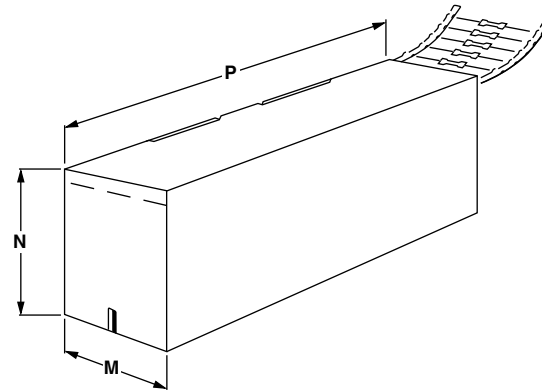
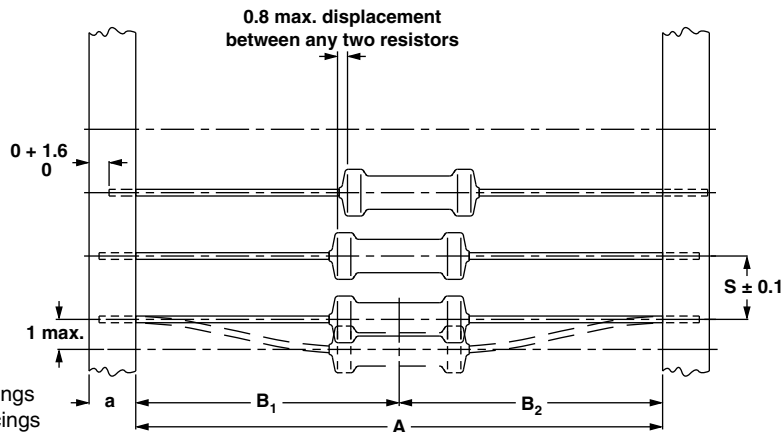


Linear Leaded Resistors

DIMENSIONS OF AMMOPACK



Bandolier in ammpack



Axial style on tape

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

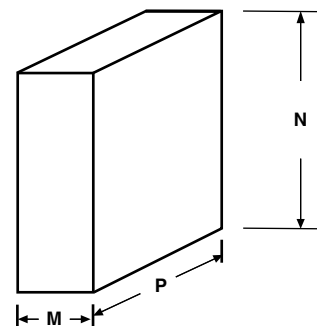
DIMENSIONS in millimeters - Resistor type, quantities and packaging dimensions for axial taped in ammpack								
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS						
		AXIAL TAPED ON BANDOLIER				AMMOPACK		
		a	A	$ B_1 - B_2 $	S	M	N	P
SFR16S	1000	6 ± 0.5	52.5 ± 1.5	± 1.2	5	75	30	140
	5000	6 ± 0.5	52.5 ± 1.5	± 1.2	5	75	73	270
SFR25	1000	6 ± 0.5	$52 + 1.5/- 0$	± 1.2	5	82	28	262
	5000	6 ± 0.5	$52 + 1.5/- 0$	± 1.2	5	78	98	270
SFR25H	1000	6 ± 0.5	$52 + 1.5/- 0$	± 1.2	5	82	28	262
	5000	6 ± 0.5	$52 + 1.5/- 0$	± 1.2	5	78	98	270
MBA/SMA 0204	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	75	40	187
	5000	6 ± 0.5	53 ± 2.0	± 1.2	5	75	55	330
MBB/SMA 0207	1000	6 ± 0.5	53 ± 1.0	± 1.2	5	75	40	187
	5000	6 ± 0.5	53 ± 1.0	± 1.2	5	75	85	330
MBE/SMA 0414	1000	6 ± 0.5	63 ± 2.0	± 1.2	5	45	88	378
UXA 0204	100	6 ± 0.5	53 ± 2.0	± 1.2	5	75	40	187
	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	75	40	187
UXB 0207 MPR24	100	6 ± 0.5	53 ± 2.0	± 1.2	5	75	40	187
	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	75	40	187
UXE 0414	100	6 ± 0.5	63 ± 2.0	± 1.2	5	45	88	378
	1000	6 ± 0.5	63 ± 2.0	± 1.2	5	45	88	378

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
NFR25	1000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	82	28	262
	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	78	98	270
NFR25H	1000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	82	28	262
	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	78	98	270
VR25, HVR25	1000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	82	28	262
	2000	6 ± 0.5	26 + 1.5/- 0	± 1.2	5	50	50	255
	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	76	120	260
VR37, HVR37	1000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	76	60	262
VR68	500	5 ± 0.5	66.7 ± 1.5	± 1.2	10	85	112	258
LSR37	1000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	76	60	262
CBB 0207	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	75	40	187
	5000	6 ± 0.5	53 ± 2.0	± 1.2	5	75	85	330
MBA/SMA 0204 HF	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	75	30	187
	5000	6 ± 0.5	53 ± 2.0	± 1.2	5	75	55	330
PR01	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	97	28	262
	5000	6 ± 0.5	53 ± 2.0	± 1.2	5	76	120	260
PR02	1000	6 ± 0.5	52 ± 2.0	± 1.2	5	76	60	262
PR03	500	6 ± 0.5	63 ± 2.0	± 1.2	10	85	50	259
AC01	1000	6 ± 0.5	63 ± 2.0	± 1.2	10	80	55	260
AC03	500	6 ± 0.5	63 ± 2.0	± 1.2	10	80	55	260
AC04	500	6 ± 0.5	63 ± 2.0	± 1.2	10	80	70	260
AC05	500	6 ± 0.5	63 ± 2.0	± 1.2	10	80	105	265
AC07	500	6 ± 0.5	74 ± 2.0	± 1.2	10	90	105	265
AC10	500	6 ± 0.5	89 ± 4	± 1.2	10	105	105	265
PAC01	1000	6 ± 0.5	63 ± 1	± 1.2	10	80	55	260
PAC02	500	6 ± 0.5	63 ± 1	± 1.2	10	80	55	260
PAC03	500	6 ± 0.5	63 ± 1	± 1.2	10	80	70	260
PAC04	500	6 ± 0.5	63 ± 1	± 1.2	10	80	105	265
PAC05	500	6 ± 0.5	71 ± 1	± 1.2	10	90	105	265
PAC06	500	6 ± 0.5	71 ± 1	± 1.2	10	90	105	265
AC01RT ⁽¹⁾	2000	6 ± 0.5	71 ± 1	± 1.2	10	147	53	334

Note

⁽¹⁾ Radial taped

DIMENSIONS OF REEL PACKAGING (AXIAL TAPED)				
PRODUCT TYPE	QUANTITY	OUTER PACKAGING DIMENSIONS (for Bandolier on reel)		
		M (mm)	N (mm)	P (mm)
SFR16S	5000	92	278	278
SFR25	5000	92	311	311
SFR25H	5000	92	311	311
NFR25	5000	92	311	311
NFR25H	5000	92	311	311
VR25, HVR25	5000	92	311	311
VR37, HVR37, LSR37	5000	92	375	375
VR68	750	110	320	320
PR01	5000	92	311	311
PR02	5000	92	375	375

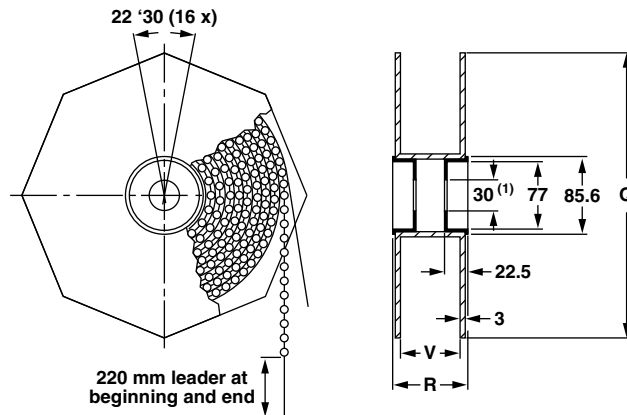


Dimensions of outer packaging (for axial taped bandolier on reel)

Note

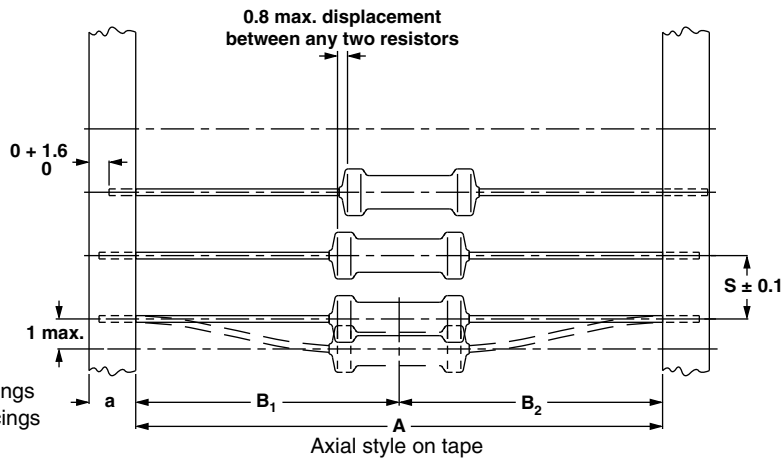
- For MBA/SMA 0204, MBB/SMA 0207, MBE/SMA 0414 reel packaging is without outer box packaging

DIMENSIONS OF REEL in millimeters



Note

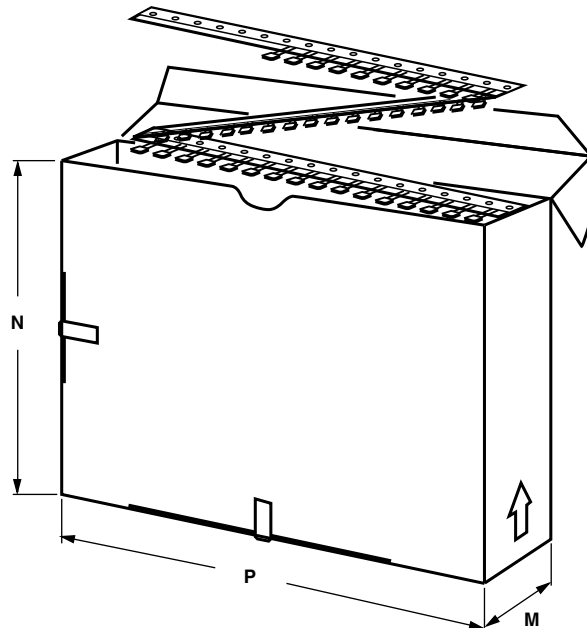
(1) Dimensions of inner packaging (for bandolier on reel)



Maximum 1 mm per 10 spacings
Maximum 0.5 mm per 5 spacings

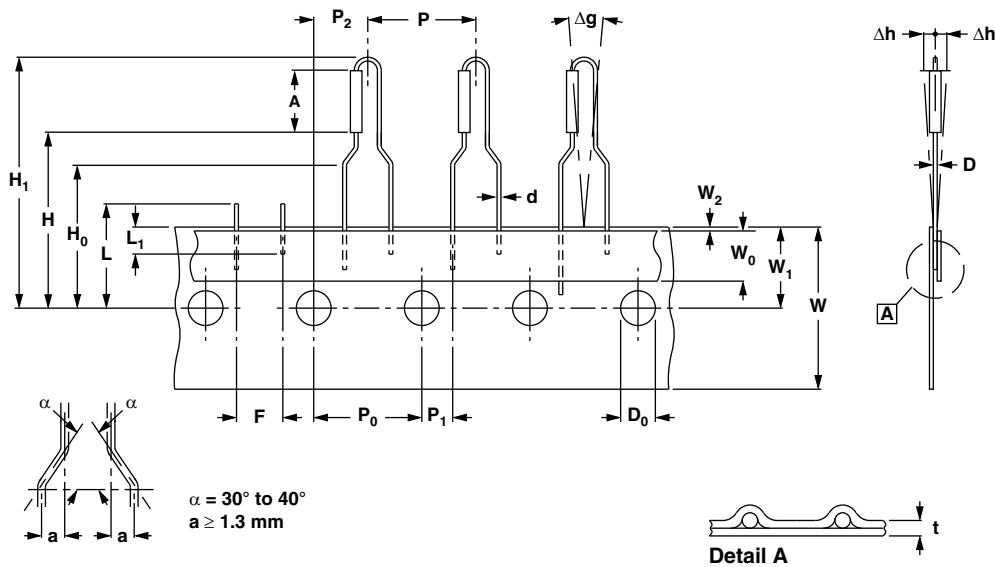
DIMENSIONS in millimeters - Resistor type, quantities and packaging dimensions for axial taped on reel								
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS						
		AXIAL TAPED ON BANDOLIERS				REEL		
		a	A	B ₁ - B ₂	S	Q	V	R
SFR16S	5000	6 ± 0.5	52.5 ± 1.5	± 1.2	5	265	75	86
SFR25	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	305	75	86
SFR25H	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	305	75	86
MBA/SMA 0204	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	315	70	80
MBA/SMA 0204	5000	6 ± 0.5	53 ± 2.0	± 1.2	5	315	70	80
MBB/SMA 0207	1000	6 ± 0.5	53 ± 1.0	± 1.2	5	315	70	80
MBB/SMA 0207	5000	6 ± 0.5	53 ± 1.0	± 1.2	5	315	70	80
MBE/SMA 0414	2500	6 ± 0.5	63 ± 2.0	± 1.2	5	315	80	90
UXA 0204	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	315	70	80
UXA 0204	5000	6 ± 0.5	53 ± 2.0	± 1.2	5	315	70	80
UXB 0207 MPR24	1000	6 ± 0.5	53 ± 2.0	± 1.2	5	315	70	80
UXB 0207 MPR24	5000	6 ± 0.5	53 ± 2.0	± 1.2	5	315	70	80
NFR25	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	305	75	86
NFR25H	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	305	75	86
VR25	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	305	75	86
VR37	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	356	75	86
VR68	750	6 ± 0.5	66.7 ± 1.5	± 1.2	10	305	75	86
LSR37	5000	6 ± 0.5	52 + 1.5/- 0	± 1.2	5	356	75	86
PR01	5000	6 ± 0.5	52 ± 2.0	± 1.2	5	305	75	86
PR02	5000	6 ± 0.5	52 ± 2.0	± 1.2	5	356	75	86

DIMENSIONS OF AMMOPACK (RADIAL TAPED) in millimeters



Dimensions of ammpack (radial taped)

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



Bandolier for types with radial leads

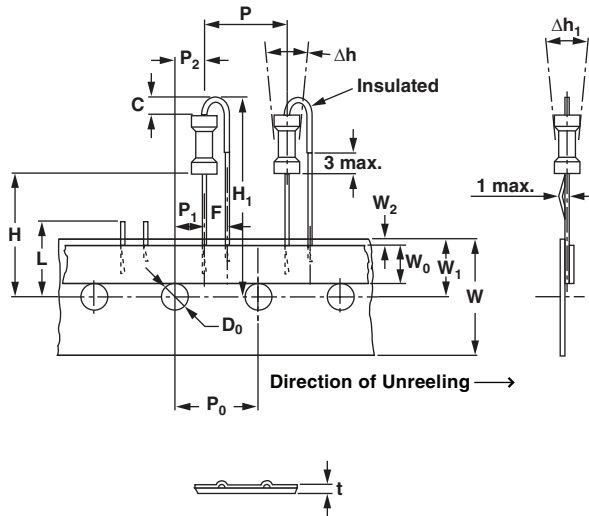


RADIAL PRODUCT DIMENSIONS (TAPED)					
SYMBOL	PARAMETER	TYPE	VALUE	TOLERANCE	UNIT
D	Maximum body diameter	See detailed product specification			mm
A	Maximum body length				mm
d	Lead wire diameter				mm
H ₁	Component height	SFR25	29	max.	mm
		NFR25	29	max.	mm
		NFR25H	29	max.	mm
		PR01	29	max.	mm
		VR25	29	max.	mm
		PR02	29	± 3.0	mm
		MBB/SMA 0207	28	max.	mm

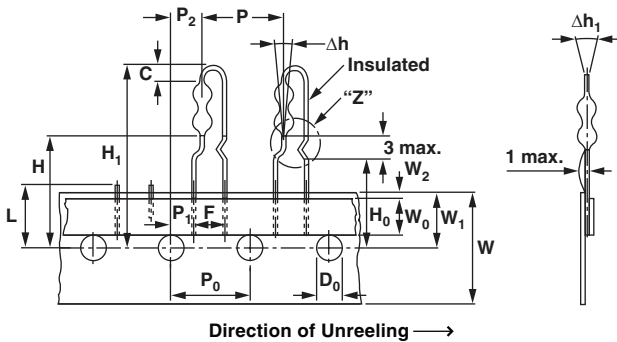
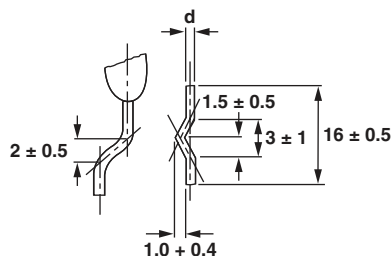
DIMENSIONS OF AMMOPACK (RADIAL TAPED)

DIMENSIONS in millimeters - Resistor type, quantities and dimensions of the packaging for radial taped in ammpack					
PRODUCT TYPE	QUANTITY	PACKAGING DIMENSIONS			
		AMMOPACK			P
		M	N		
SFR25	4000	45	262		330
NFR25	4000	45	262		330
NFR25H	4000	45	262		330
PR01	4000	45	262		330
VR25	4000	45	262		330
PR02	3000	45	262		330
MBB/SMA 0207	4000	45	262		330

TAPE DIMENSIONS					
SYMBOL	PARAMETER	VALUE	TOLERANCE	UNIT	
P	Pitch of components	12.7	± 1.0	mm	
P ₀	Feed-hole pitch	12.7	± 0.2	mm	
	Cumulative pitch error per 20 spacings		1.0	mm	
P ₁	Feed-hole centre to lead at topside at the tape	3.85	± 0.5	mm	
P ₂	Feed-hole center to body center	6.35	± 1.0	mm	
F	Lead-to-lead distance	4.8	+ 0.7/- 0	mm	
Δh	Component alignment	0	± 1.2	mm	
Δg	Component alignment	0	± 3	deg	
W	Tape width	18.0	± 0.5	mm	
W ₀	Minimum hold down tape width	5.5	-	mm	
W ₁	Hole position	9.0	± 0.5	mm	
W ₂	Maximum hold down tape position	0.5	-	mm	
H ₀	Lead wire clinch height	16.5	± 0.5	mm	
H	Height of component from tape center	19.5	± 1	mm	
D ₀	Feed-hole diameter	4.0	± 0.2	mm	
t	Total tape thickness	0.4	- 0/+ 0.5	mm	
L	Maximum length of snapped lead	11.0	-	mm	
L ₁	Minimum lead wire (tape portion) shortest lead	2.5	-	mm	

MBB/SMA 0207 WITH RADIAL TAPED ON REEL
LEAD SPACING (UB) 2.5 mm, SIZE 0207


DIMENSIONS in millimeters			TOL.
Lead \varnothing	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 \varnothing	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 \varnothing	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 \varnothing	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.	-

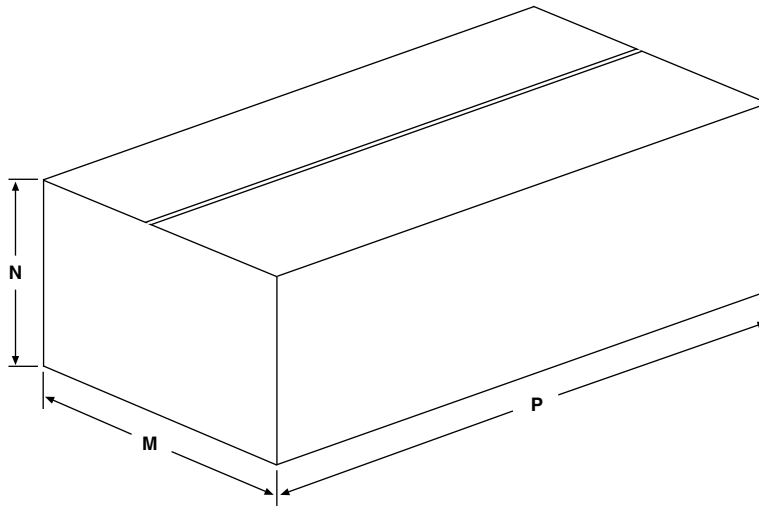
Notes

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

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

DIMENSIONS OF BOX (FOR LOOSE PACKAGING) in millimeters



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)
PR01 formed	1000	105	70	205
PR02 formed	500 or 1000	105	70	205
PR03 formed	250 or 500	105	70	205