



Product Specification

Chip Multilayer Diplexer
WiFi 2G/ 5-7G

for 1164-2690 / 5150-7125 MHz

size : 1.0x0.5mm

P/N : LFD152G45MUAF201



Part Number : LFD152G45MUAUF201

1. General information

Operating Temperature	-40 ~ +85 °C
Power Capacity	1W 50Ω Load
RoHS compliance	YES (RoHs-Y)
MSL	1

2. Electrical Characteristics (at -40 ~ +85 °C)

■ Low Band

Item		Frequency (MHz)	SPEC			Unit
			Min.	Typ.(+25°C)	Max.	
Insertion Loss	at +25°C	1164.00 ~ 1610.00	-	0.27	0.45	dB
	at -40~+85°C	1164.00 ~ 1610.00	-	-	0.55	dB
	at +25°C	2400.00 ~ 2500.00	-	0.42	0.65	dB
	at -40~+85°C	2400.00 ~ 2500.00	-	-	0.75	dB
	at +25°C	2496.00 ~ 2690.00	-	0.46	0.80	dB
	at -40~+85°C	2496.00 ~ 2690.00	-	-	0.90	dB
V.S.W.R.		1164.00 ~ 2500.00	-	1.38	1.92	dB
Attenuation (Absolute value)		4800.00 ~ 6000.00	15.00	21.85	-	dB
		5150.00 ~ 7125.00	15.00	21.85	-	dB
		7200.00 ~ 7500.00	20.00	30.32	-	dB



■ High Band

Item		Frequency (MHz)	SPEC			Unit
			Min.	Typ.(+25°C)	Max.	
Insertion Loss	at +25°C	5150.00 ~ 5950.00	-	0.62	0.95	dB
	at -40~+85°C	5150.00 ~ 5950.00	-	-	1.05	dB
	at +25°C	5950.00 ~ 6245.00	-	0.55	0.95	dB
	at -40~+85°C	5950.00 ~ 6245.00	-	-	1.10	dB
	at +25°C	6245.00 ~ 7125.00	-	0.60	0.95	dB
	at -40~+85°C	6245.00 ~ 7125.00	-	-	1.10	dB
V.S.W.R		5150.00 ~ 5950.00	-	1.34	2.10	dB
		5950.00 ~ 6245.00	-	1.34	2.10	dB
		6245.00 ~ 7125.00	-	1.34	2.10	dB
Attenuation (Absolute value)		500.00 ~ 2400.00	24.0	31.2	-	dB
		2400.00 ~ 2500.00	26.0	35.4	-	dB
		2500.00 ~ 2690.00	19.0	29.6	-	dB
		10300.00 ~ 11900.00	9.0	22.6	-	dB
		11900.00 ~ 12490.00	13.5	22.4	-	dB
		12490.00 ~ 14250.00	11.5	21.5	-	dB
	15510.00 ~ 21375.00	8.0	14.4	-	dB	

■ Common

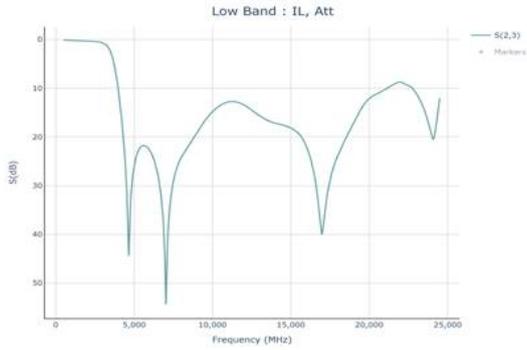
Item		Frequency (MHz)	SPEC			Unit
			Min.	Typ.(+25°C)	Max.	
V.S.W.R		1164.00 ~ 2500.00	-	1.34	1.92	dB
		5150.00 ~ 5950.00	-	1.27	2.10	dB
		5950.00 ~ 6245.00	-	1.30	2.20	dB
		6245.00 ~ 7125.00	-	1.31	2.20	dB

■ Isolation

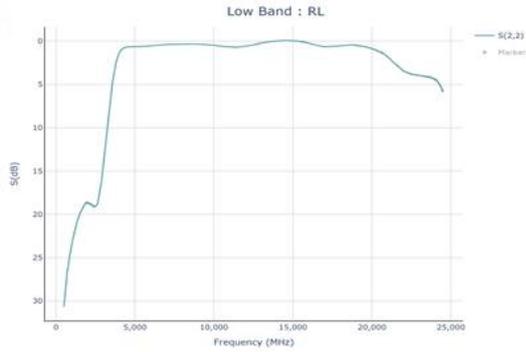
Item		Frequency (MHz)	SPEC			Unit
			Min.	Typ.(+25°C)	Max.	
Isolation LB-HB		2400.00 ~ 2500.00	24.0	33.4	-	dB
		5150.00 ~ 5950.00	16.0	22.4	-	dB
		5950.00 ~ 6245.00	15.5	23.2	-	dB
		6245.00 ~ 7125.00	16.5	24.9	-	dB

■ Impedance

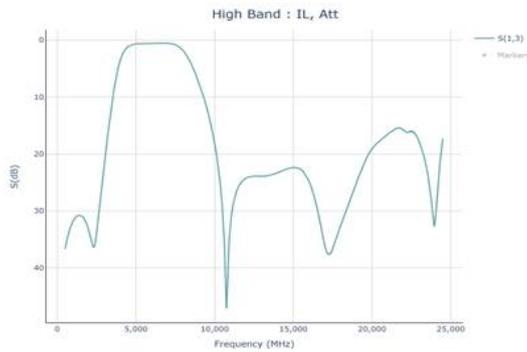
Item		Frequency (MHz)	SPEC			Unit
			Min.	Typ.(+25°C)	Max.	
Impedance Common (Nominal)			-	50	-	Ω
Impedance LB (Nominal)			-	50	-	Ω
Impedance HB (Nominal)			-	50	-	Ω



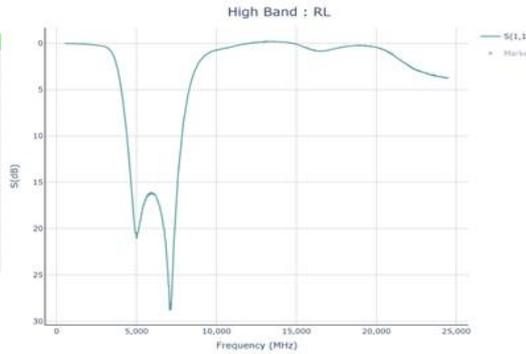
Freq (MHz)	S(dB)
1164	0.209
1610	0.273
2400	0.387
2496	0.406
2500	0.407
2690	0.464
4800	31.987
5150	23.775
6000	22.762
7125	42.199
7200	37.358
7500	29.101



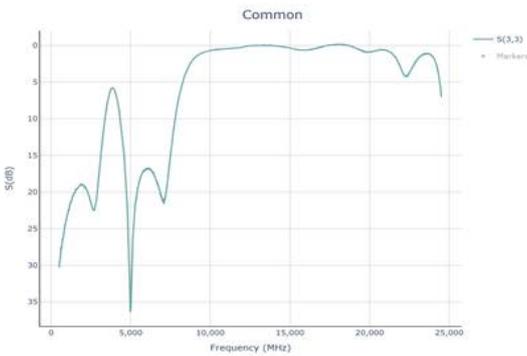
Freq (MHz)	S(dB)
1164	21.958
2500	19.052



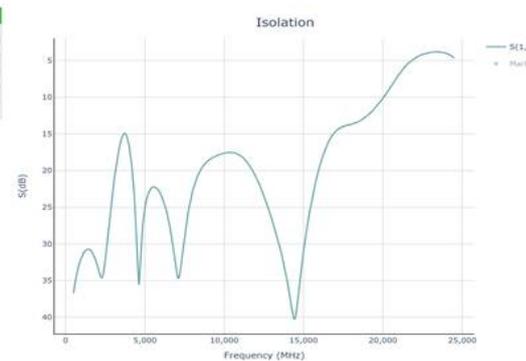
Freq (MHz)	S(dB)
500	36.675
2400	35.808
2500	33.849
2690	28.828
5150	0.661
5950	0.626
6245	0.602
7125	0.614
10300	23.793
11900	24.411
12490	23.904
14250	22.995
15510	22.790
21375	15.802



Freq (MHz)	S(dB)
5150	20.023
5950	16.277
6245	16.601
7125	28.375



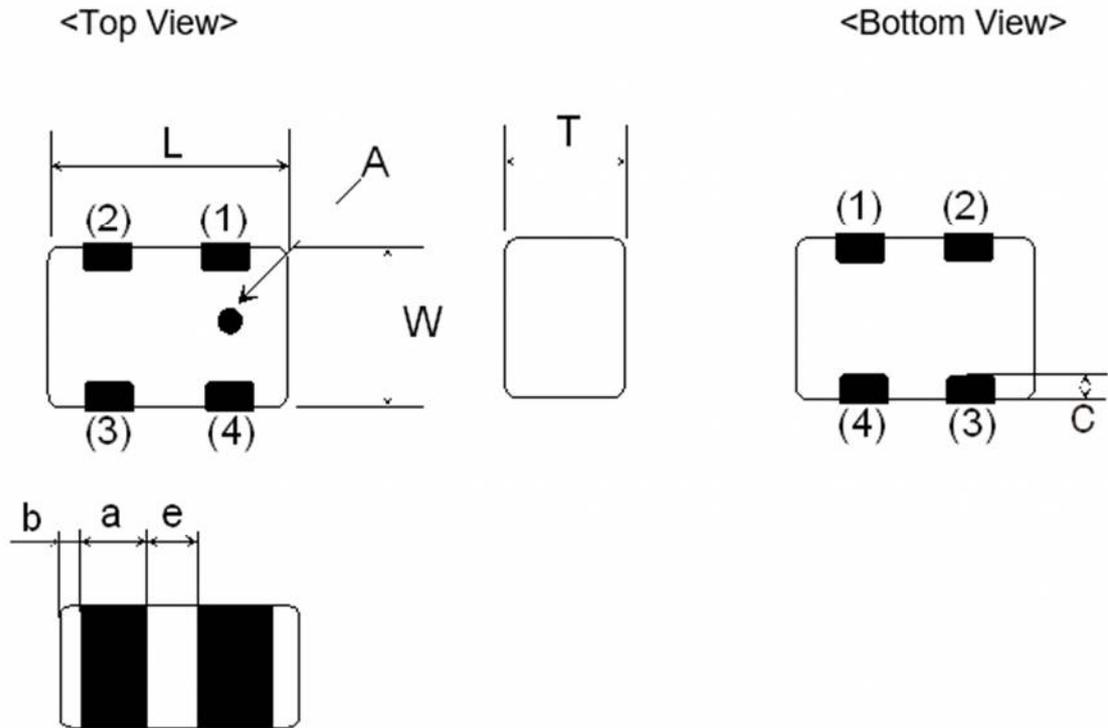
Freq (MHz)	S(dB)
1164	21.703
2500	21.530
5150	25.755
5950	16.785
6245	16.934
7125	20.900



Freq (MHz)	S(dB)
2400	33.846
2500	32.268
5150	23.535
5950	23.046
6245	24.626
7125	34.690



3. Construction, Dimensions & Marking



(in mm)

Mark	Meaning
A	Directional Input Mark

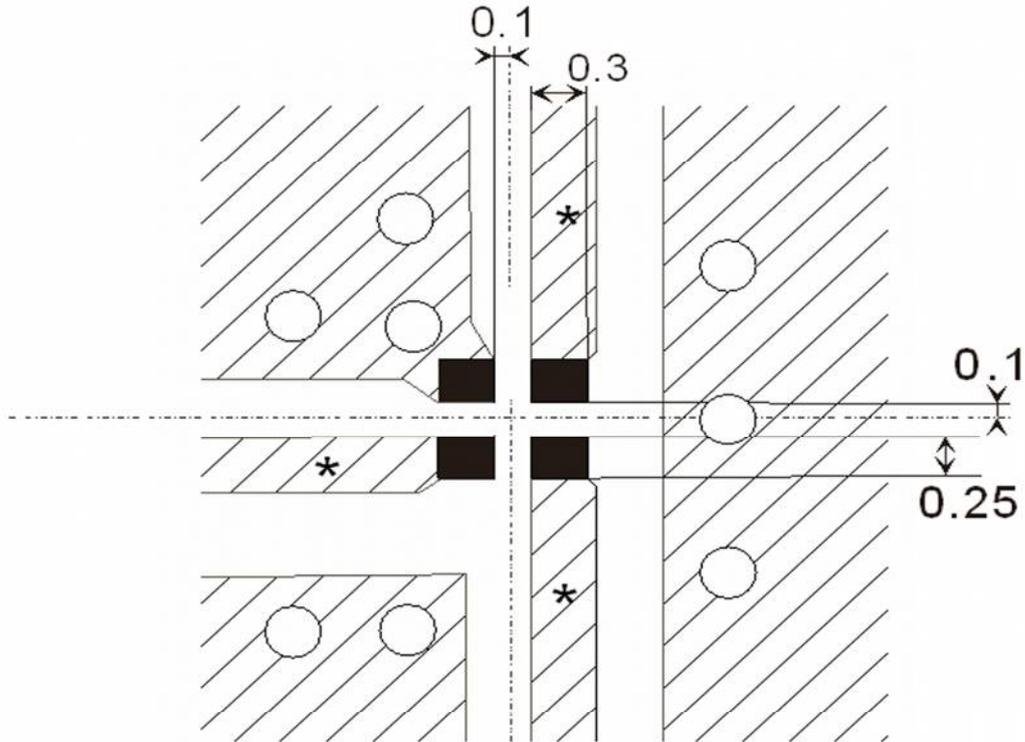
Mark	Dimension	Mark	Dimension
L	1.000+0.050/-0.075	b	0.10 +/- 0.10
W	0.50 +/- 0.05	c	0.12 +/- 0.07
T	0.40 max.	e	0.20 +/- 0.10
a	0.30 +/- 0.10		

TERMINAL CONFIGURATION

Terminal No.	Terminal Name	Terminal No.	Terminal Name
(1)	P3(COM)	(3)	P1(5G)
(2)	GND	(4)	P2(2.4G)



4. Land Pattern



(in mm)

-  Land
-  Solder resist
-  No pattern
Solder resist
-  Through Hole ϕ 0.30

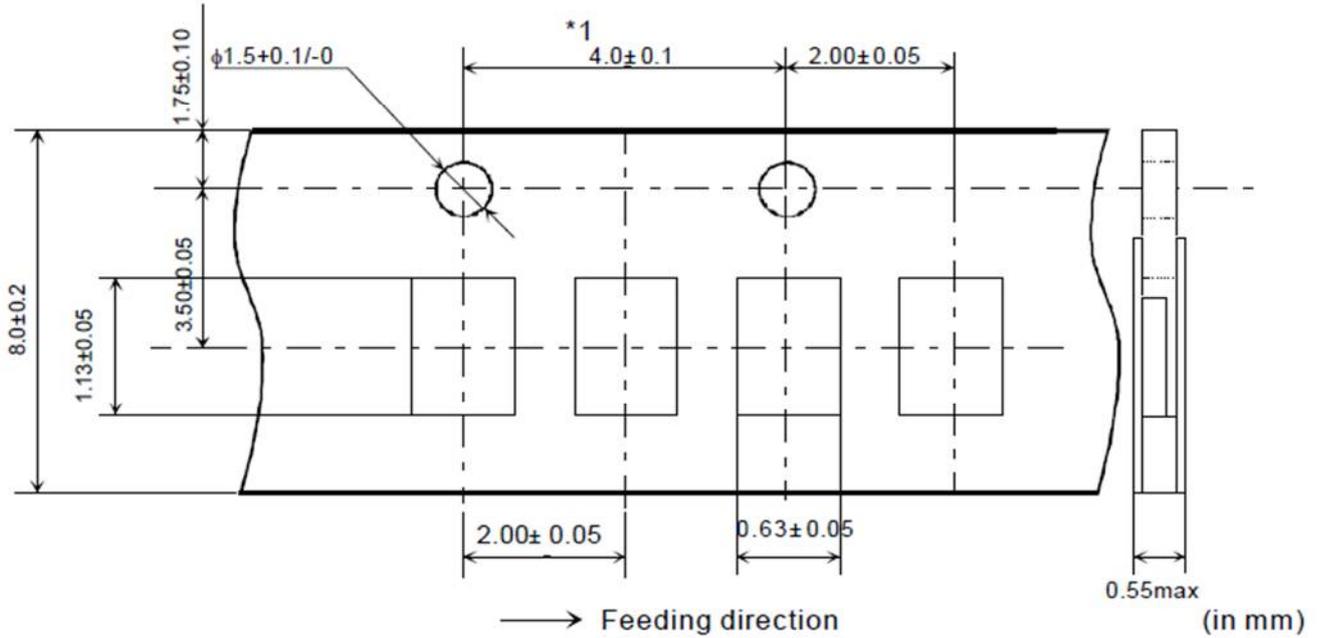
* Line width to be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.



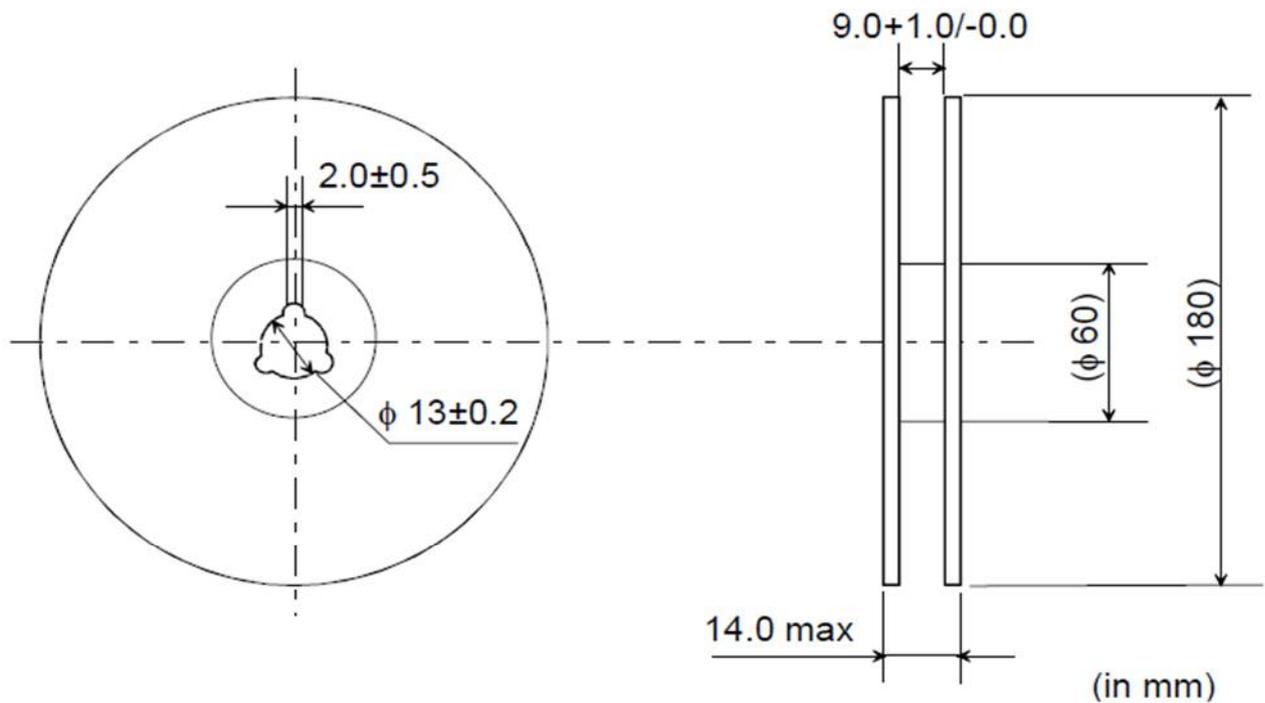
5. Tape and Reel Packing

(1) Dimensions of Tape (Paper tape)

* Cumulative tolerance of max. ± 0.3 every 10 pitches.

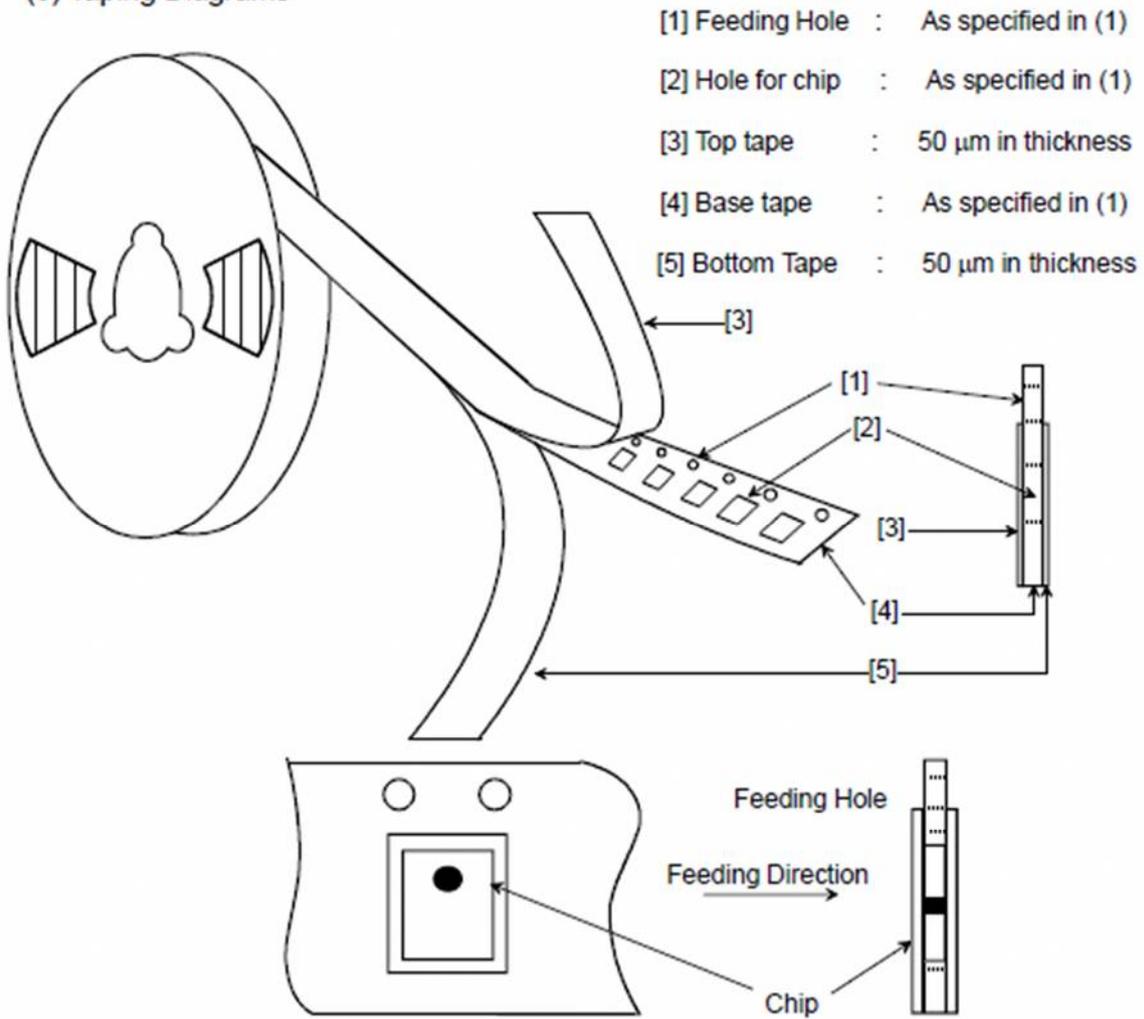


(2) Dimensions of Reel

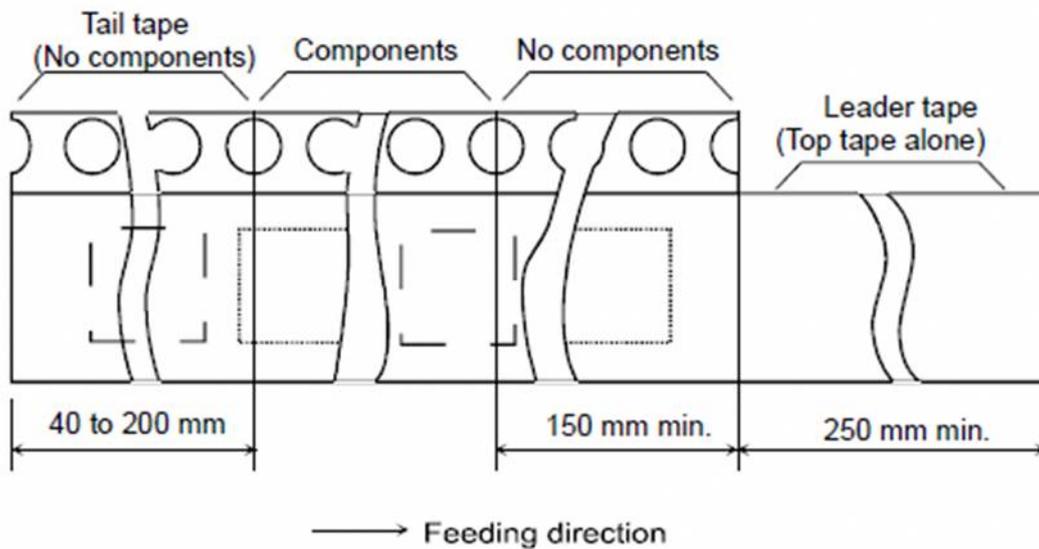




(3) Taping Diagrams



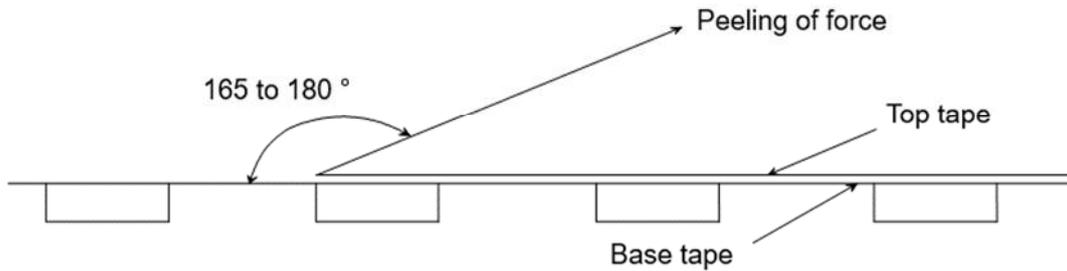
(4) Leader and Tail tape





- (5) The tape for chips are wound clockwise, the feeding holes to the right side as the tape is pulled toward the user.
- (6) The top tape and bottom tape shall not protrude the edges of the tape, and shall not cover sprocket holes.
- (7) The top tape and base tape are not adhered at no components area for 250 mm min.
- (8) Tear off strength against pulling of top tape and bottom tape : 5N min.
- (9) Packaging unit : 10000 pcs. / reel
- (10) Material : Base tapePaper
ReelPlastic
- (11) Peeling of force : in the direction of peeling as shown below.
Peeling speed : 300mm/min \pm 10mm/min

Tape width	Peeling of force (max)
8mm	1.0N





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- improper use of engineering samples.

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Change History

Revision No.	Date	Comment
-	2022/6/27	Initial
A	2025/9/29	Update format