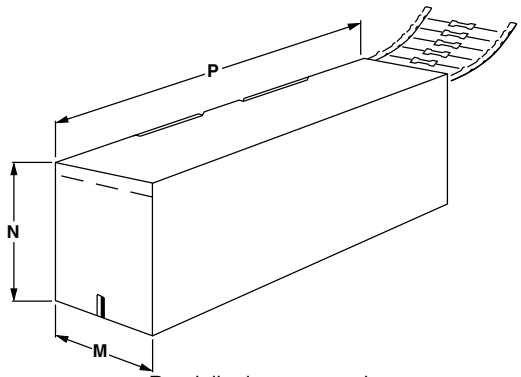
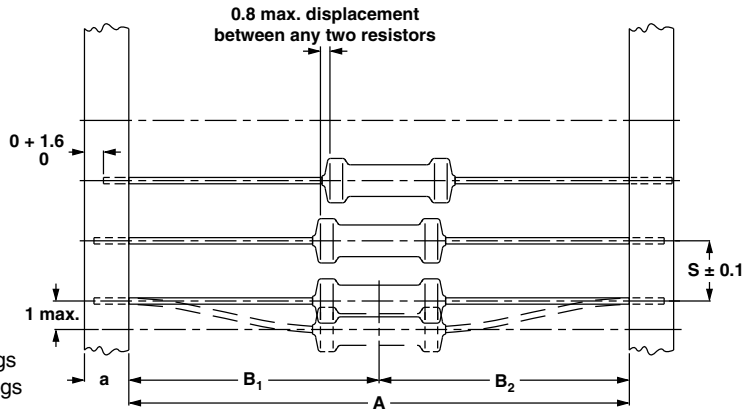
Linear Leaded Resistors

DIMENSIONS OF AMMOPACK



Bandolier in ammopack



Axial style on tape

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

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	$\lvert B_1 - B_2 \rvert$	S	M	N	P
AC01	1000	6 ± 0.5	63 ± 2.0	± 1.2	10	85	70	260
AC03	500	6 ± 0.5	63 ± 2.0	± 1.2	10	85	58	260
AC04 (1)	500	6 ± 0.5	63 ± 2.0	± 1.2	10	85	70	260
						85	58	260
AC05	500	6 ± 0.5	63 ± 2.0	± 1.2	10	86	118	270
AC07	500	6 ± 0.5	74 ± 2.0	± 1.2	10	90	118	265
AC10	250	6 ± 0.5	89 ± 4.0	± 1.2	10	105	105	265
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
						77	82	324
MBE/SMA 0414	1000	6 ± 0.5	63 ± 2.0	± 1.2	5	47	84	374
MRS16	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
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	55	330
MRS25 (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
						77	82	324

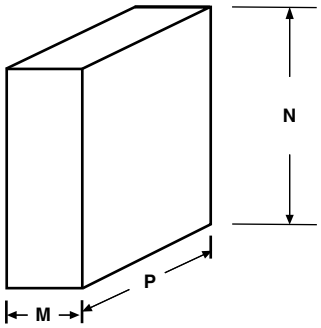
Notes

(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 ammopack								
PRODUCT TYPE	**QUANTITY**	**PACKAGING DIMENSIONS**						
		AXIAL TAPED ON BANDOLIER				**AMMOPACK**		
		a	**A**	**$\lvert B_1 - B_2 \rvert$**	**S**	**M**	**N**	**P**
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
SFR16S (1)	1000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	28	262
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	73	270
SFR25 (1)	1000	6 ± 0.5	52 +2 / -1	± 1.2	5	78	31	260
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	98	270
SFR25H (1)	1000	6 ± 0.5	52 +2 / -1	± 1.2	5	78	31	260
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	98	270
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
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	75	55	330
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
	5000	6 ± 0.5	52 +2 / -1	± 1.2	5	77	82	324
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

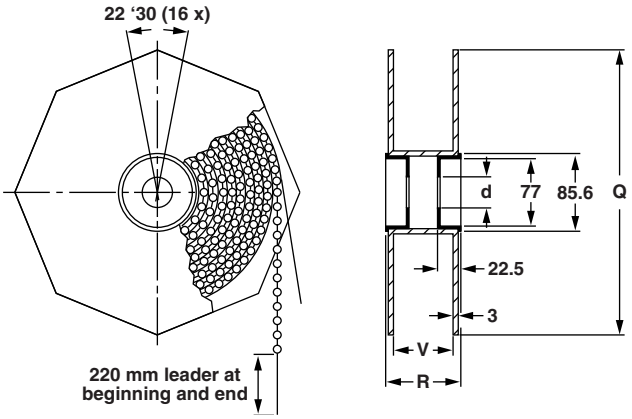
Note
(1) Packing of 1000 pieces (packing code A1) is only available with 5 % tolerance products

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)**
SFR16S	5000	92	278	278
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
PR02L	5000	100	375	375
PR2.5L	2500	100	375	375
PR2.5LS	2500	100	375	375
MBB0207	5000	93	300	298
MRS25	5000	93	300	298
WR4	2500	105	315	305



Note
- Reel packing does not have outer packaging box for Sokolov, CZ produced parts

DIMENSIONS OF REEL in millimeters



Note

- Dimension d is mounting bush inner diameter

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)**
MBA/SMA 0204	5000	242	70	80	26.40
MBA/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	5000	298	75	86	30.0
PR02	5000	367	75	86	30.0
PR02L	5000	367	80	91	30.0
PR2.5L, PR2.5LS	2500	367	80	91	30.0
SFR16S	5000	265	75	86	30.0
SFR25	5000	298	75	86	30.0
SFR25H	5000	298	75	86	30.0
UXA 0204	1000	242	70	80	26.40
UXB 0207 MPR24	1000	242	70	80	26.40
	5000	315	76	86	26.40
UXE 0414	1000	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

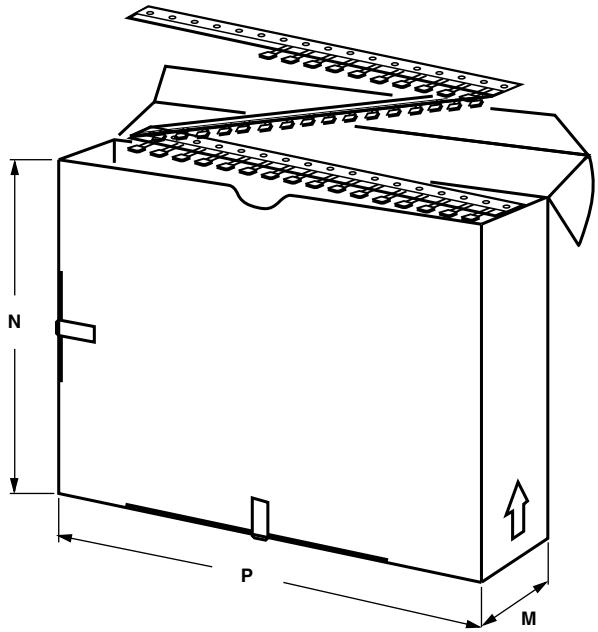
Note

(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**
MBB/SMA 0207	4000	355	45	50
PR02	2000	367	43	53

DIMENSIONS OF AMMOPACK (RADIAL TAPED) in millimeters

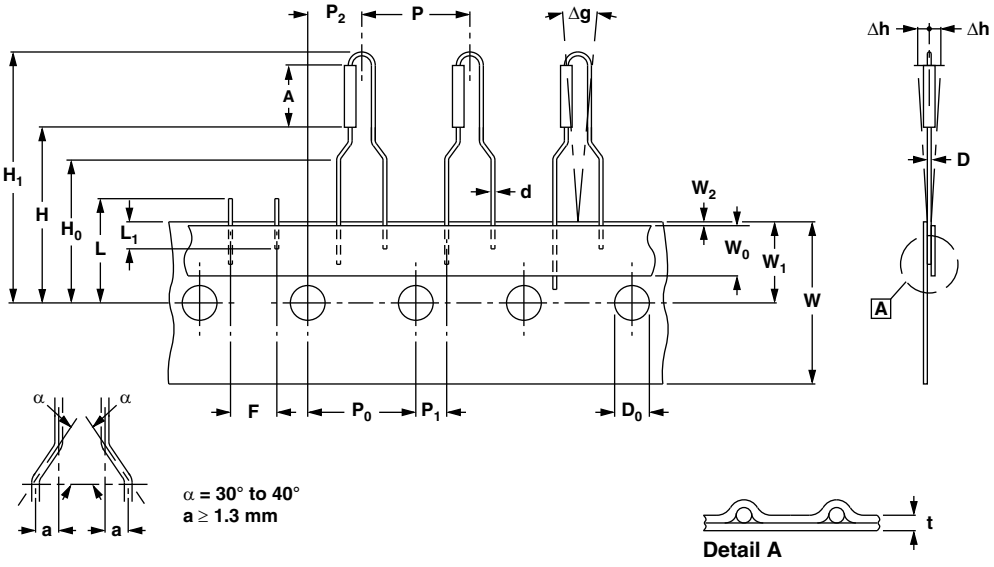


Dimensions of ammopack (radial taped)

DIMENSIONS OF AMMOPACK (RADIAL TAPED)

DIMENSIONS in millimeters - Resistor type, quantities and dimensions of the packaging for radial taped in ammopack				
PRODUCT TYPE	**QUANTITY**	**PACKAGING DIMENSIONS**		
		AMMOPACK		
		M	**N**	**P**
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)

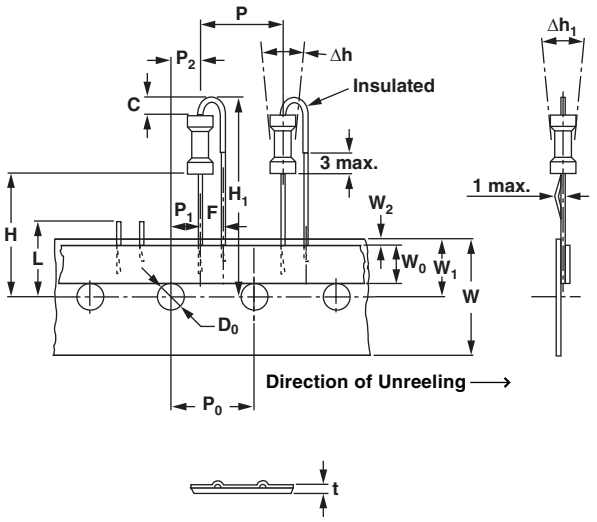


Bandolier for types with radial leads

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 snipped lead		11.0	-
L_1	Minimum lead wire (tape portion) shortest lead		2.5	-

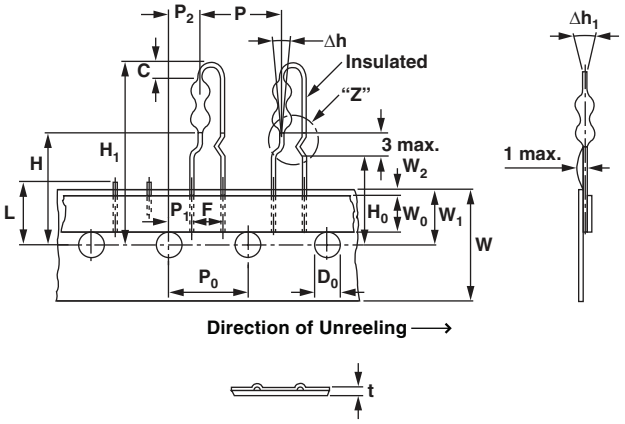
MBB/SMA 0207 WITH RADIAL TAPED ON REEL

LEAD SPACING (UB) 2.5 mm, SIZE 0207

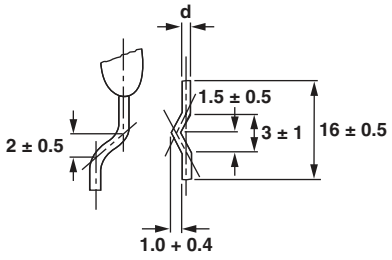


DIMENSIONS in millimeters			TOL.
Lead Ø	d	0.6	-
Pitch of components	P	12.7	± 1.0
Pitch of sprocket holes (1)	P_0	12.7	± 0.3
Distance between hole center and lead center	P_1	5.1	± 0.7
Distance between hole center and resistor center	P_2	5.1	± 0.7
Lead Spacing	F	2.5	+0.6, -0.1
Angle of insertion	Δh	1.3 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.	-

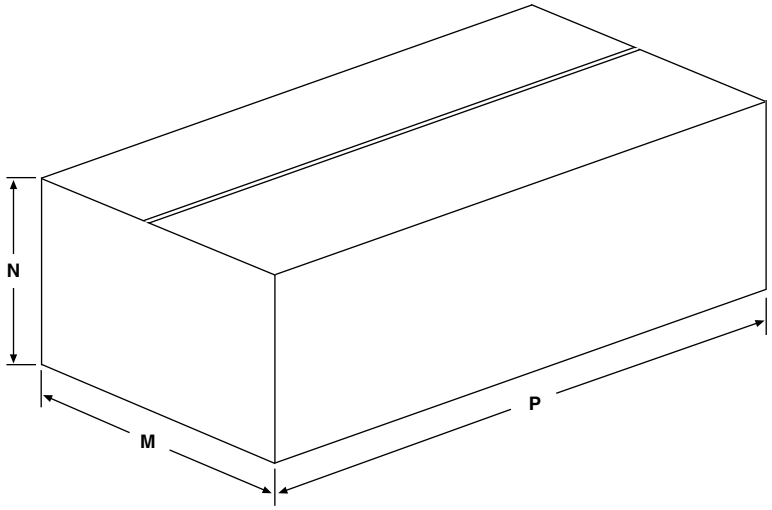
Notes

(1) Test over 10 holes - 9 intervals P_0 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) - 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)**
HPR 1/2	1000	105	70	205
HPR1, HPR2	500	105	70	205
PR01 formed	1000	105	70	205
PR02 formed	1000	105	70	205
PR03 formed	500	105	70	205