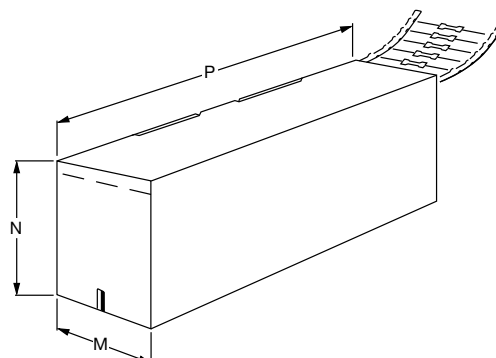
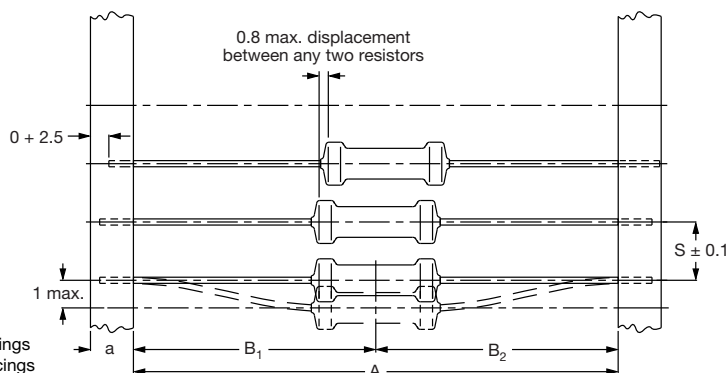


Linear Leaded Resistors

DIMENSIONS OF AMMOPACK



Bandolier in ammopack



Dimensions in millimeters
Maximum 1 mm per 10 spacings
Maximum 0.5 mm per 5 spacings

Axial style on tape

DIMENSIONS in millimeters - resistor type, quantities and packaging dimensions for axial taped in ammopack								
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS						
		AXIAL TAPED ON BANDOLIER				AMMOPACK		
		a	A	B ₁ - B ₂	S	M	N	P
AC01, AC01-AT ⁽¹⁾	1000	6 ± 0.5	63 ± 2.0	± 1.2	10	85	70	260
AC03, AC03-AT, AC03-NI ⁽¹⁾	500	6 ± 0.5	63 ± 2.0	± 1.2	10	85	58	260
AC04, AC04-AT, AC04-NI ⁽¹⁾	500	6 ± 0.5	63 ± 2.0	± 1.2	10	85	70	260
						85	58	260
AC05, AC05-AT, AC05-NI ⁽¹⁾	500	6 ± 0.5	63 ± 2.0	± 1.2	10	86	118	270
AC07, AC07-AT	500	6 ± 0.5	74 ± 2.0	± 1.2	10	90	118	265
AC10, AC10-AT	250	6 ± 0.5	89 ± 4.0	± 1.2	10	70	105	265
AC01-CS	500	6 ± 0.5	63 ± 2.0	± 1.2	10	72	85	260
AC03-CS	500	6 ± 0.5	63 ± 2.0	± 1.2	10	85	120	270
AC05-CS	250	6 ± 0.5	83 ± 2.0	± 1.2	15	110	120	270
AC05-CS	250	6 ± 0.5	93 ± 2.0	± 1.2	15	120	120	270
CBB 0207	1000	6 ± 0.5	52 +2 / -1	± 1.2	5	74	42	182
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	77	82	324
MBA/SMA 0204	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	55	330
MBB/SMA 0207 ⁽¹⁾	1000	6 ± 0.5	52 +2 / -1	± 1.2	5	74	42	184
						78	31	260
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	114	260
MBE/SMA 0414	1000	6 ± 0.5	63 ± 2.0	± 1.2	5	47	84	374
MRS16	1000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	42	184
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	55	330

Note

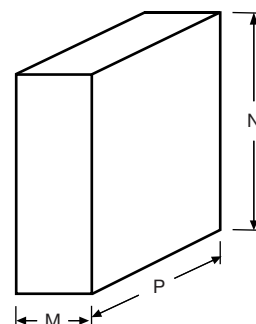
⁽¹⁾ Manufacturing at different production locations may involve use of differently sized box. Please contact at below email for details

DIMENSIONS in millimeters - resistor type, quantities and packaging dimensions for axial taped in ammpack								
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS						
		AXIAL TAPED ON BANDOLIER				AMMOPACK		
		a	A	$ B_1 - B_2 $	S	M	N	P
MRS25 ⁽¹⁾	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	42	184
						78	31	260
	5000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	114	260
						77	82	324
NFR25	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	28	262
	5000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	98	270
NFR25H	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	28	262
	5000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	98	270
PAC01	1000	6 ± 0.5	63 ± 2.0	± 1.2	10	85	58	260
PAC02	500	6 ± 0.5	63 ± 2.0	± 1.2	10	85	58	260
PAC03	500	6 ± 0.5	63 ± 2.0	± 1.2	10	85	70	260
PAC04	500	6 ± 0.5	63 ± 2.0	± 1.2	10	86	118	270
PAC05	500	6 ± 0.5	71 ± 1.0	± 1.2	10	90	118	265
PAC06	500	6 ± 0.5	71 ± 1.0	± 1.2	10	90	118	265
PR01	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	78	31	260
	5000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	114	260
PR02	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	80	72	260
PR03	500	6 ± 0.5	63 ± 2.0	± 1.2	10	83	58	256
SFR25	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	78	31	260
	5000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	114	260
SFR25H	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	78	31	260
	5000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	114	260
UXA 0204	100	6 ± 0.5	$52 +2 / -1$	± 1.2	5	74	42	184
	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	74	42	184
UXB 0207 MPR24	100	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	40	187
	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	40	187
UXE 0414	100	6 ± 0.5	63 ± 2.0	± 1.2	5	47	84	374
	1000	6 ± 0.5	63 ± 2.0	± 1.2	5	47	84	374
VR25, HVR25	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	31	260
	5000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	76	105	265
VR37, HVR37	1000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	60	260
VR68	500	5 ± 0.5	66.7 ± 1.5	± 1.2	10	165	76	258
WK2	2000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	72	55	258
	5000	6 ± 0.5	$52 +2 / -1$	± 1.2	5	75	114	260
WR4	1000	6 ± 0.5	73 ± 2.0	± 1.2	5	95	57	260

Note

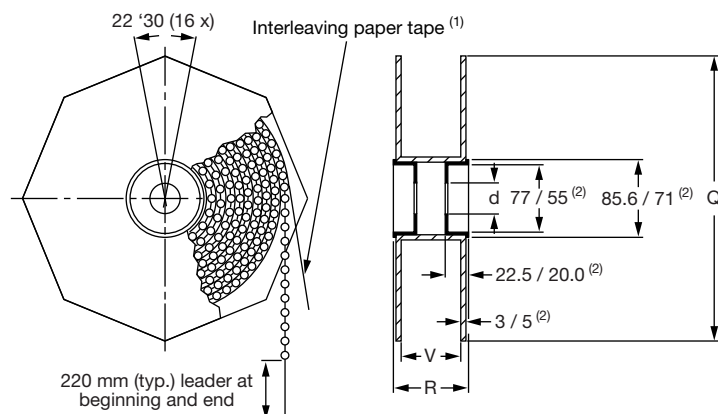
⁽¹⁾ Manufacturing at different production locations may involve use of differently sized box. Please contact at below email for details

DIMENSIONS OF OUTER PACKAGING BOX FOR AXIAL TAPED BANDOLIER ON REEL				
PRODUCT TYPE	QUANTITY	OUTER PACKAGING DIMENSIONS (for Bandolier on reel)		
		M (mm)	N (mm)	P (mm)
AC03, AC03-AT, AC03-NI	1000	90	257	260
AC05, AC05-AT, AC05-NI	500	90	257	260
SFR25	5000	93	300	298
SFR25H	5000	93	300	298
NFR25	5000	92	311	311
NFR25H	5000	92	311	311
VR25, HVR25	5000	93	300	298
VR37, HVR37	5000	90	375	375
VR68	750	105	315	305
PR01, WK2	5000	93	300	298
PR02	5000	90	375	375
MBB0207	5000	93	300	298
MRS25	5000	93	300	298
WR4	2500	105	315	305


Note

- Reel packing for MRS25 and MBB0207 does not have outer packaging box for Sokolov, CZ produced parts

DIMENSIONS OF REEL in millimeters



Notes

- Dimension d is mounting bush inner diameter
- (1) Interleaving tape typical specifications for MBA/SMA 0204 series: width 65 mm to 75 mm, thickness 80 μ m, tensile strength: lengthwise 118 Nm/g, crosswise 51 Nm/g
- (2) Dimensions for AC05, AC05-AT, AC05-NI, AC03, AC03-AT, and AC03-NI

DIMENSIONS in millimeters - resistor type, quantities and packaging dimensions for axial taped on reel					
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS			
		REEL			
		Q	V	R	d (nominal)
AC03, AC03-AT, AC03-NI	1000	271	80	90	20.0
AC05, AC05-AT, AC05-NI	500	271	80	90	20.0
MBA/SMA 0204	5000	242	70	80	26.40
MBB/SMA 0207 ⁽¹⁾	5000	298	75	86	30.0
		315	70	80	26.40
MBE/SMA 0414	2500	315	80	90	26.40
MRS25 ⁽¹⁾	5000	298	75	86	30.0
		315	70	80	26.40
NFR25	5000	305	75	86	30.0
NFR25H	5000	305	75	86	30.0
PR01, WK2	5000	298	75	86	30.0
PR02	5000	367	75	86	30.0
SFR25	5000	298	75	86	30.0
SFR25H	5000	298	75	86	30.0
UXB 0207	1000	242	70	80	26.40
MPR24, UXB 0207	5000	315	76	86	26.40
UXE 0414	2500	315	80	90	26.40
VR25, HVR25	5000	298	75	86	30.0
VR37, HVR37	5000	367	75	86	30.0
VR68	750	298	90	100	30.0
WR4	2500	298	90	100	30.0

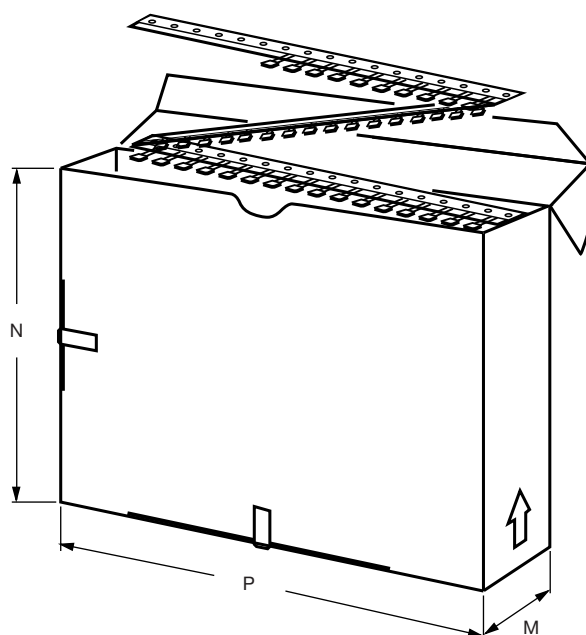
Note

- (1) Manufacturing at different production locations may use differently sized reel. Please contact the below email for details

DIMENSIONS OF REEL PACKAGING (RADIAL TAPED)

DIMENSIONS in millimeters - resistor type, quantities and dimensions of the packaging for radial taped in reel packaging				
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS		
		REEL		
		Q	V	R
AC01-CS, AC03-CS	1000	360	43	53
AC05, AC05-AT, AC05-NI	500	360	49	59
AC05-CS	250	360	49	59
MBB/SMA 0207	4000	355	45	50
PR02	2000	367	43	53

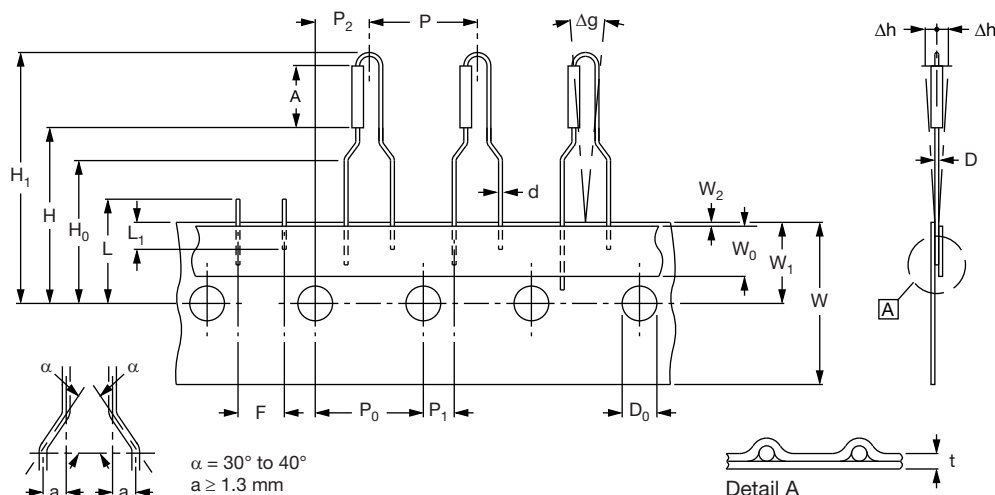
DIMENSIONS OF AMMOPACK (RADIAL TAPED) in millimeters



Dimensions of ammpack (radial taped)

DIMENSIONS OF AMMOPACK (RADIAL TAPED)

DIMENSIONS in millimeters - resistor type, quantities and dimensions of the packaging for radial taped in ammpack				
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS		
		AMMOPACK		
		M	N	P
AC01 RT	2500	46	200	334
AC03 RT	1800	46	200	334
SFR25	4000	48	253	330
NFR25	4000	48	253	330
NFR25H	4000	48	253	330
PR01	4000	48	253	330
VR25	4000	48	253	330
PR02	3000	48	253	330
MBB/SMA 0207	4000	48	253	330

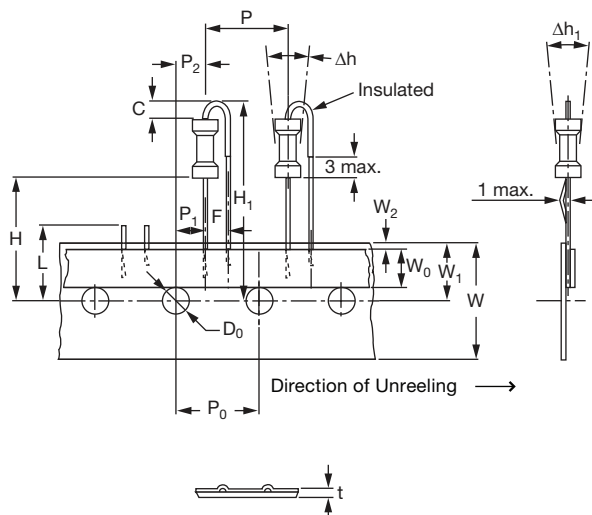
PRODUCTS WITH RADIAL LEADS (SFR25, SFR25H, NFR25, NFR25H, VR25, PR01, PR02)


Bandier for types with radial leads

TAPING PARAMETERS in millimeters				
SYMBOL	PARAMETER		VALUE	TOLERANCE
D	Maximum body diameter		See detailed product specification	
A	Maximum body length			
d	Lead wire diameter			
H ₁	Component height	SFR25	29	max.
		NFR25	29	max.
		NFR25H	29	max.
		PR01	29	max.
		VR25	29	max.
		PR02	29	± 3.0
		MBB/SMA 0207	28	max.
P	Pitch of components		12.7	± 1.0
P ₀	Feed-hole pitch		12.7	± 0.2
	Cumulative pitch error per 20 spacings		1.0	
P ₁	Feed-hole center to lead at topside at the tape		3.85	± 0.5
P ₂	Feed-hole center to body center		6.35	± 1.0
F	Lead-to-lead distance		4.8	+0.7/-0
Δh	Component alignment		0	± 1.2
Δg	Component alignment		0	± 3°
W	Tape width		18.0	± 0.5
W ₀	Minimum hold down tape width		5.5	-
W ₁	Hole position		9.0	± 0.5
W ₂	Maximum hold down tape position		0.5	-
H ₀	Lead wire clinch height		16.5	± 0.5
H	Height of component from tape center		19.5	± 1
D ₀	Feed-hole diameter		4.0	± 0.2
t	Total tape thickness		0.4	-0/+0.5
L	Maximum length of snapped lead		11.0	-
L ₁	Minimum lead wire (tape portion) shortest lead		2.5	-

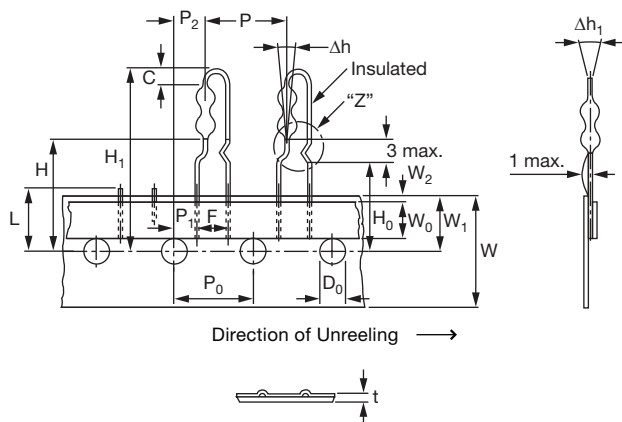
MBB/SMA 0207 WITH RADIAL TAPED ON REEL

LEAD SPACING (UB) 2.5 mm, SIZE 0207

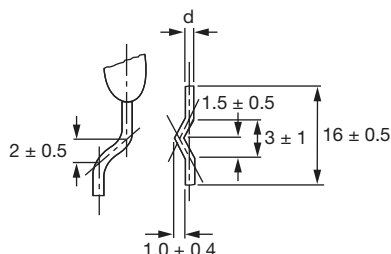


DIMENSIONS in millimeters			TOL.
Lead Ø	d	0.6	-
Pitch of components	P	12.7	± 1.0
Pitch of sprocket holes ⁽¹⁾	P ₀	12.7	± 0.3
Distance between hole center and lead center	P ₁	5.1	± 0.7
Distance between hole center and resistor center	P ₂	5.1	± 0.7
Lead Spacing	F	2.5	+0.6, -0.1
Angle of insertion	Δh	1.3 max.	-
Angle of insertion	Δh ₁	2 max.	-
Width of carrier tape	W	18.0	+1, -0.5
Width of adhesive tape	W ₀	6.0	± 0.5
Position of holes	W ₁	9.0	+0.75, -0.5
Position of adhesive tape	W ₂	0.5	+0.5, -0
Body to hole center ⁽²⁾	H	18.0	± 2, -0
Hole Ø	D ₀	4.0	+0.2
Thickness of tape ⁽³⁾	t	0.9 max.	-
Height for cutting	L	11 max.	-
Height for bending	C	2.5	+0, -0.5
Height for insertion	H ₁	32 max.	-

LEAD SPACING (RB) 5.0 mm, SIZE 0207



Area "Z"

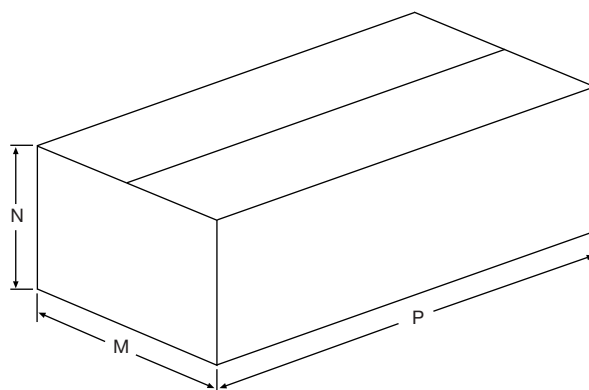


DIMENSIONS in millimeters			TOL.
Lead Ø	d	0.6	-
Pitch of components	P	12.7	± 1.0
Tape pitch	P ₀	12.7	± 0.3
Distance between hole center and lead center	P ₁	3.85	± 0.7
Distance between hole center and resistor center	P ₂	6.35	± 0.7
Lead spacing	F	5.0	+0.6, -0.1
Angle of insertion	Δh	1.3 max.	-
Angle of insertion	Δh ₁	2 max.	-
Width of carrier tape	W	18.0	+1, -0.5
Width of adhesive tape	W ₀	6.0	± 0.5
Position of holes	W ₁	9.0	+0.75, -0.5
Position of adhesive tape	W ₂	0.5	+0.5, -0
Body to hole center ⁽²⁾	H	18.0	+2, -0
Lead crimp to hole center ⁽²⁾	H ₀	16.0	± 0.5
Hole Ø	D ₀	4.0	± 0.2
Thickness of tape ⁽³⁾	t	0.9 max.	-
Height for cutting	L	11 max.	-
Height for bending	C	2.5	+0, -0.5
Height for insertion	H ₁	32 max.	-

Notes

- ⁽¹⁾ Test over 10 holes - 9 intervals P₀ 12 x 9 = 114.3 ± 0.5
- ⁽²⁾ Parallelism, < 0.5 mm
- ⁽³⁾ Thickness of carrier tape: 0.55 mm ± 0.1 mm

DIMENSIONS OF BOX (FOR LOOSE PACKAGING) - AC01 DK/EK, AC03 DK/EK, AC04 DK/EK, AC05 DK/EK, AC07 DK/EK, HPR, PR01, PR02, PR03

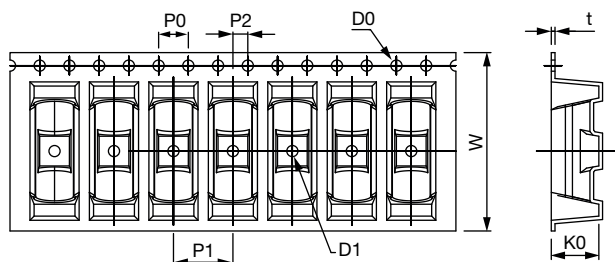


Dimensions of box

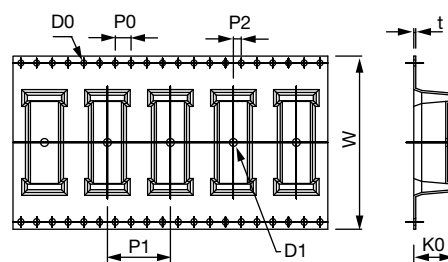
DIMENSIONS in millimeters - resistor type, quantities and dimensions of the packaging in box				
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS		
		LOOSE IN BOX		
		M (mm)	N (mm)	P (mm)
AC01 DK/EK	500	55	80	260
AC03 DK/EK	500	54	82	224
AC04 DK/EK	500	54	82	224
AC05 DK/EK	500	54	82	224
AC07 DK/EK	250	90	118	265
HPR 1/2	1000	105	70	205
HPR1	500	105	70	205
PR01 formed	1000	105	70	205
PR02 formed	1000	105	70	205
PR03 formed	500	105	70	205

DIMENSIONS OF BLISTER TAPE

AC01 WSZ, AC01-AT WSZ, AC03 WSZ, AC03-AT WSZ,
AC03-NI WSZ, AC01-CS WSZ, AC03-CS WSZ



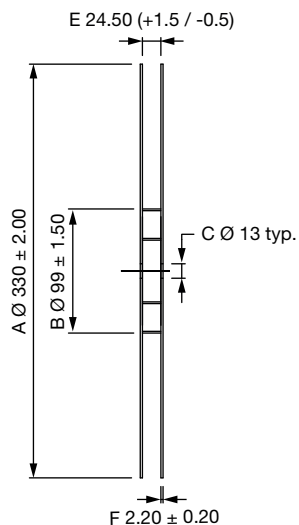
AC05 WSZ, AC05-AT WSZ, AC05-NI WSZ



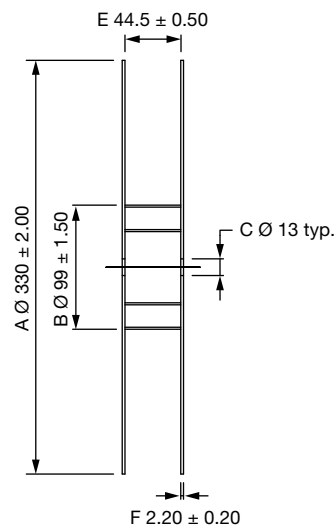
DIMENSIONS in millimeters - resistor type, quantities, and packaging dimensions for blister tape									
PRODUCT TYPE	QUANTITY PER REEL	PACKAGING DIMENSIONS							
		P0	P1	P2	D0	D1	W	K0	t
AC01 WSZ	1250	4.00 ± 0.10	8.00 ± 0.10	2.00 ± 0.10	1.50 +0.10, -0.0	1.50 ± 0.10	24.00 ± 0.30	6.05 ± 0.10	0.50 ± 0.05
AC01-AT WSZ									
AC01-CS WSZ, AC03 WSZ, AC03-CS WSZ	1250	4.00 ± 0.10	8.00 ± 0.10	2.00 ± 0.10	1.50 +0.10, -0.0	1.50 +0.10 / -0.0	24.00 ± 0.30	6.40 ± 0.10	0.50 ± 0.05
AC03-AT WSZ									
AC03-NI WSZ									
AC05 WSZ	350	4.00 ± 0.10	16.00 ± 0.10	2.00 ± 0.15	1.50 +0.10, -0.0	2.00 +0.10, -0.0	44.00 ± 0.30	10.10 ± 0.10	0.50 ± 0.05
AC05-AT WSZ									
AC05-NI WSZ									

DIMENSIONS OF BLISTER TAPE PLASTIC REEL

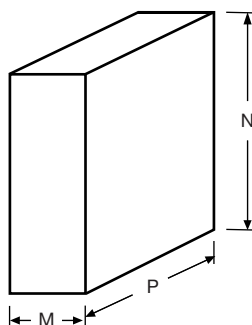
AC01 WSZ, AC01-AT WSZ, AC03 WSZ, AC03-AT WSZ,
AC03-NI WSZ, AC01-CS WSZ, AC03-CS WSZ



AC05 WSZ, AC05-AT WSZ, AC05-NI WSZ



DIMENSIONS OF OUTER PACKAGING BOX FOR BLISTER TAPED REEL



PRODUCT TYPE	QUANTITY PER REEL	PACKAGING DIMENSIONS		
		M (mm)	N (mm)	P (mm)
AC01 WSZ, AC01-CS WSZ	1250	35	350	340
AC01-AT WSZ				
AC03 WSZ, AC03-CS WSZ				
AC03-AT WSZ				
AC03-NI WSZ	350	55	350	340
AC05 WSZ				
AC05-AT WSZ				
AC05-NI WSZ				