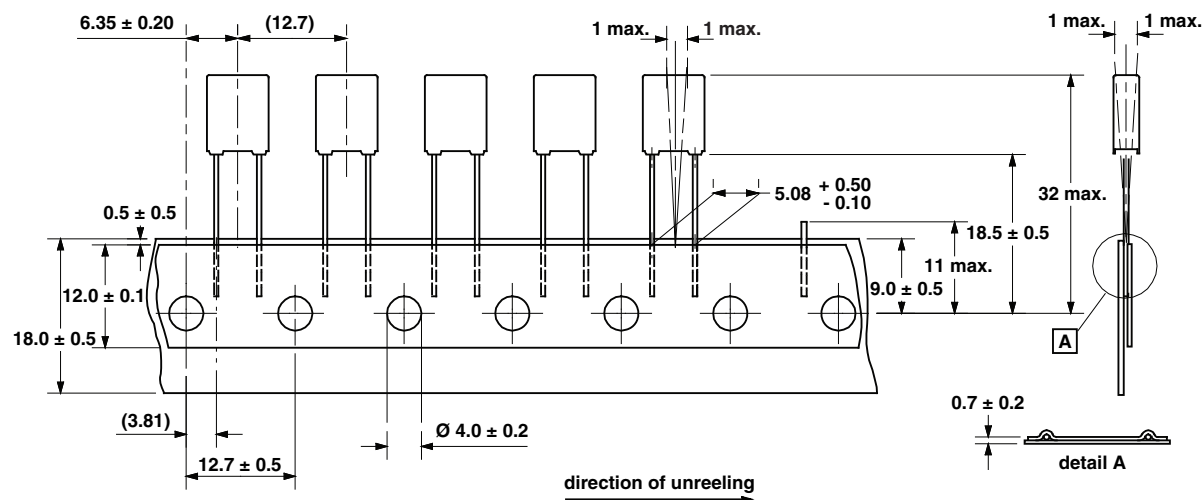
1.1. RADIAL POTTED FILM CAPACITORS (dimensions in mm)

1.1.1. RADIAL POTTED STRAIGHT LEADS

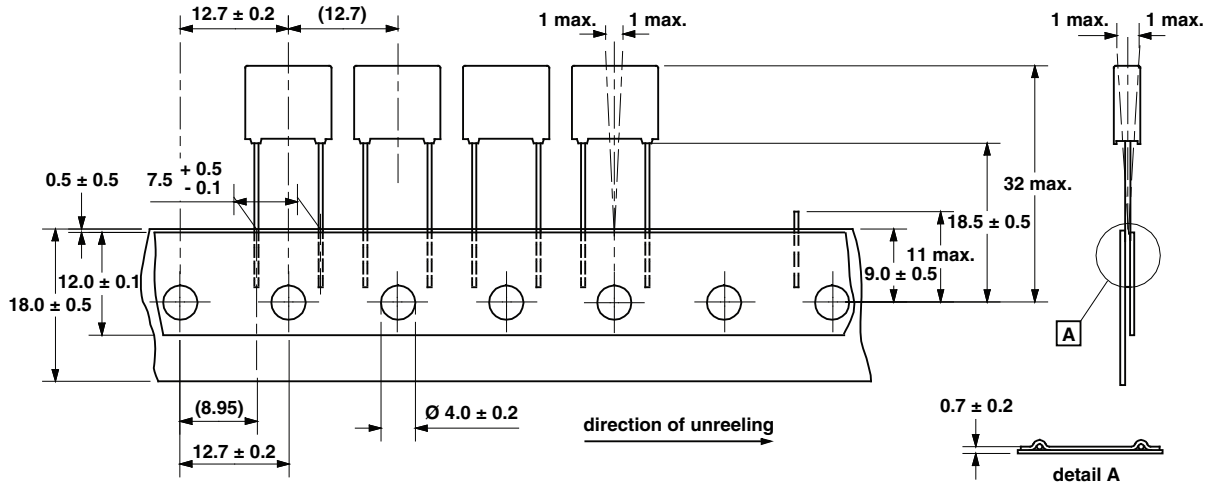
PITCH = 5.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H)



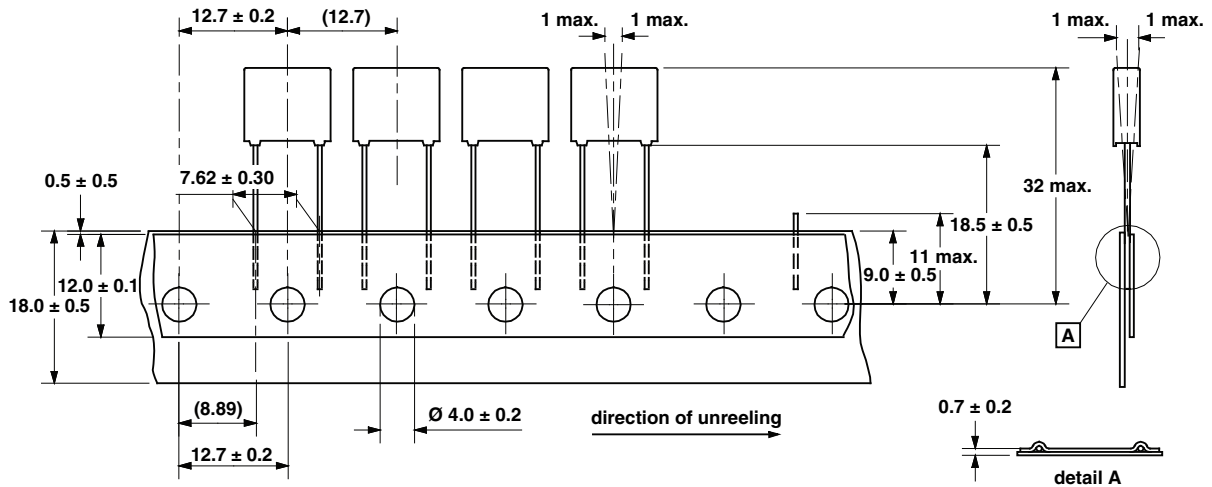
PITCH = 5.08 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H)



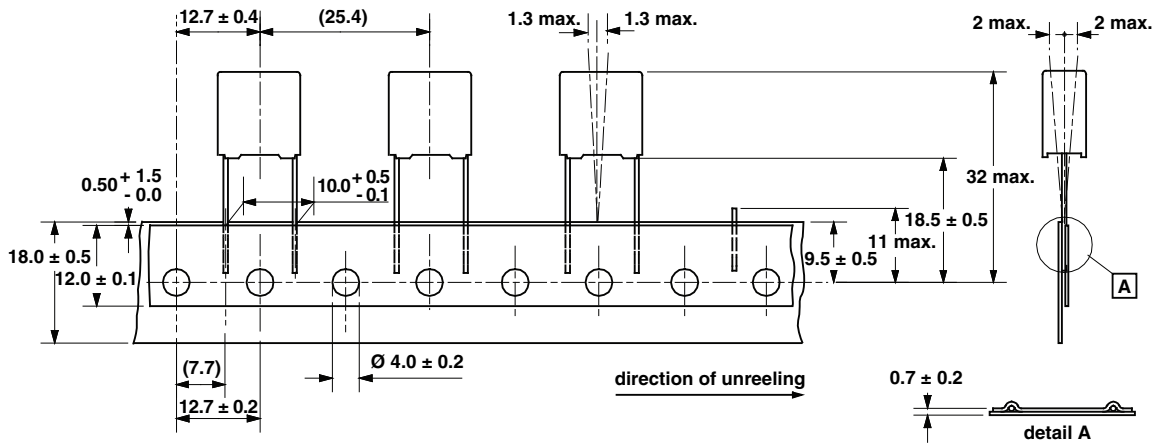
PITCH = 7.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H)



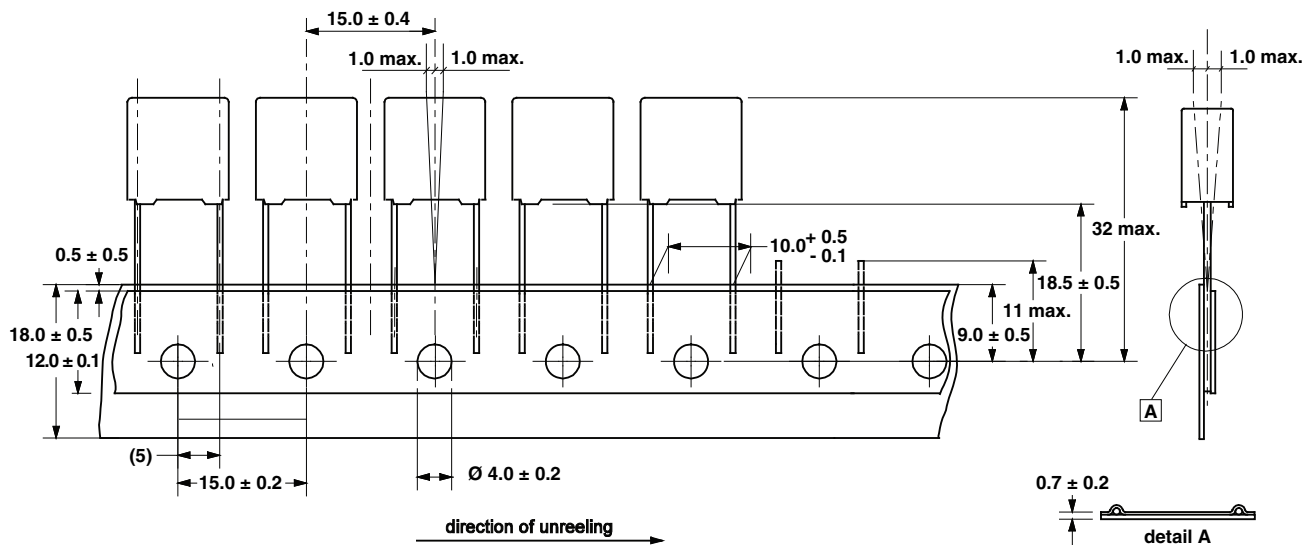
PITCH = 7.62 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H)



PITCH = 10.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H)



PITCH = 10.0 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 18.5 mm (H)

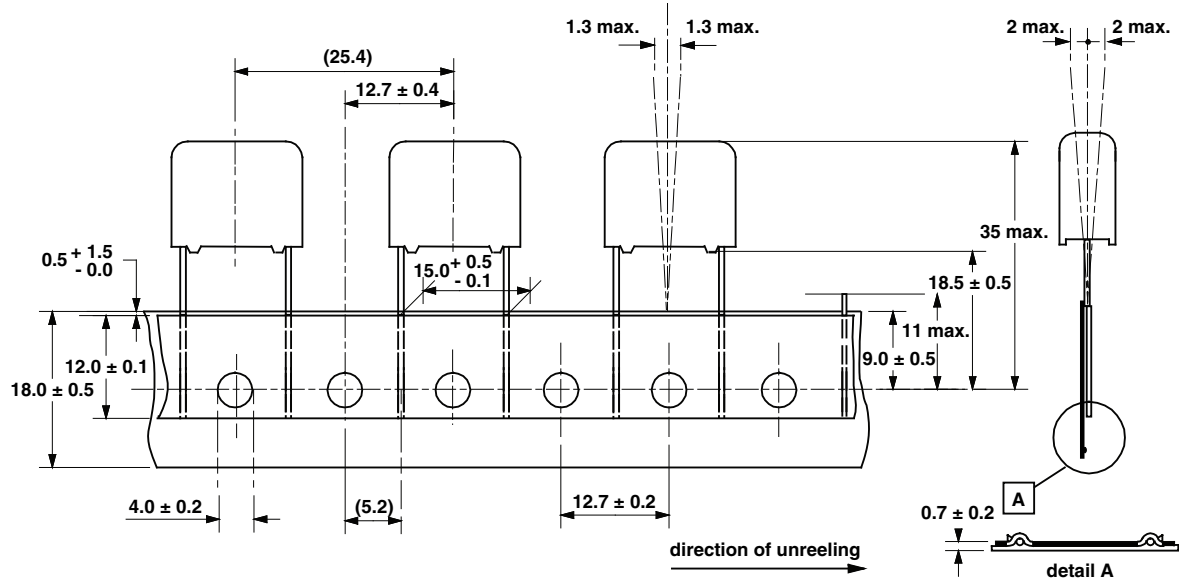


Taping, Special Kinking, Packaging and Labeling

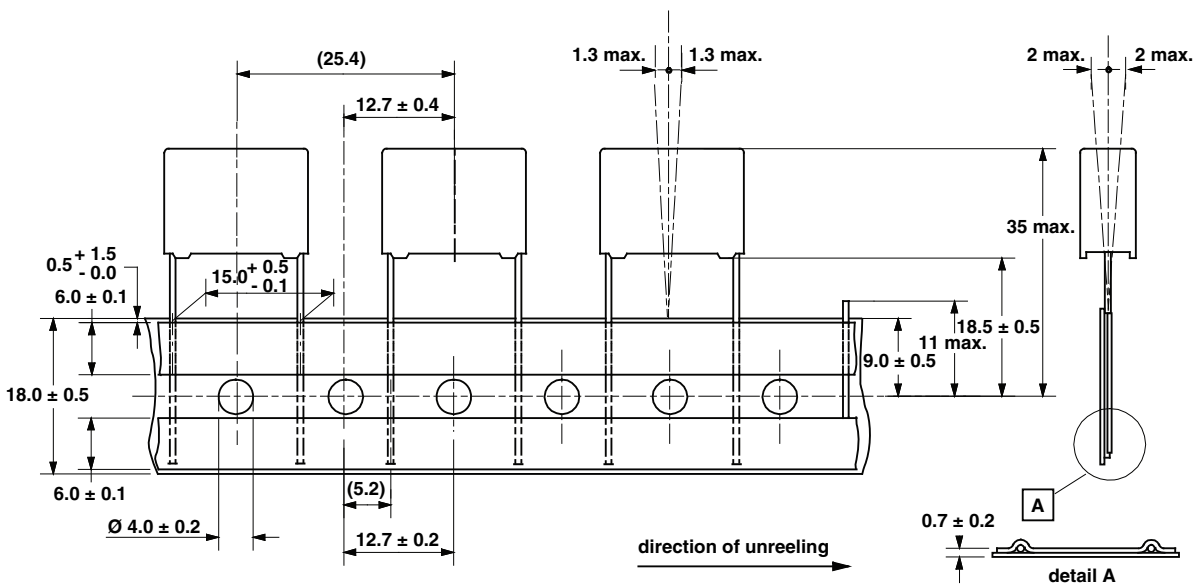


Vishay

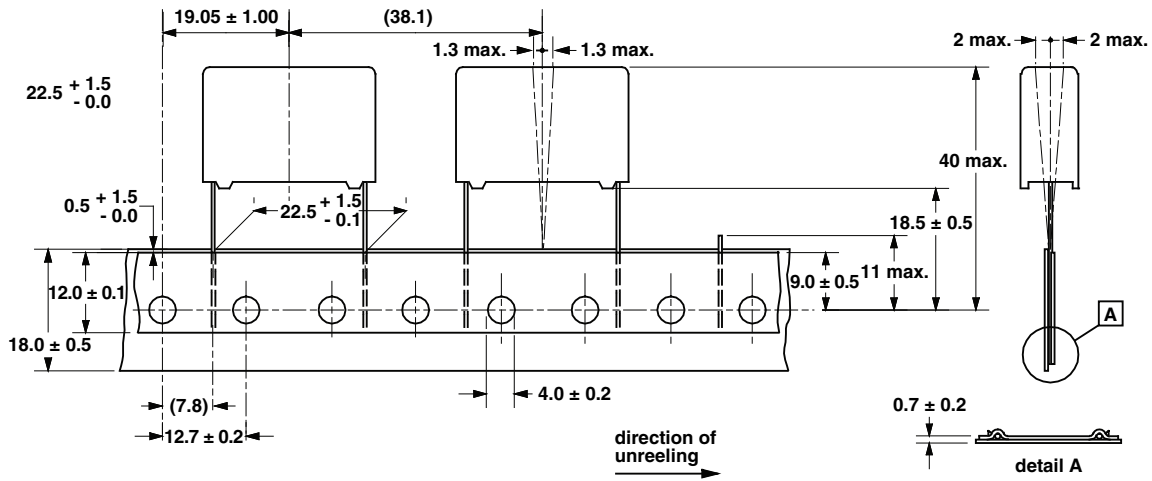
PITCH = 15.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H); ONE TAPE



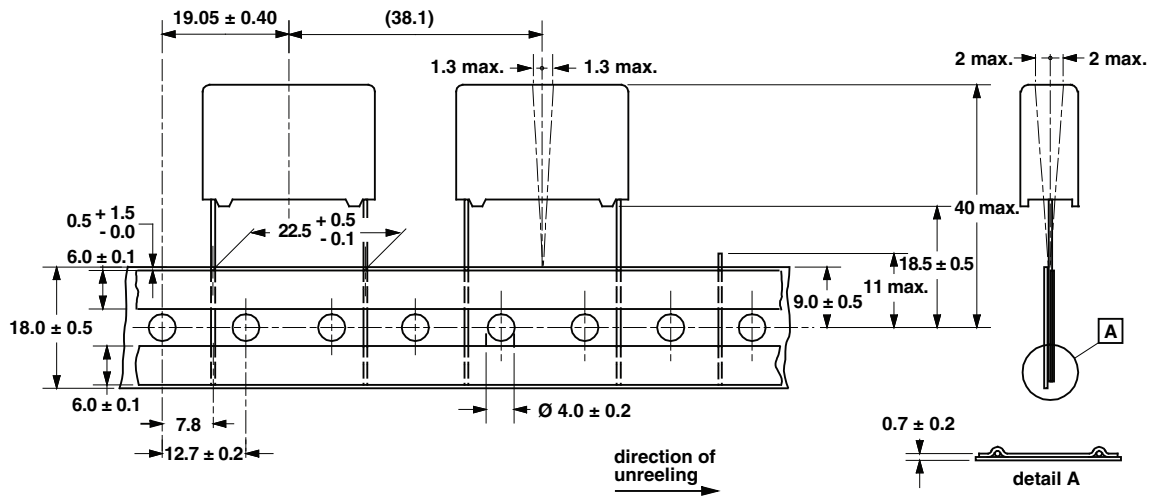
PITCH = 15.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H); TWO TAPES



PITCH = 22.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H); ONE TAPE

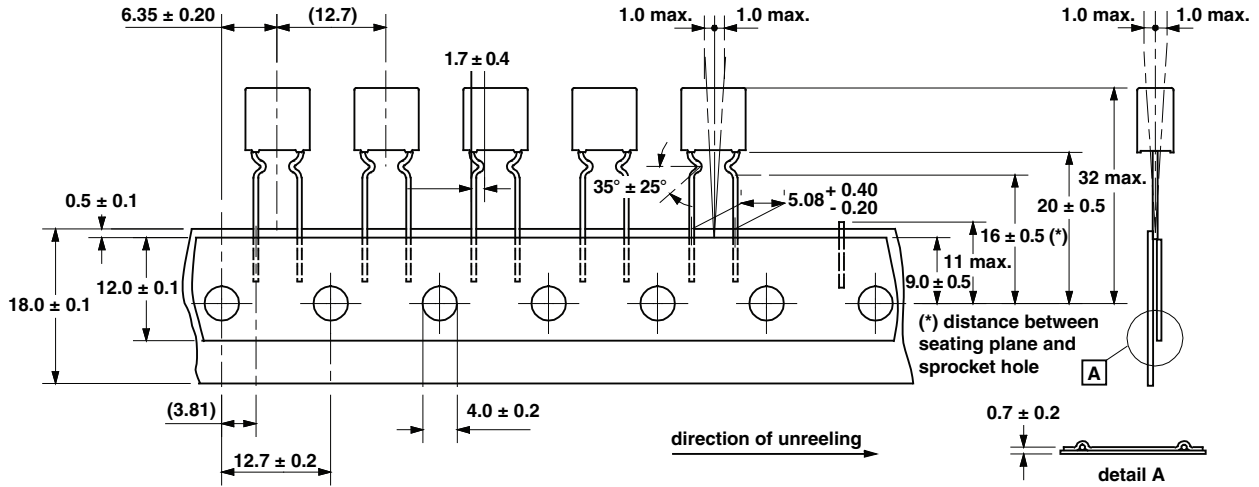


PITCH = 22.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.5 mm (H); TWO TAPES



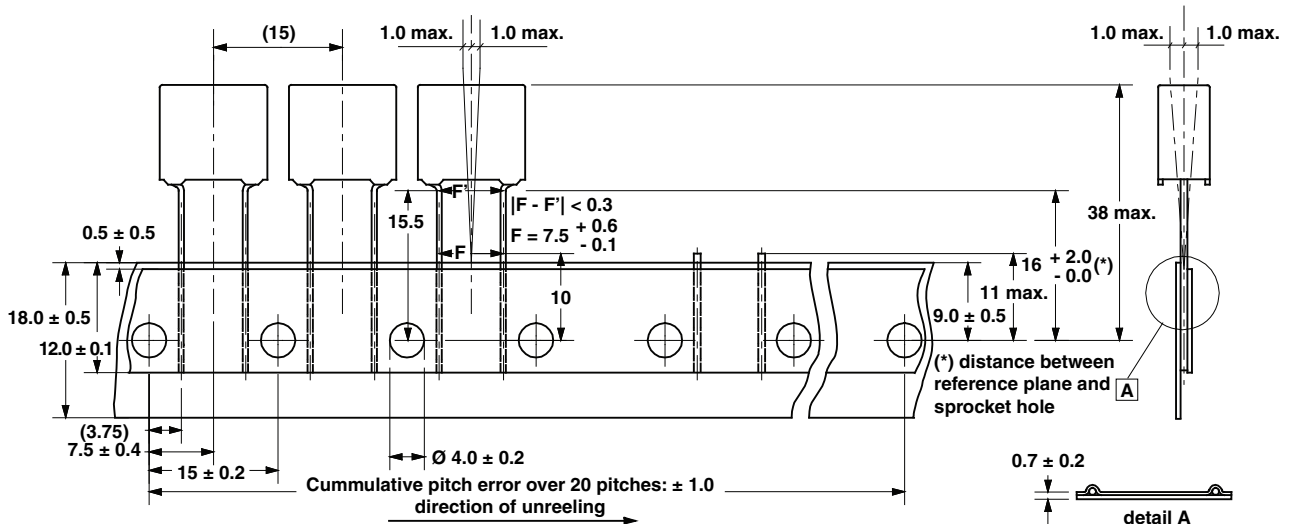
1.1.2. RADIAL POTTED KINKED LEADS

PITCH = 5.08 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H)

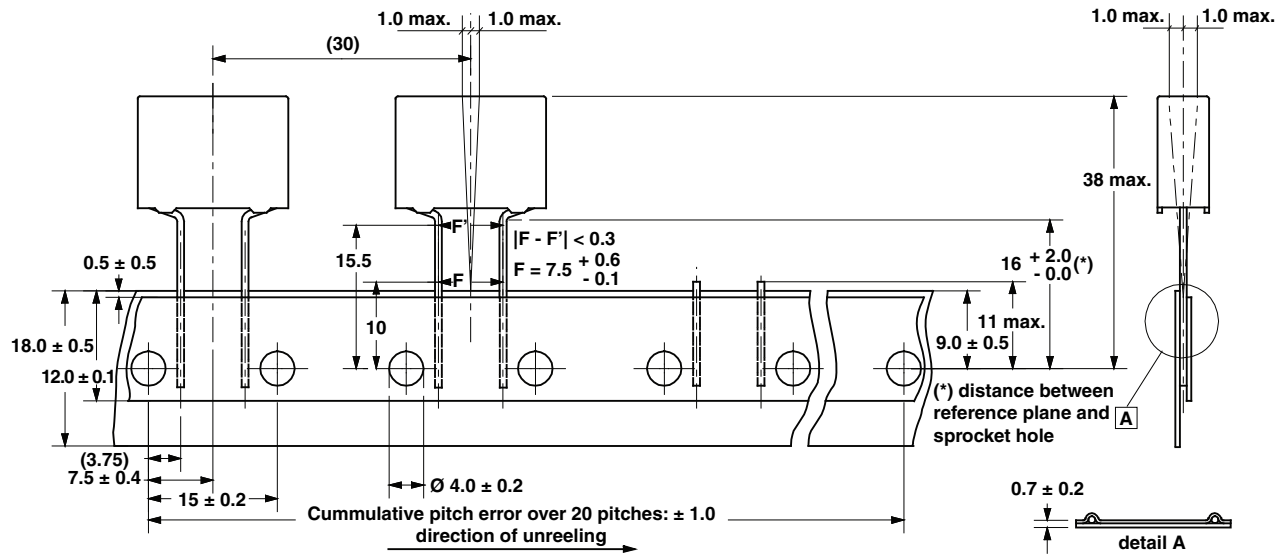


1.1.3. RADIAL POTTED BENT BACK LEADS

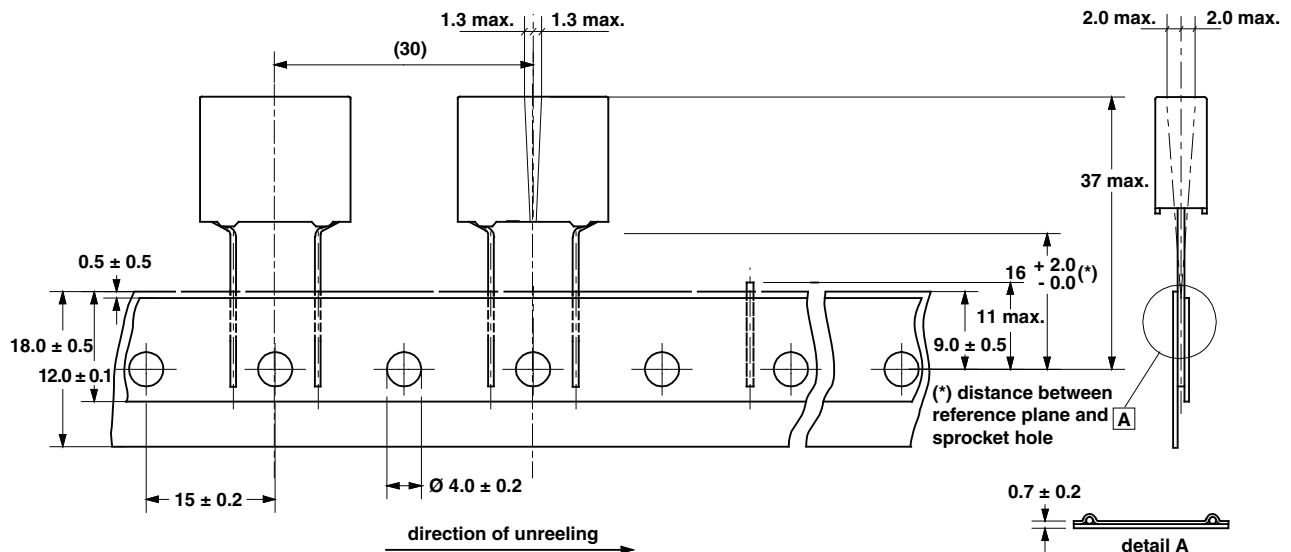
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 16.0 mm (H)
(original pitch = 10.0 mm)



BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 16.0 mm (H)
 (original pitch = 15.0 mm)



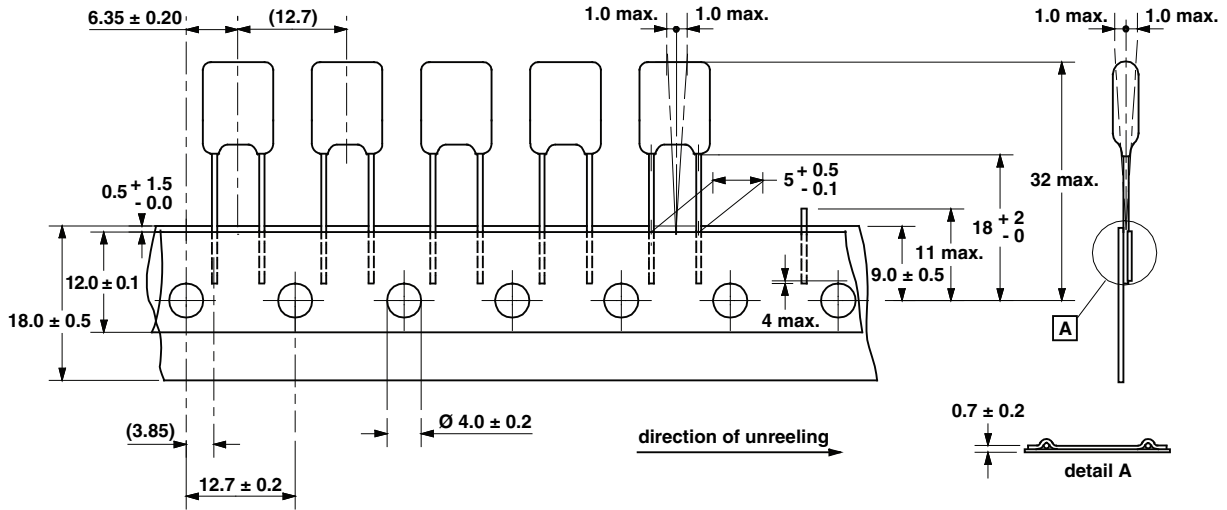
BENT BACK PITCH = 10 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 16.0 mm (H)
 (original pitch = 15.0 mm)



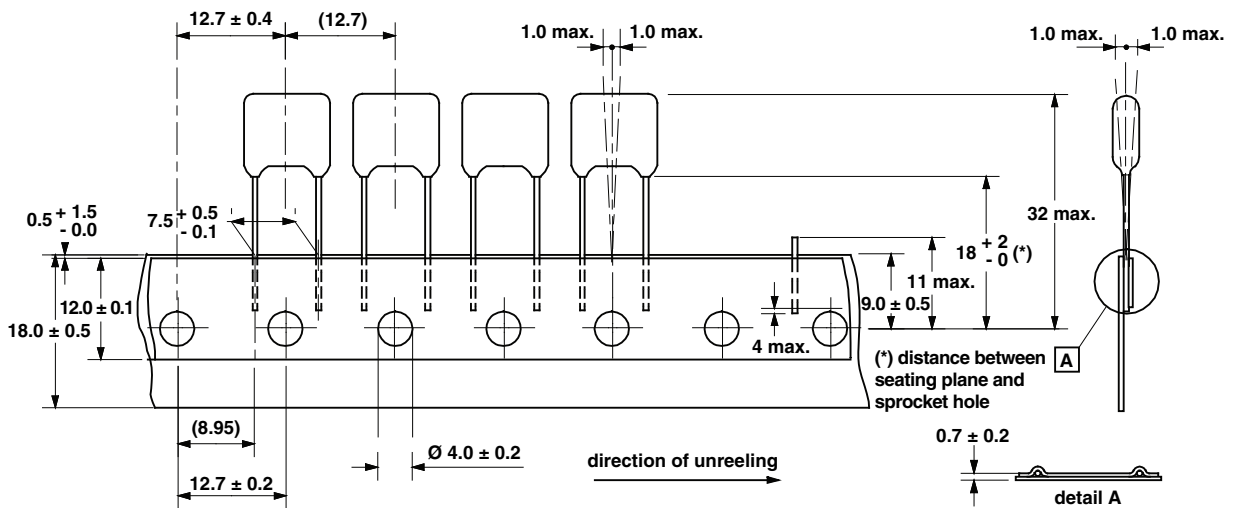
1.2. RADIAL LACQUERED FILM CAPACITORS

1.2.1. RADIAL LACQUERED STRAIGHT LEADS

PITCH = 5.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.0 mm (H)



PITCH = 7.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.0 mm (H)

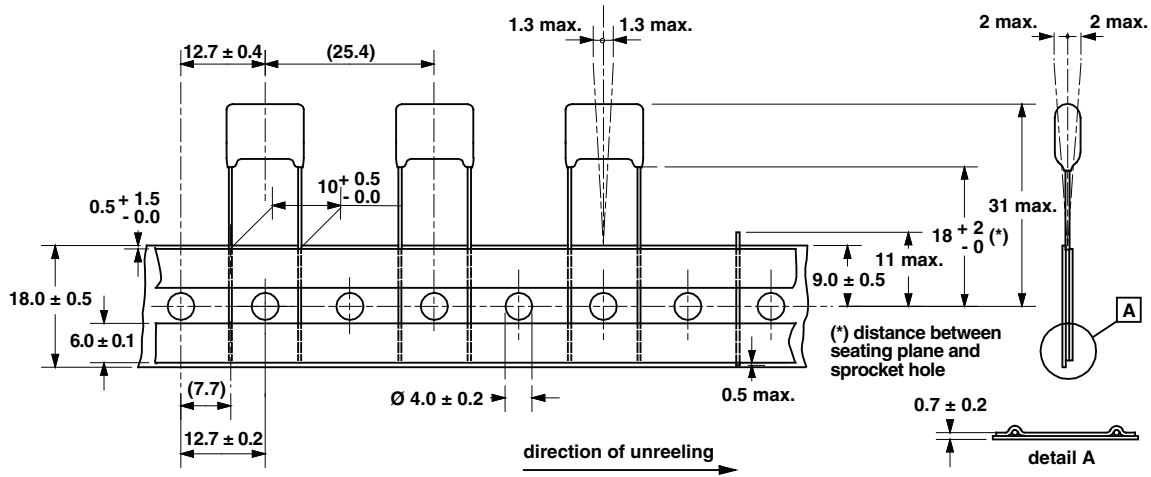


Taping, Special Kinking, Packaging and Labeling

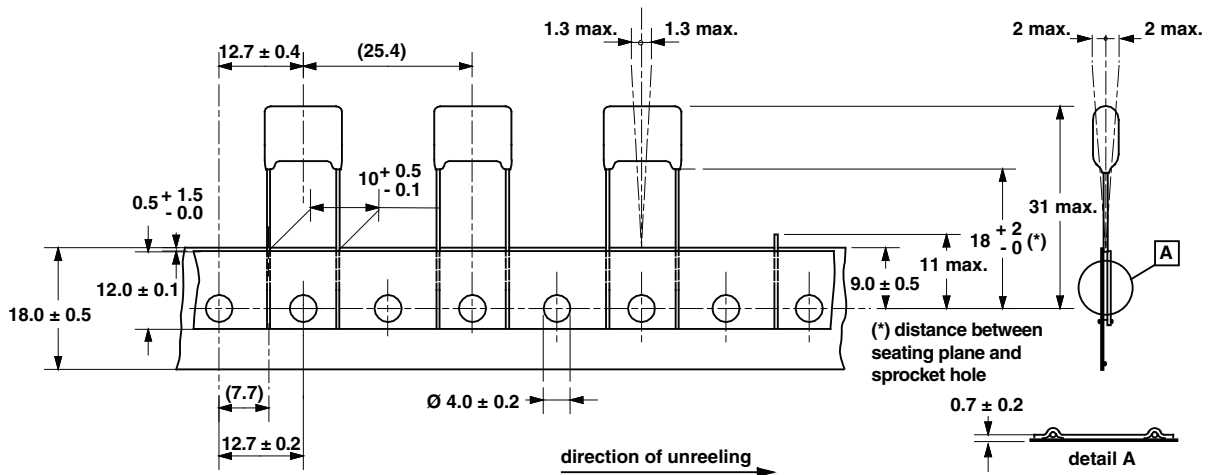


Vishay

PITCH = 10.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.0 mm (H); TWO TAPES

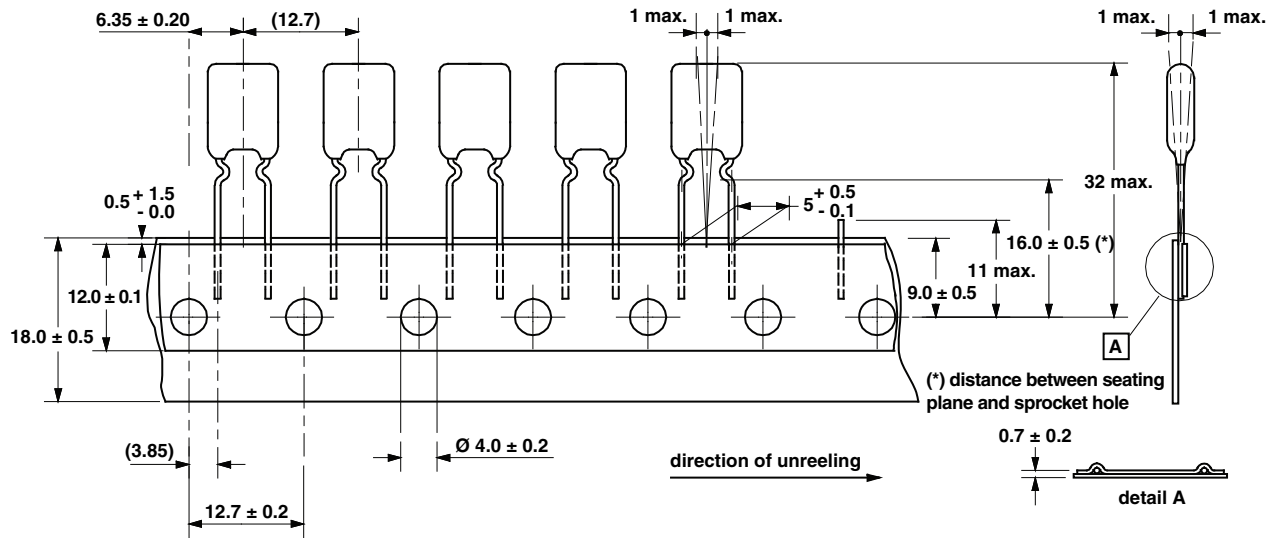


PITCH = 10.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 18.0 mm (H); ONE TAPE

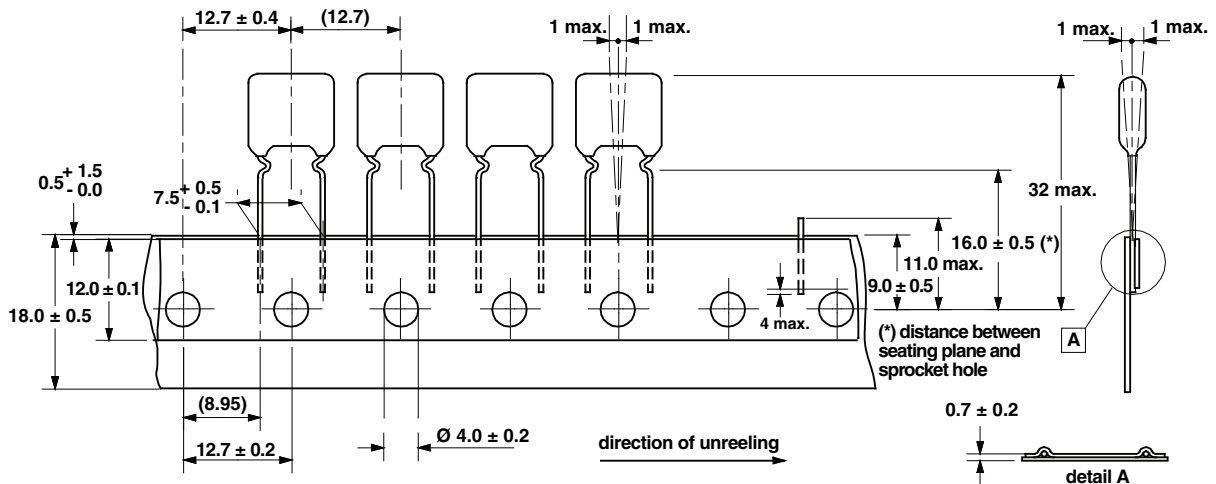


1.2.2. RADIAL LACQUERED FILM CAPACITORS

PITCH = 5.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H)



PITCH = 7.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H)

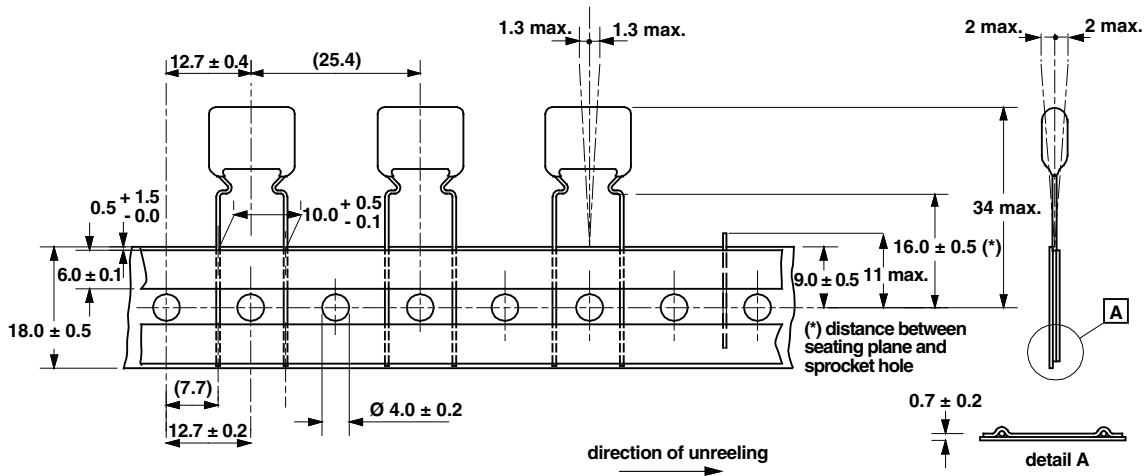


Taping, Special Kinking, Packaging and Labeling

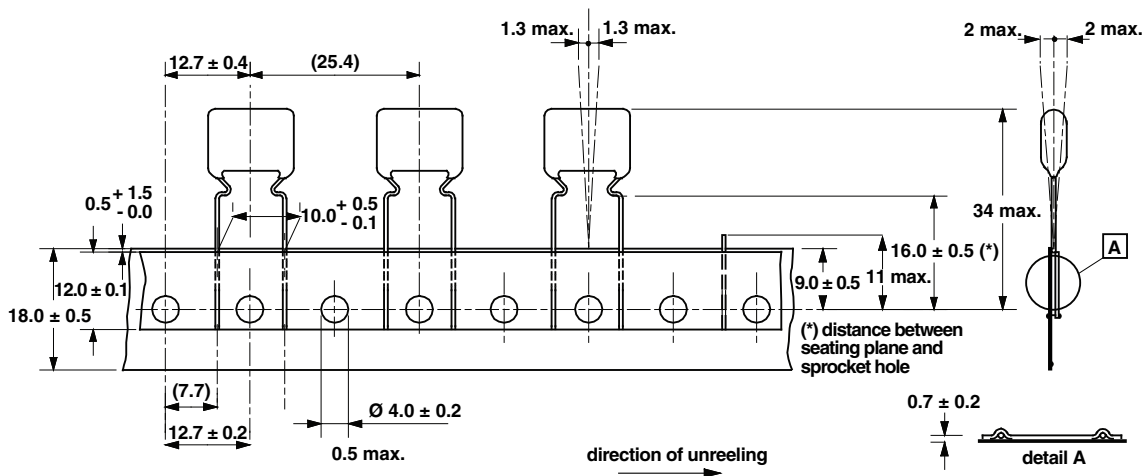


Vishay

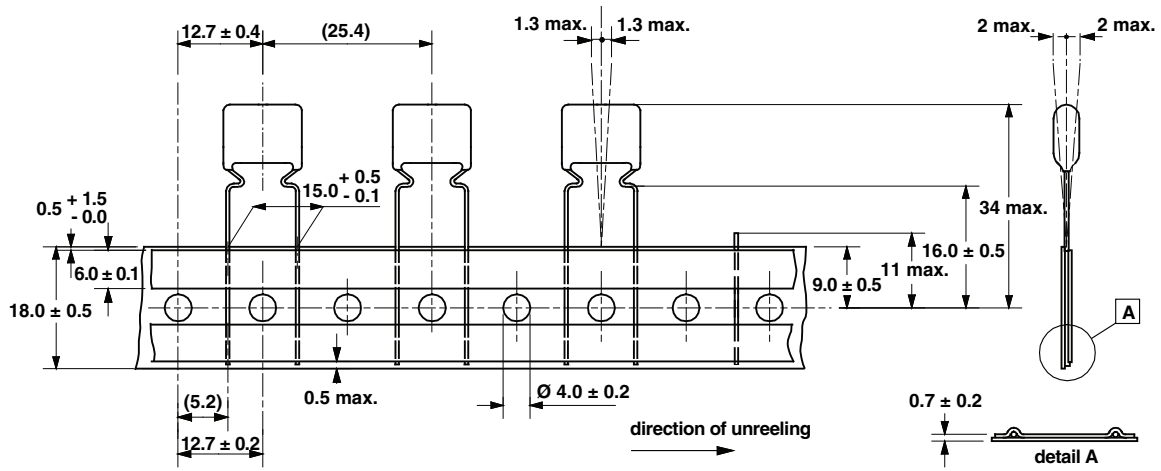
PITCH = 10.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); TWO TAPES



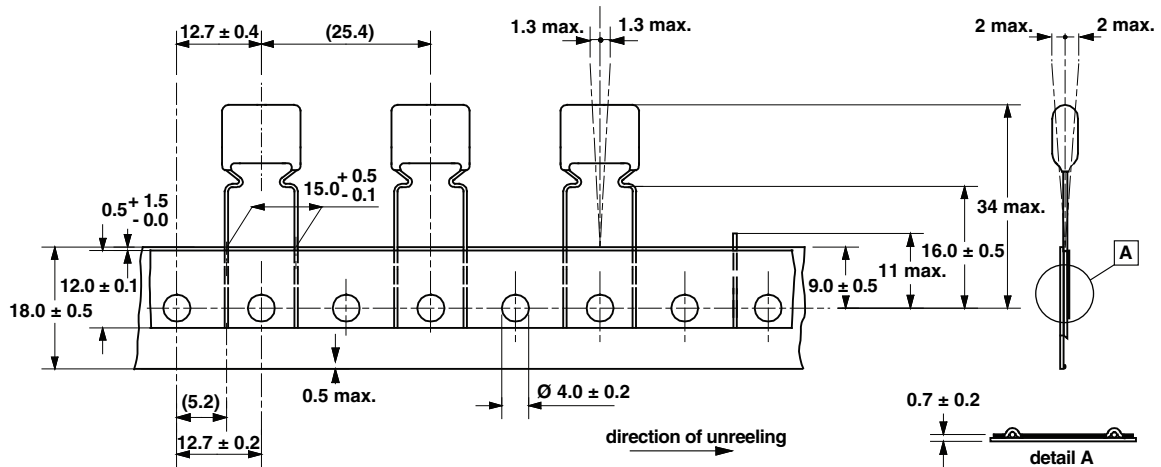
PITCH = 10.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); ONE TAPE



PITCH = 15.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); TWO TAPE

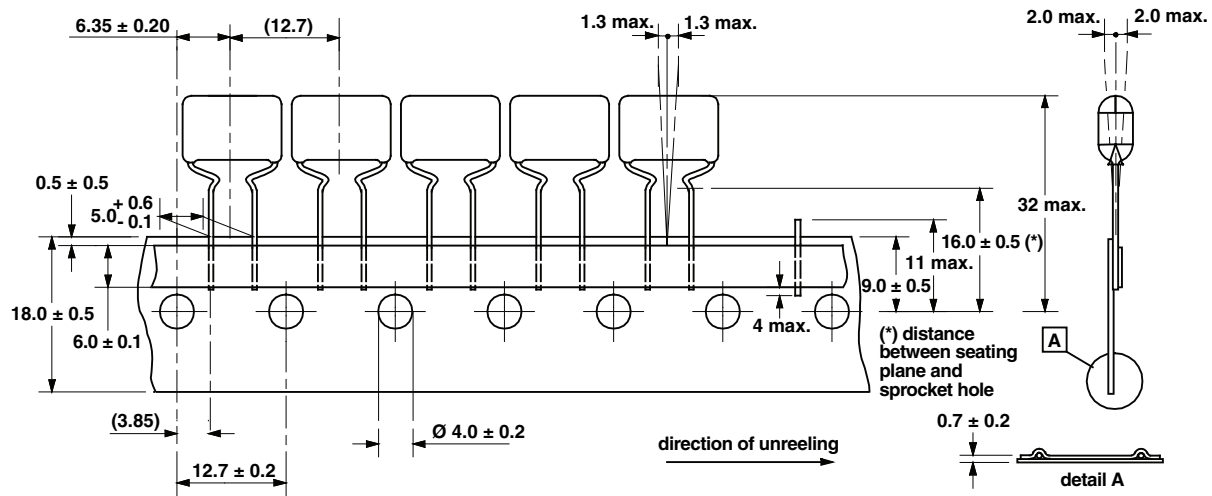


PITCH = 15.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); ONE TAPE

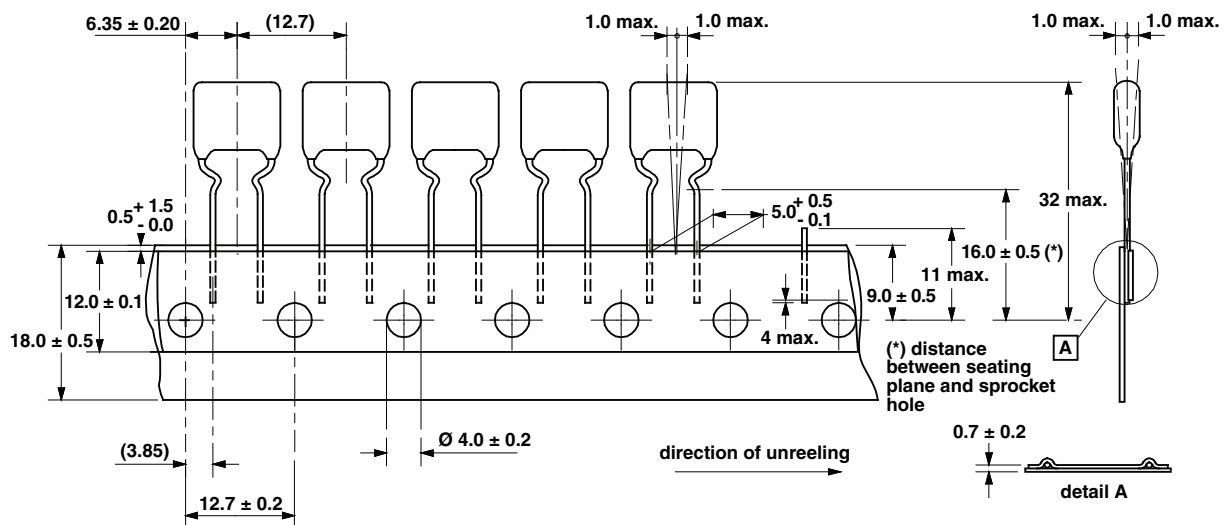


1.2.3. RADIAL LACQUERED BENT BACK LEADS

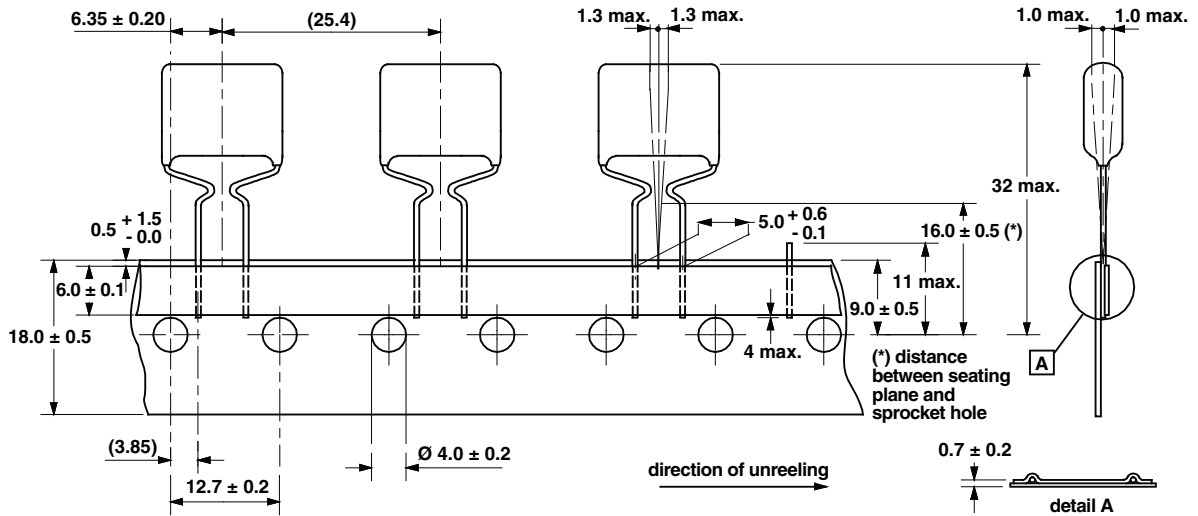
BENT BACK PITCH = 5.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); 6 mm TAPE
 (original pitch = 7.5 mm)



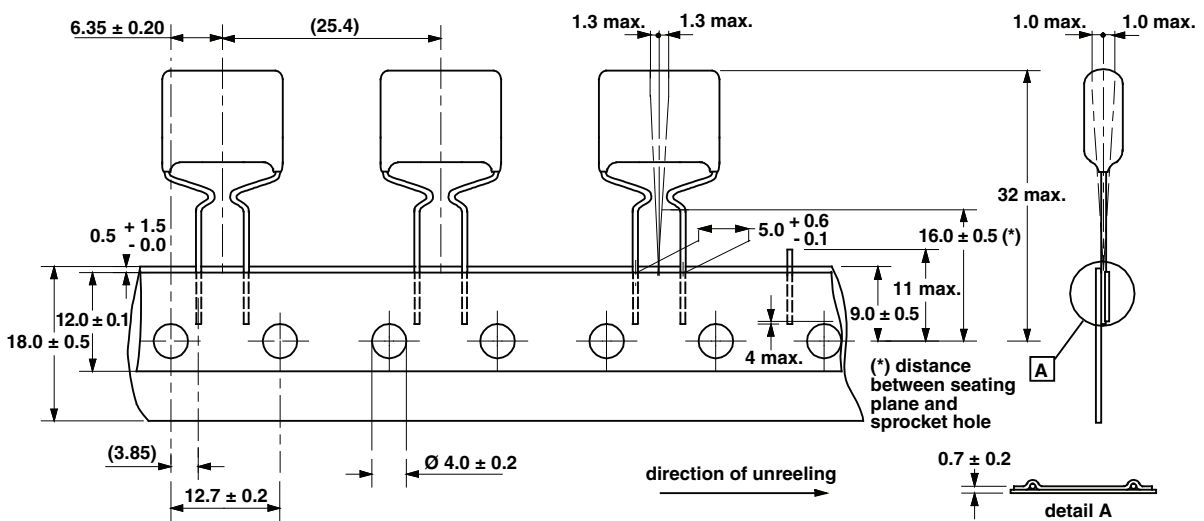
BENT BACK PITCH = 5.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); 12 mm TAPE
 (original pitch = 7.5 mm)



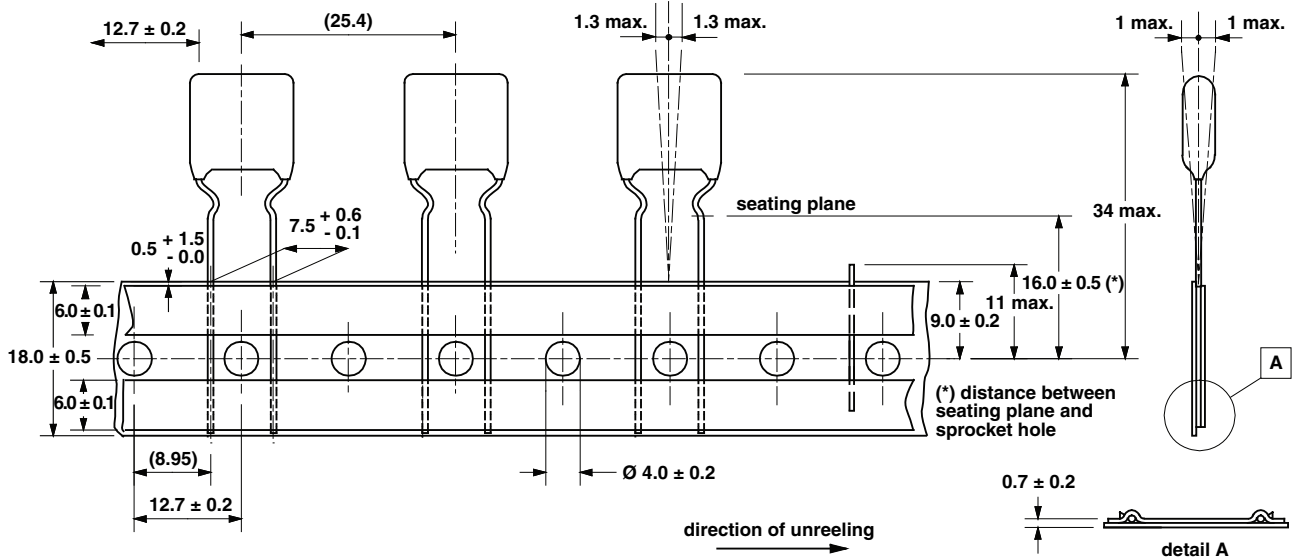
BENT BACK PITCH = 5.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); 6 mm TAPE
 (original pitch = 10.0 mm)



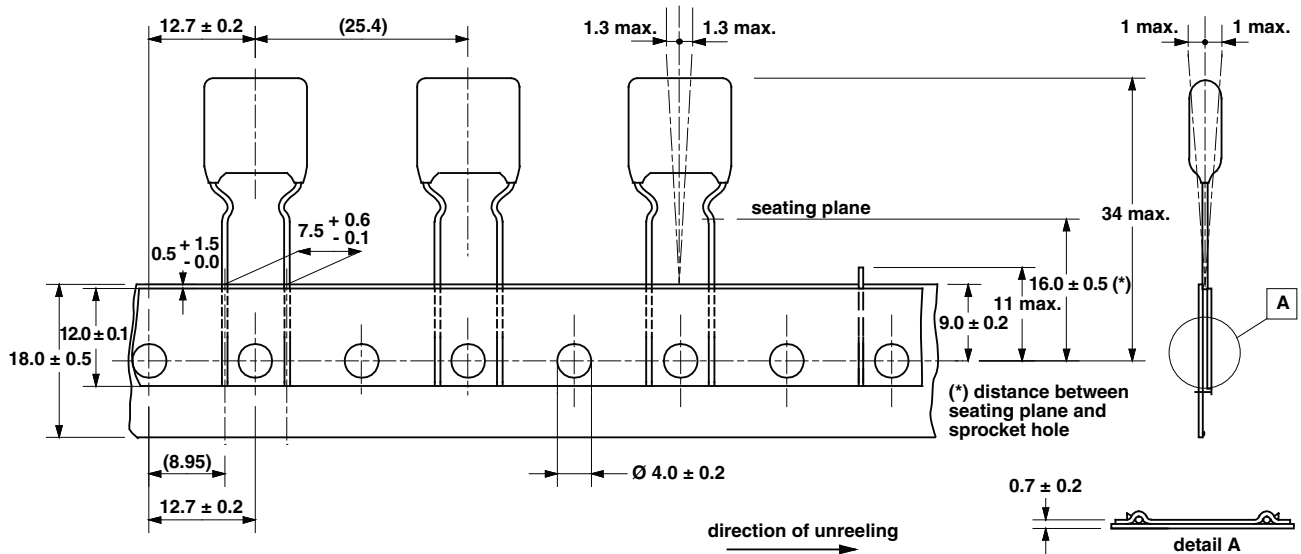
BENT BACK PITCH = 5.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); 12 mm TAPE
 (original pitch = 10.0 mm)



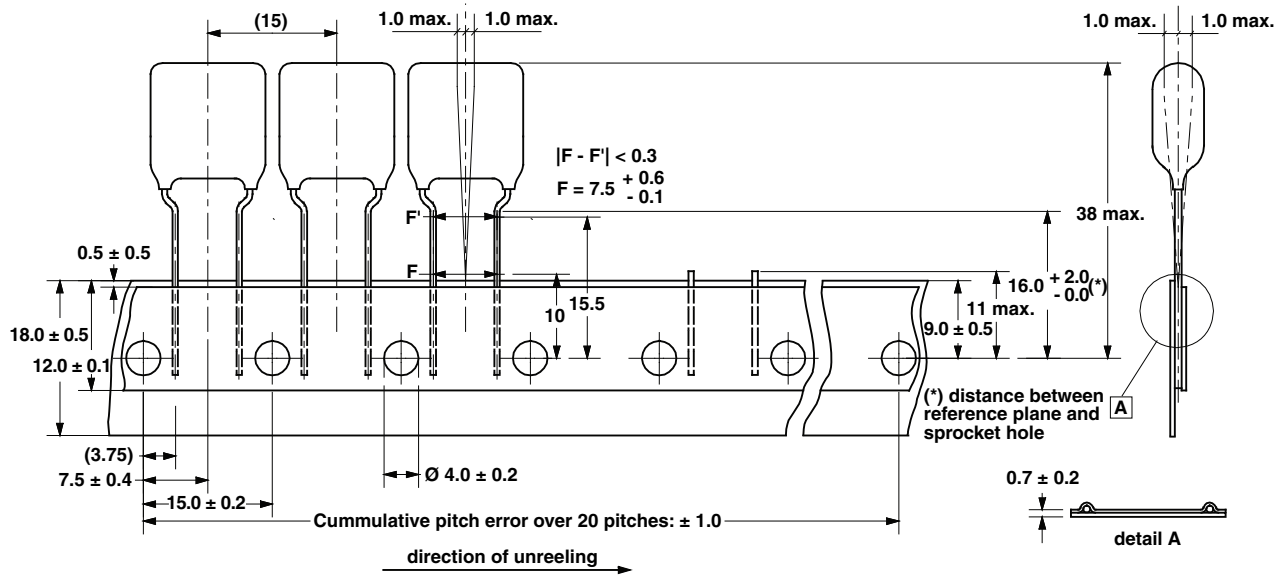
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); TWO TAPES
 (original pitch = 10.0 mm)



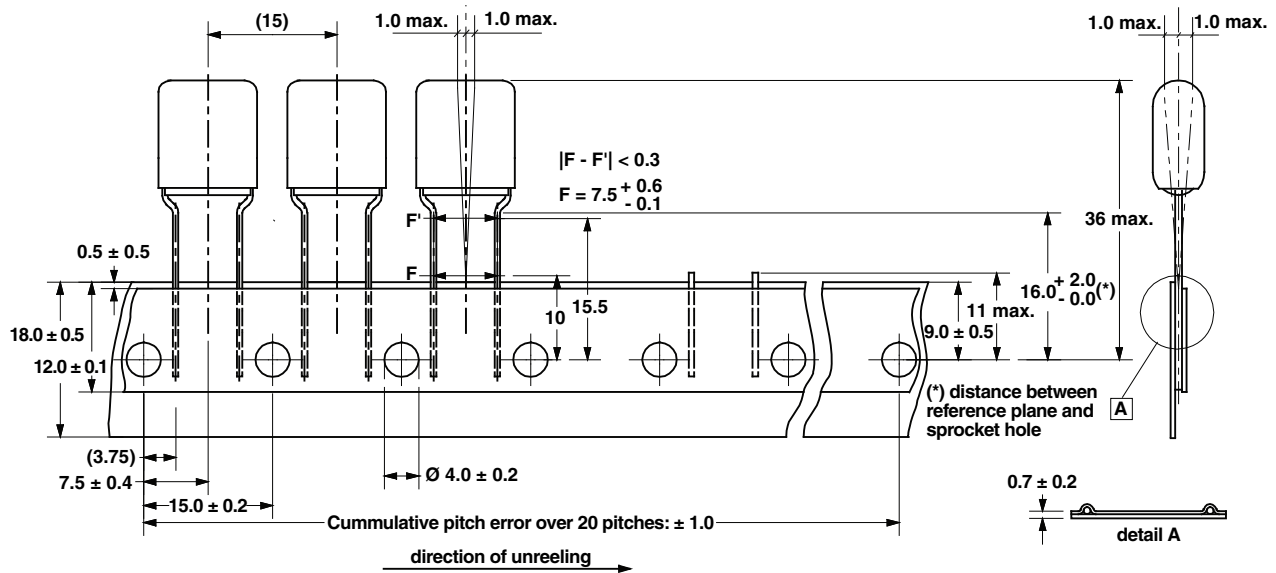
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); ONE TAPE
 (original pitch = 10.0 mm)



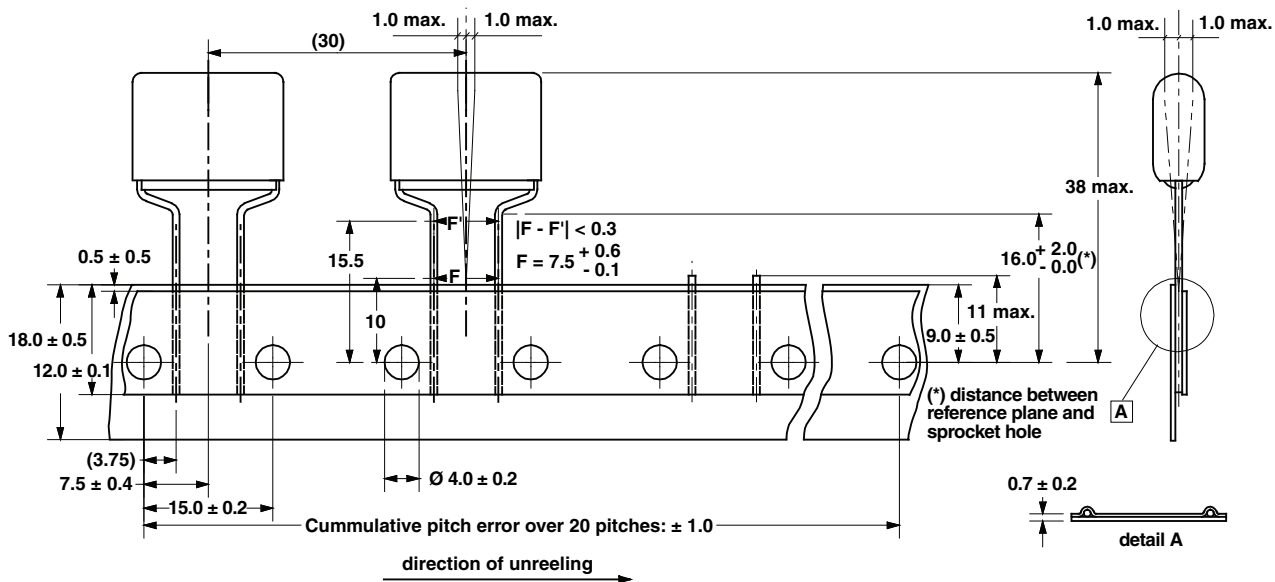
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 16.0 mm (H)
 (original pitch = 10.0 mm)



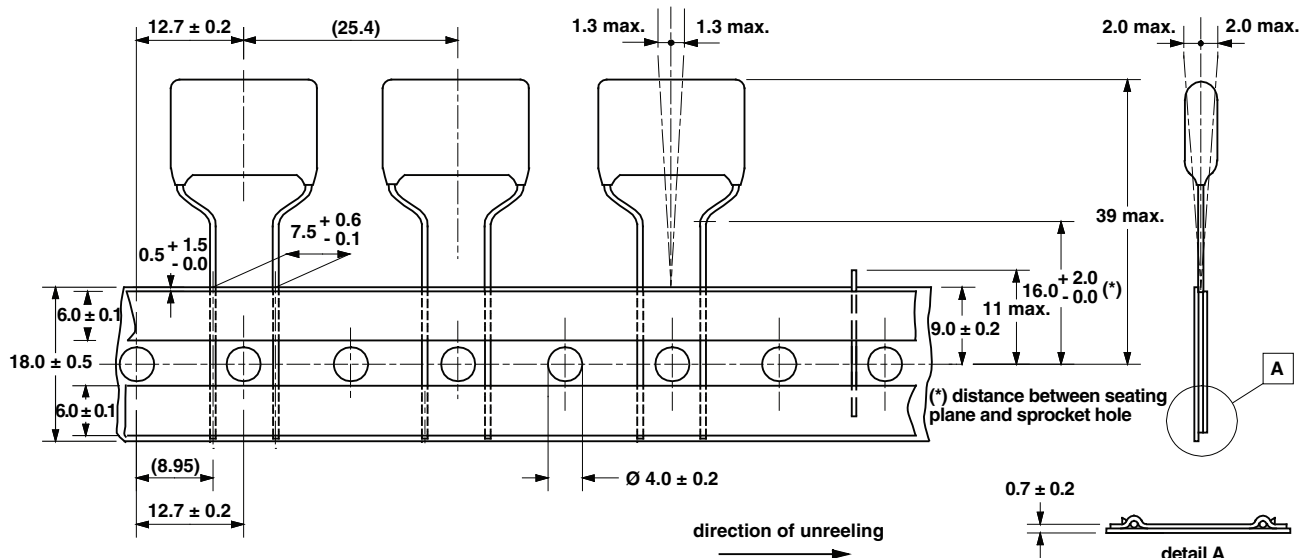
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 16.0 mm (H); NAKED BELLY
 (original pitch = 10.0 mm)



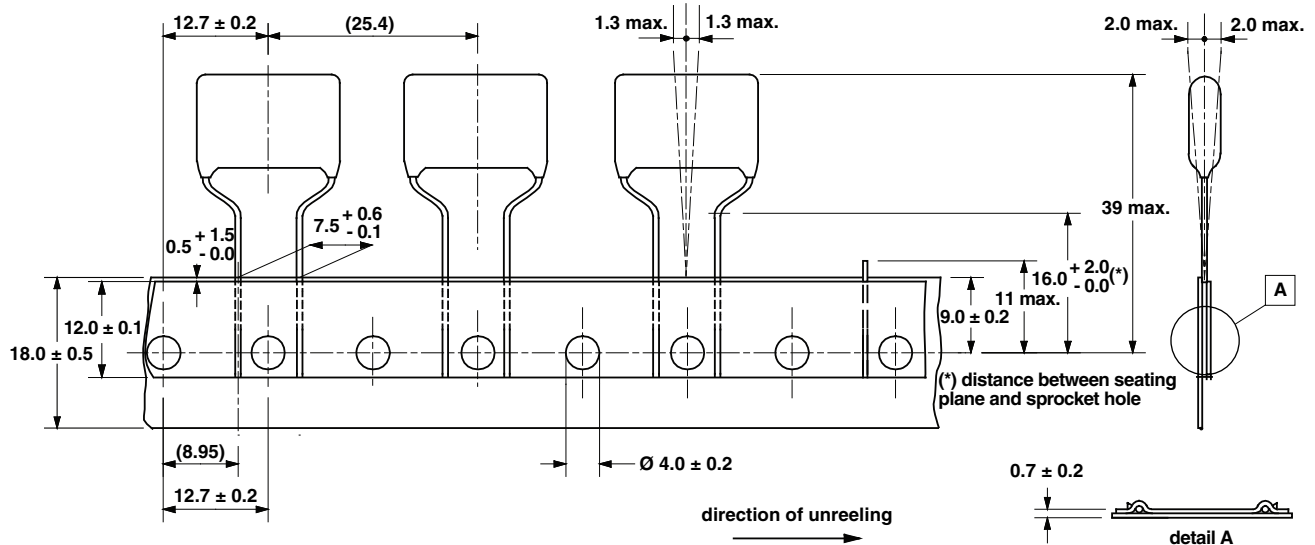
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 16.0 mm (H); NAKED BELLY
 (original pitch = 15.0 mm)



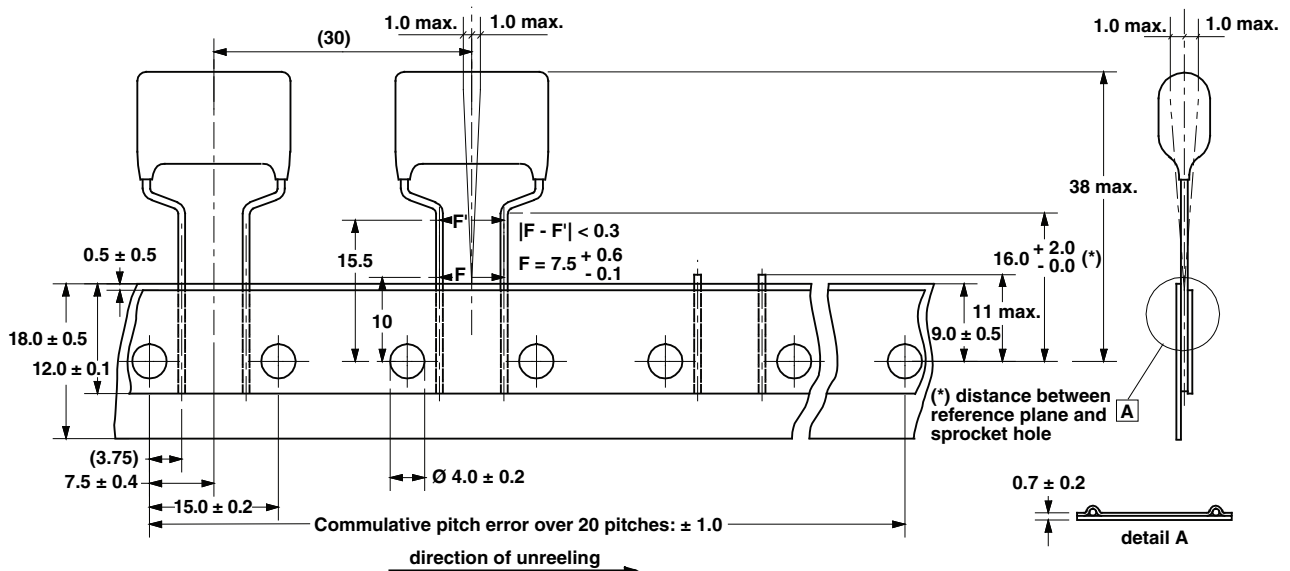
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); TWO TAPES
 (original pitch = 15.0 mm)



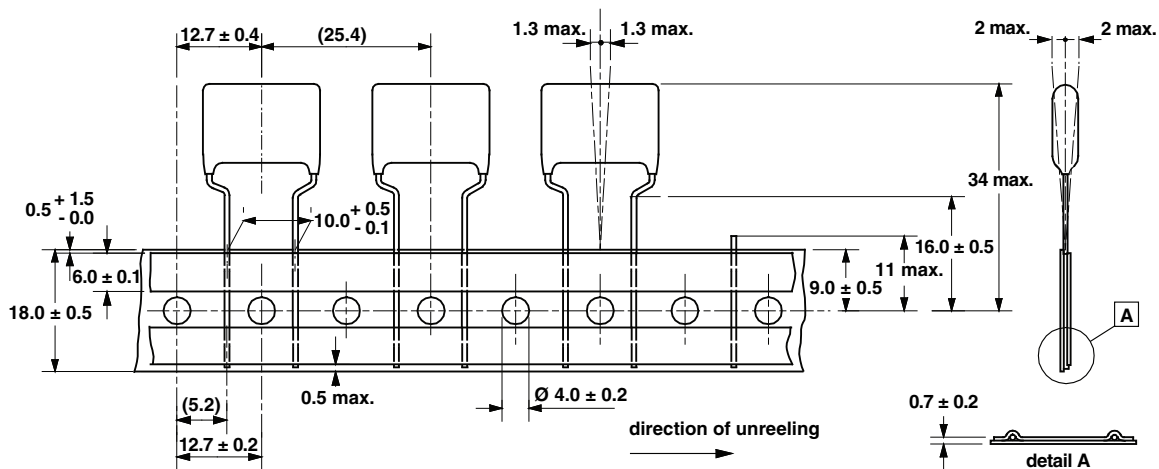
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); ONE TAPE
 (original pitch = 15.0 mm)



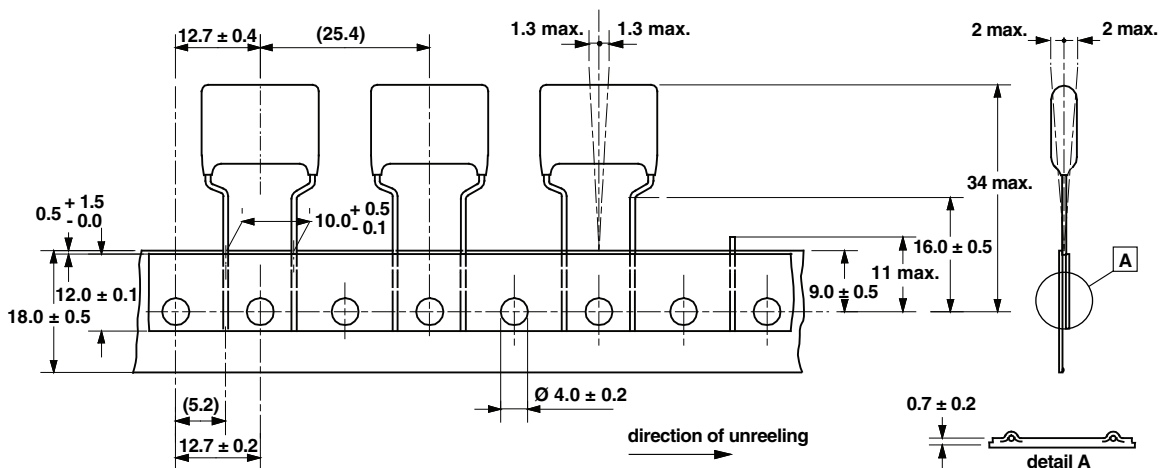
BENT BACK PITCH = 7.5 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 16.0 mm (H); ONE TAPE
 (original pitch = 15.0 mm)



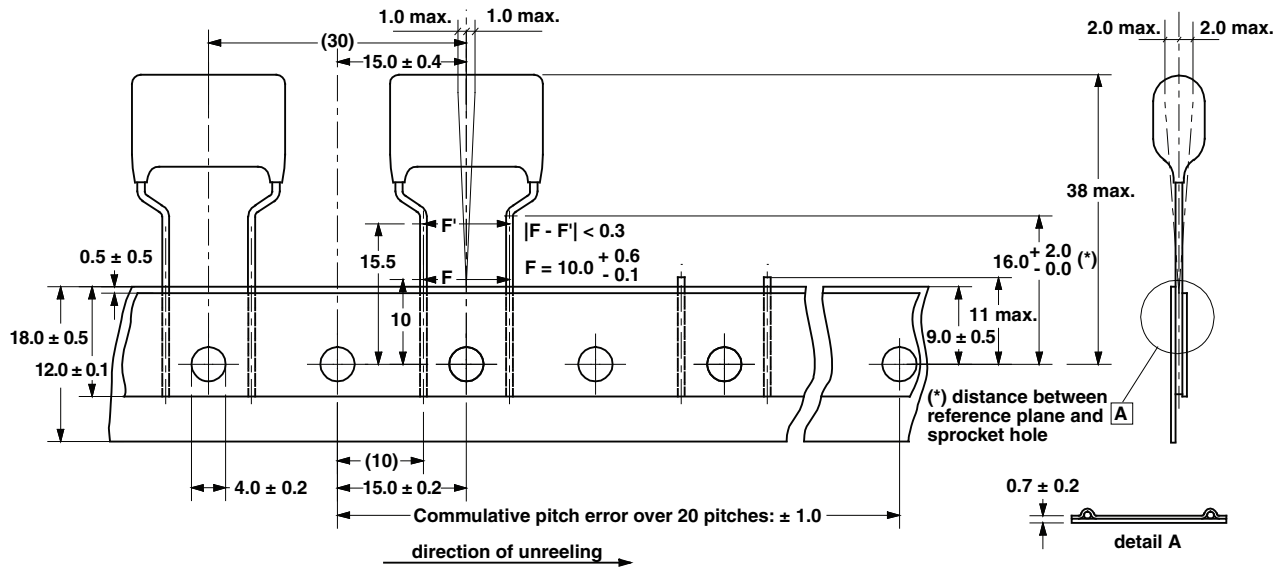
BENT BACK PITCH = 10.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); TWO TAPES
 (original pitch = 15.0 mm)



BENT BACK PITCH = 10.0 mm (P); SPROCKET HOLE 12.7 mm (P₀); TAPING HEIGHT 16.0 mm (H); ONE TAPE
 (original pitch = 15.0 mm)



BENT BACK PITCH = 10.0 mm (P); SPROCKET HOLE 15.0 mm (P₀); TAPING HEIGHT 16.0 mm (H); ONE TAPE
 (original pitch = 15.0 mm)



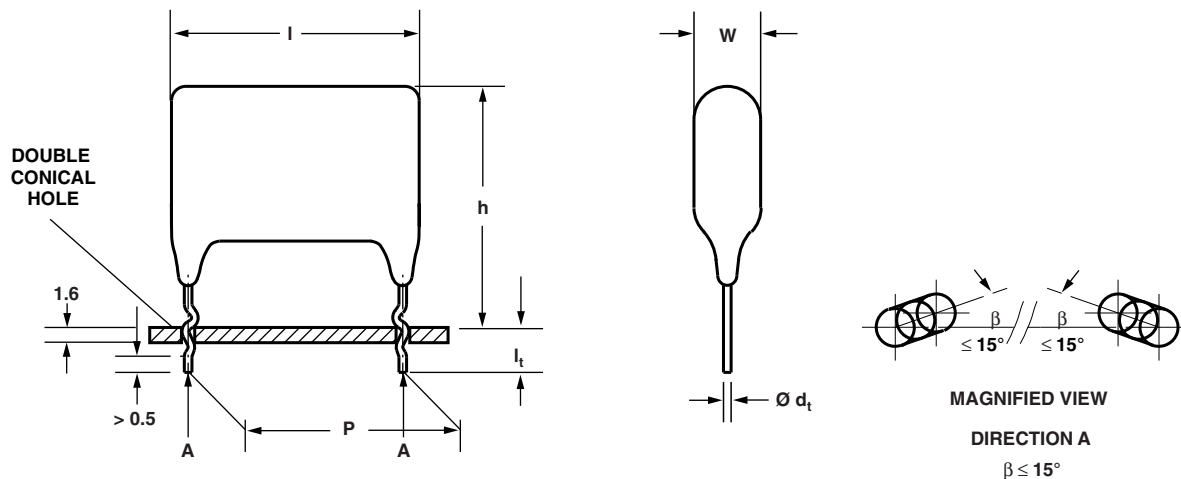
1.3. TAPING CHARACTERISTICS FOR RADIAL POTTED AND LACQUERED FILM CAPACITORS

RADIAL LEADS	
DESCRIPTION	VALUE
Pull-out force of the component	≥ 5 N
Peel-off force of adhesive tape	≥ 6 N
Tearing force of tape	≥ 15 N
Storage conditions	
Storage temperature	- 25 to + 40 °C
Maximum relative humidity without condensation	80 %

2. SPECIAL KINKING INFORMATION

RADIAL LACQUERED FILM CAPACITORS WITH DOUBLE KINK

General data



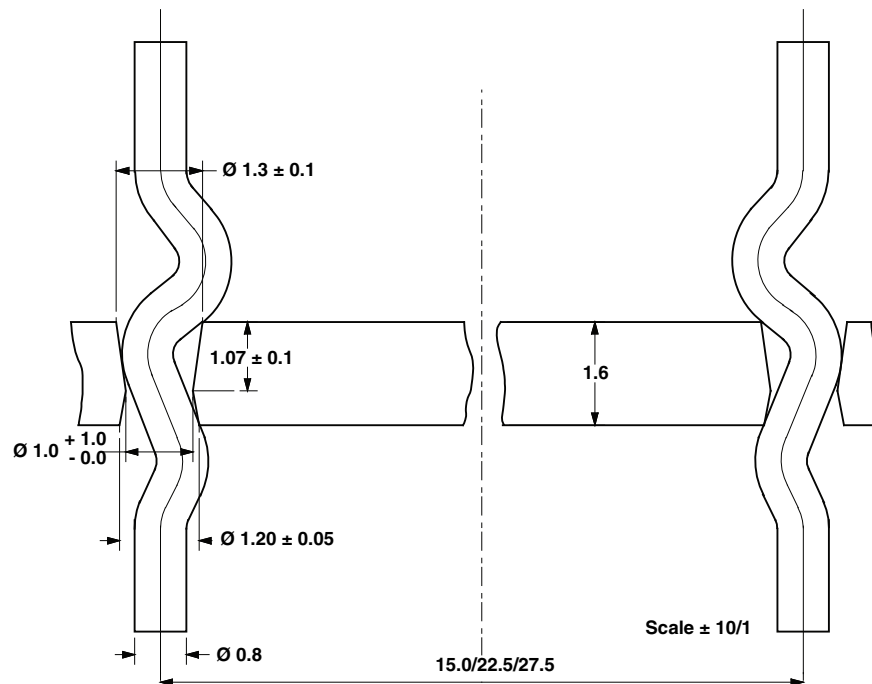
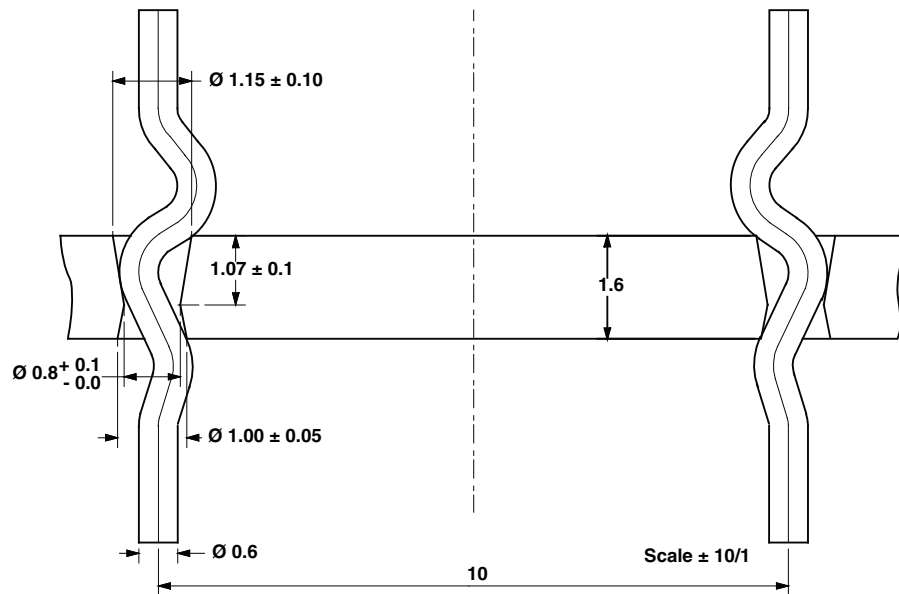
DOUBLE KINK CAPACITORS

PITCH (mm)	LEAD DIAMETER (mm)
10.0 ± 1.0	0.6
15.0 ± 1.0	0.8
22.5 ± 1.0	0.8
27.5 ± 1.0	0.8

The capacitors are usable for radial manual insertion on PCB. The fixation on the board by double kinked leads prevents that the component jumps out of the PCB during transport.

The components with lead diameter of 0.6 mm are usable for being inserted in punched holes with nominal diameter of 0.8 mm and the components with lead diameter of 0.8 mm are usable for being inserted in punched holes with nominal diameter of 1.0 mm.

The pitch is specified on the top of the leads. After manufacturing, the products meet the specification. Although special care is taken to the packaging, deviations may occur due to transport.



3. PACKAGING INFORMATION

3.1. LOOSE IN BOX

3.1.1. Lacquered capacitors (all pitches) and potted capacitors (pitch ≤ 15 mm: all; pitch > 15 mm: long leads)

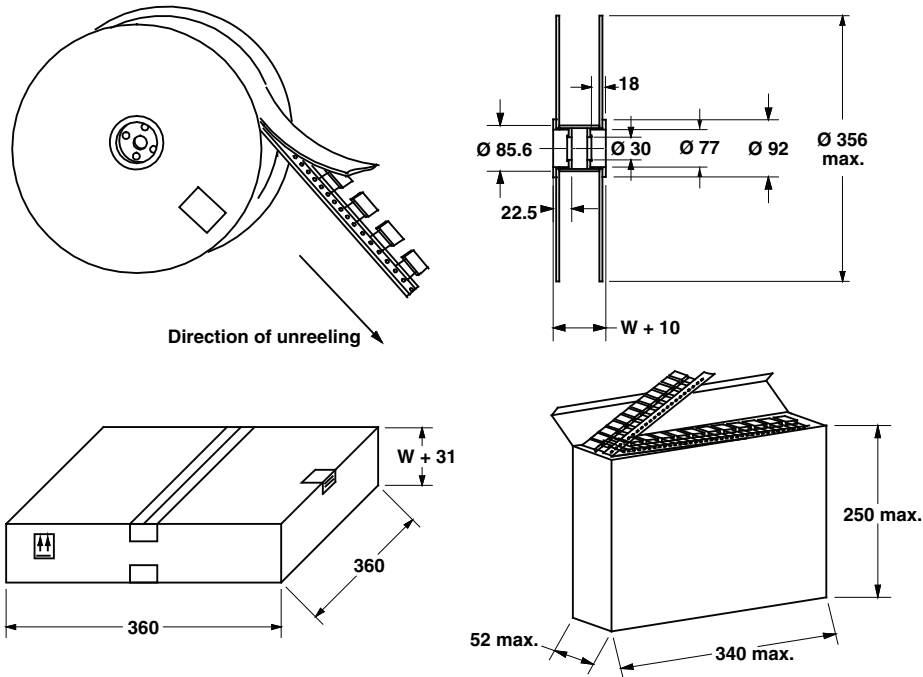
“Loose in box” capacitors are packed in carton boxes. For quantities per box see detail specifications.

3.1.2. Potted capacitors (pitch > 15 mm, short leads)

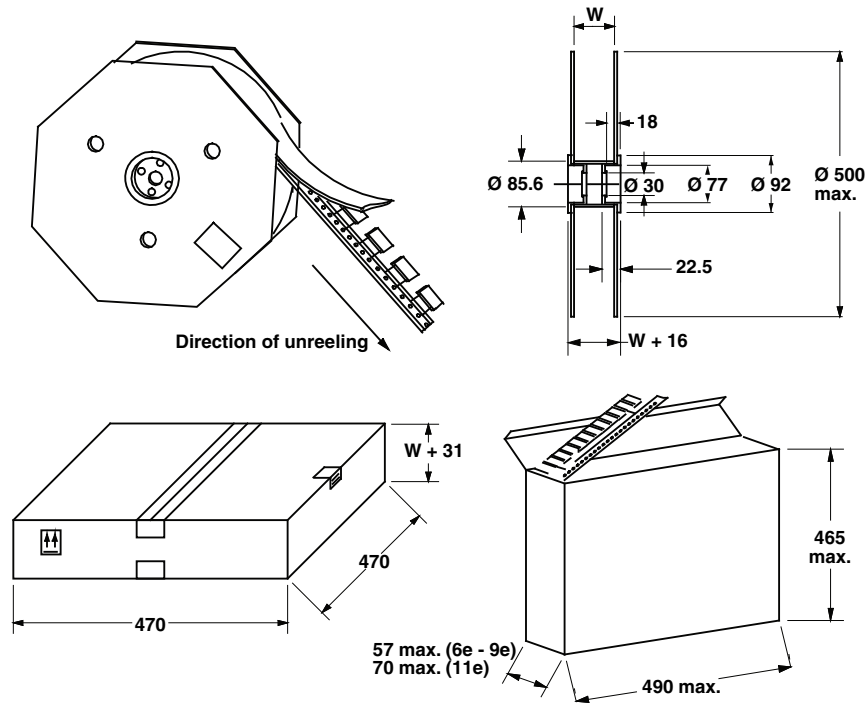
“Loose in box” capacitors are packed in tray form. For quantities per box see detail specifications.

3.2 TAPED ON REEL

3.2.1 SMALL REELS (356 mm)/AMMOPACK



3.2.2 LARGE REELS (500 mm)/AMMOPACK



W AS A FUNCTION OF PRODUCT HEIGHT

h (mm)	W ± 2 mm
≤ 9.0	40
10.0 up to and including 15.0	45
15.5 up to and including 19.5	50
21.0 up to and including 23.0	55
25.0 up to and including 28.0	60
31.0	65

The cumulative pitch error is: 1.0 mm per 20 pitches.

The maximum number of empty positions per reel shall not exceed 0.5 % ⁽¹⁾ of the total number of components per reel, but no more than 2 consecutive positions may be vacant provided this gap is followed by 6 consecutive components.

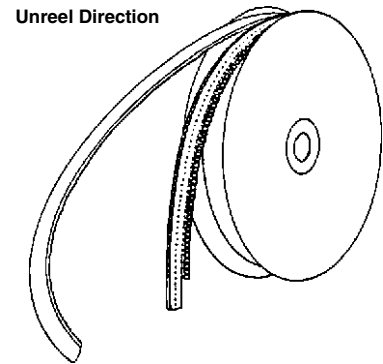
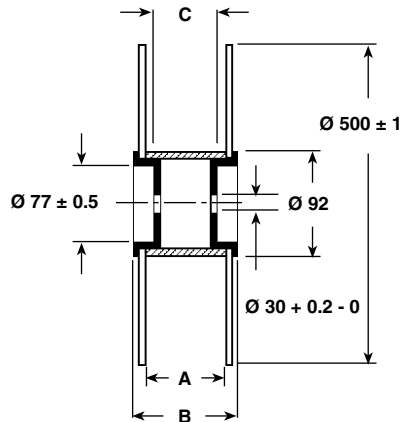
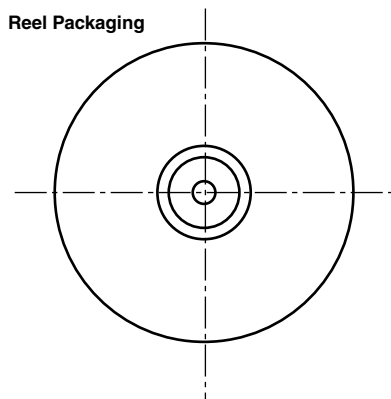
Note

1. Potted: this 5 % for capacitors in ammpack (except for capacitors with w = 2.5 or 3.5 mm and l = 7.2 mm)

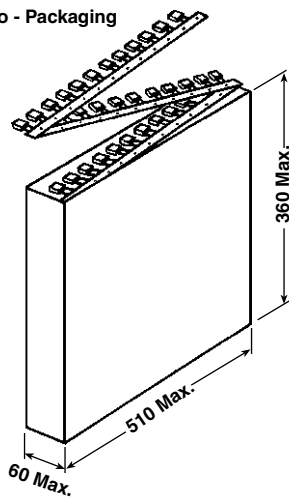
lacquered for pitches 15 and 22.5 mm: 5 % for capacitors in ammpack (except for capacitors with w = 2.5 or 3.5 mm and l = 7.2 mm)

3.2.3 LARGE REELS (500 mm; MOUNTING WHEEL INNER DIAMETER 77 mm)/AMMOPACK

RADIAL PLASTIC (ROBOTIC INSERTION)



Ammo - Packaging

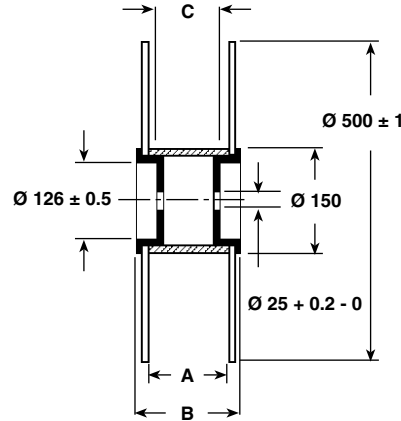
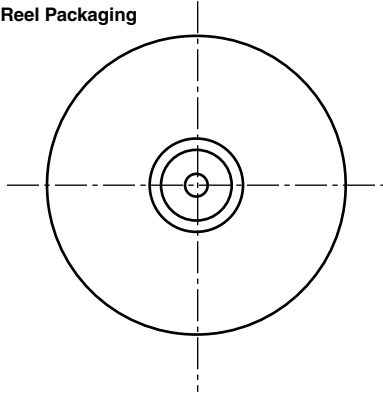


MAX. CAP. HEIGHT	REEL - DIMENSIONS in millimeters		
	H	A	B
20	52	70	28
25	57	75	33
30	82	80	38
35	67	85	43
40	72	90	48

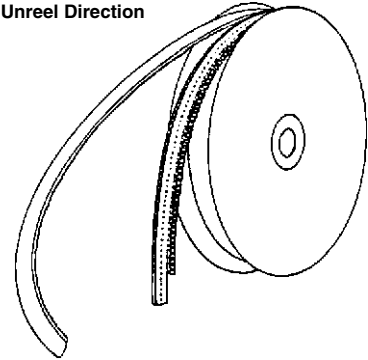
3.2.4 LARGE REELS (500 mm; MOUNTING WHEEL INNER DIAMETER 126 mm)/AMMOPACK

RADIAL PLASTIC (ROBOTIC INSERTION)

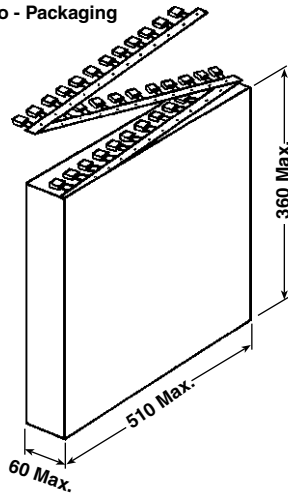
Reel Packaging



Unreel Direction



Ammo - Packaging



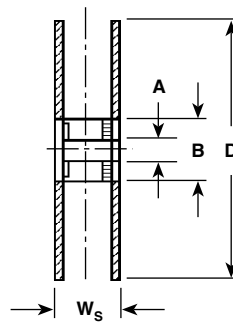
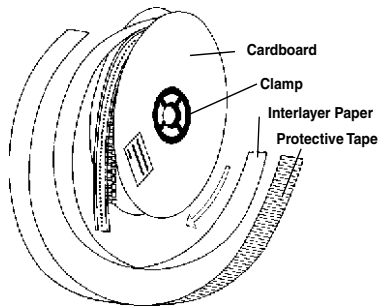
MAX. CAP. HEIGHT	REEL - DIMENSIONS in millimeters		
H	A	B	C
20	52	70	28
25	57	75	33
30	82	80	38
35	67	85	43
40	72	90	48

3.2.5 SMALL REELS (350 mm)/AMMOPACK

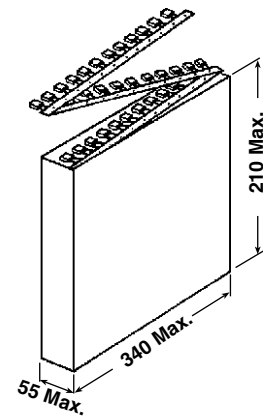
LETTER CODES FOR TAPING OF RADIAL LEADED CAPACITORS (Pitch 5 mm to 15 mm)

LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)
D	AMMO	16.5
G	AMMO	18.5
F	REEL	16.5
W	REEL	18.5

REEL FOR RADIALLY TAPED CAPACITORS
(Box size 50 mm x 370 mm x 370 mm)



CARDBOARD BOX FOR RADIALLY TAPED CAPACITORS (Ammo - Packaging)

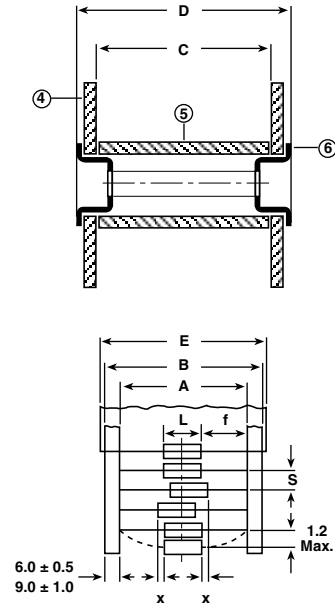
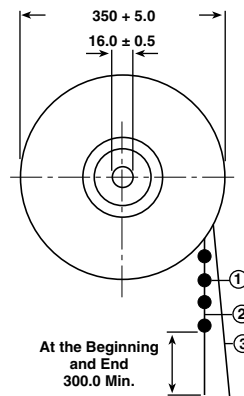


DIMENSIONS (mm)
D = Ø 350
A = Ø 30
B = Ø 85
Ws = 52 Max.

3.2.6 AXIAL TYPES

AXIAL FILM CAPACITORS ACC. TO EN/IEC 60286-1

1. Capacitor
 2. Tape
 3. Kraft paper layers between components for protection
 4. Flange (3.0mm thick)
 5. Reel
 6. Plastic hub
- A. Inner spacing of tapes
 B. Outer spacing of tapes
 C. Inner reel width
 D. Outer reel width
 E. Width of kraft paper layers
 F. Width of outer kraft paper layers
 S. Component spacing
 T. Permissible deviation over 10 spaces
 L. Body length of capacitor
 $f \geq 19.0 \text{ mm}$
 $x \pm 0.5 \text{ for } L_{\text{max.}} \leq 26 \text{ mm}$
 $x \pm 0.7 \text{ for } L_{\text{max.}} > 26 \text{ mm}$



Note:

The capacitors can also be supplied in cardboard box (Ammopack)

WIDTH OF ADHESIVE TAPE:

6.0 mm ± 0.5 mm for class I, II and III ($S = 10.0 \pm 0.5$)
 9.0 mm ± 1.0 mm for class III ($S = 15.0 \pm 0.5$) and IV

MKT 1813, MKP 1839, MKP 1845, MKC 1860

CAP. DIM. Ø D		$L_{\text{max.}}$	Input Class	A mm	S mm	T mm	B mm	C mm	$D_{\text{max.}}$ mm	E mm
≤ 5.0	11.5	6	I	53 ± 2	5 ± 0.5	± 2	65 ± 2	70 ⁻¹	80	68 ⁻¹
> 5.0 ≤ 7.0	11.5	6	I	53 ± 2	10 ± 0.5	± 2	65 ± 2	70 ⁻¹	80	68 ⁻¹
> 5.0 ≤ 9.5	22.0	6	II	63 ± 2	10 ± 0.5	± 2	75 ± 2	85 ⁻¹	95	83 ⁻¹
> 5.0 ≤ 9.5	31.5	6	III	73 ± 2	10 ± 0.5	± 2	85 ± 2	100 ⁻¹	110	98 ⁻¹
> 9.5 ≤ 13.5	31.5	9	III	73 ± 2	15 ± 0.75	± 3	91 ± 2	100 ⁻¹	110	98 ⁻¹
> 13.5 ≤ 18.0	31.5	9	IV	73 ± 2	20 ± 1	± 4	91 ± 2	100 ⁻¹	110	98 ⁻¹
> 13.5	41.5	9	IV	73 ± 2	20 ± 1	± 4	91 ± 2	100 ⁻¹	110	98 ⁻¹
(1)	41.5	9	IV	73 ± 2	30 ± 1	± 4	91 ± 2	100 ⁻¹	110	98 ⁻¹

Note:



(1) Taping for $L_{\text{max.}} = 41.5 \text{ mm}$ upon request



4. LABELLING INFORMATION

2D LABEL



TYPE :339 150nF ±20% 275Vac X2
 BATCH :200816IN LOT1 : 1003564 DC1 : 0816 L
 QTY :1000 LOT2 : DC2 :
 PART NO: BFC233922154 S.L. : 0010
 BCC PN :222233922154 RoHS   REGION:
 55/110/56/B
 PO. : 0099999999 PI: 0099 SER: B61003564026

EXPLANATION:

LINE	
1	2D barcode and manufacturer's logo
2	Type description Capacitance value Tolerance Voltage Class (if applicable)
3	Batch number Lot number Date code Factory code
4	Quantity
5	Part number SAP number RoHS symbols S.L.: Stocking location
6	Vishay catalog number REGION: Plant number
7	Climatic category (if applicable)
8	PO: Production order PI: Production item SER.N. box number