



Product Specification

Chip Multilayer Diplexer WiFi 2G/5-7G

for 617-2690 / 5150-7125 MHz

size : 1.0x0.5mm

P/N : LFD152G45MUBF402



Part Number : LFD152G45MUBF402

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	617.00 ~ 1610.00	-	0.23	0.45	dB
	at -40~+85°C		-	-	0.55	dB
	at +25°C	2400.00 ~ 2500.00	-	0.39	0.65	dB
	at -40~+85°C		-	-	0.75	dB
	at +25°C	2496.00 ~ 2690.00	-	0.45	0.80	dB
	at -40~+85°C		-	-	0.90	dB
V.S.W.R.		617.00 ~ 1610.00	-	1.17	1.93	dB
		2400.00 ~ 2500.00	-	1.31	1.93	dB
		2496.00 ~ 2690.00	-	1.34	1.93	dB
Attenuation (Absolute value)		4800.00 ~ 5000.00	15.0	26.6	-	dB
		5150.00 ~ 7125.00	15.0	21.5	-	dB
		7200.00 ~ 7500.00	20.0	31.6	-	dB



■ High Band

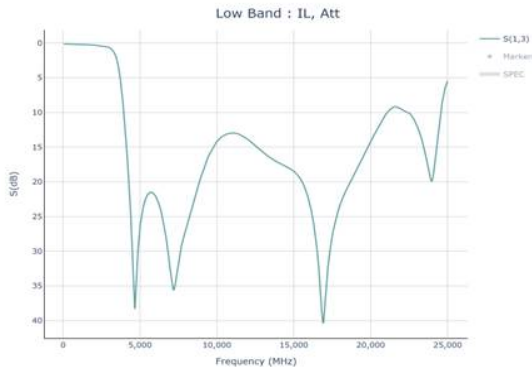
Item		Frequency (MHz)	SPEC			Unit
			Min.	Typ.(+25°C)	Max.	
Insertion Loss	at +25°C	5150.00 ~ 5950.00	-	0.63	0.95	dB
	at -40~+85°C		-	-	1.05	dB
	at +25°C	5950.00 ~ 6245.00	-	0.57	0.95	dB
	at -40~+85°C		-	-	1.10	dB
	at +25°C	6245.00 ~ 7125.00	-	0.59	0.95	dB
	at -40~+85°C		-	-	1.10	dB
V.S.W.R.		5150.00 ~ 5950.00	-	1.49	2.10	dB
		5950.00 ~ 6245.00	-	1.51	2.10	dB
		6245.00 ~ 7125.00	-	1.50	2.10	dB
Attenuation (Absolute value)		500.00 ~ 2400.00	24.0	31.6	-	dB
		2400.00 ~ 2500.00	26.0	35.1	-	dB
		2500.00 ~ 2690.00	19.0	29.3	-	dB
		10300.00 ~ 11900.00	9.0	22.1	-	dB
		11900.00 ~ 12490.00	13.5	21.9	-	dB
		12490.00 ~ 14250.00	11.5	21.3	-	dB
		15510.00 ~ 21375.00	8.0	16.8	-	dB

■ Common

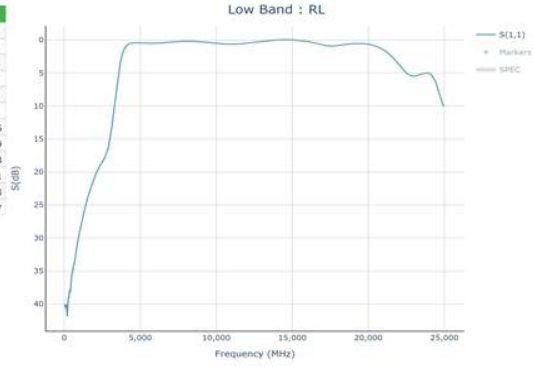
Item		Frequency (MHz)	SPEC			Unit
			Min.	Typ.(+25°C)	Max.	
V.S.W.R.		617.00 ~ 1610.00	-	1.15	1.93	dB
		2400.00 ~ 2500.00	-	1.26	1.93	dB
		2496.00 ~ 2690.00	-	1.26	1.93	dB
		5150.00 ~ 5950.00	-	1.43	2.10	dB
		5950.00 ~ 6245.00	-	1.49	2.21	dB
		6245.00 ~ 7125.00	-	1.49	2.21	dB

■ Isolation

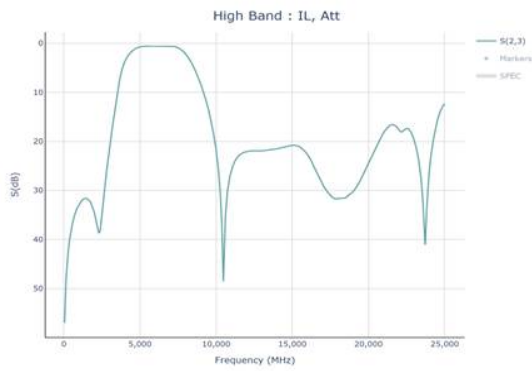
Item		Frequency (MHz)	SPEC			Unit
			Min.	Typ.(+25°C)	Max.	
Isolation LB-HB		617.00 ~ 2500.00	24.0	31.5	-	dB
		5150.00 ~ 5950.00	16.0	22.3	-	dB
		5950.00 ~ 6245.00	15.5	23.0	-	dB
		6245.00 ~ 7125.00	16.5	24.6	-	dB



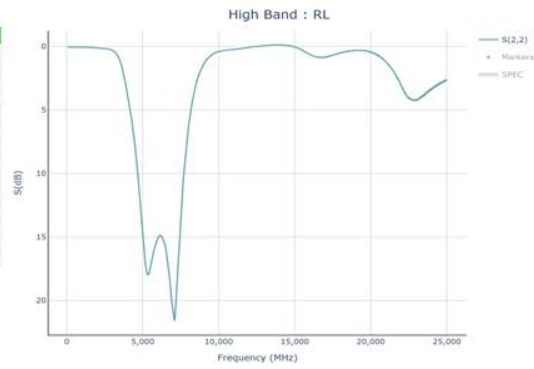
Freq (MHz)	S(dB)
617	0.168
1610	0.234
2400	0.361
2496	0.385
2500	0.387
2690	0.449
4800	32.416
5000	26.609
5150	24.303
7125	35.331
7200	35.538
7500	31.637



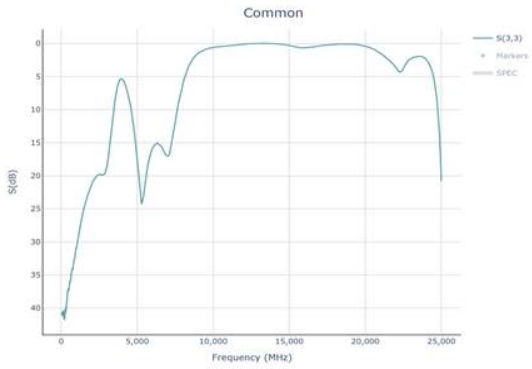
Freq (MHz)	S(dB)
617	34.133
1610	23.379
2400	18.847
2496	18.557
2500	18.534
2690	17.681



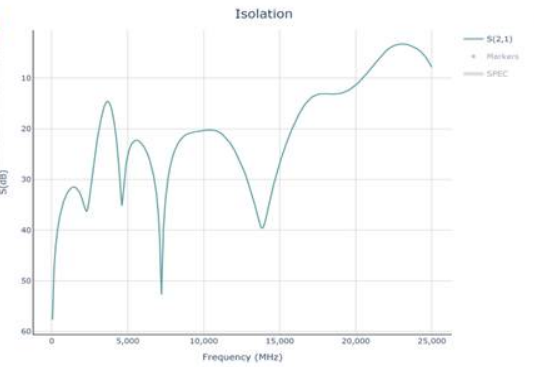
Freq (MHz)	S(dB)
500	37.784
2400	37.796
2500	35.098
2690	29.282
5150	0.626
5950	0.567
6245	0.566
7125	0.594
10300	31.873
11900	22.110
12490	21.935
14250	21.305
15510	21.143
21375	16.777



Freq (MHz)	S(dB)
5150	16.796
5950	15.192
6245	14.937
7125	21.333



Freq (MHz)	S(dB)
617	35.873
1610	23.967
2400	19.910
2496	19.825
2500	19.812
2690	19.854
5150	21.477
5950	16.099
6245	15.202
7125	16.661



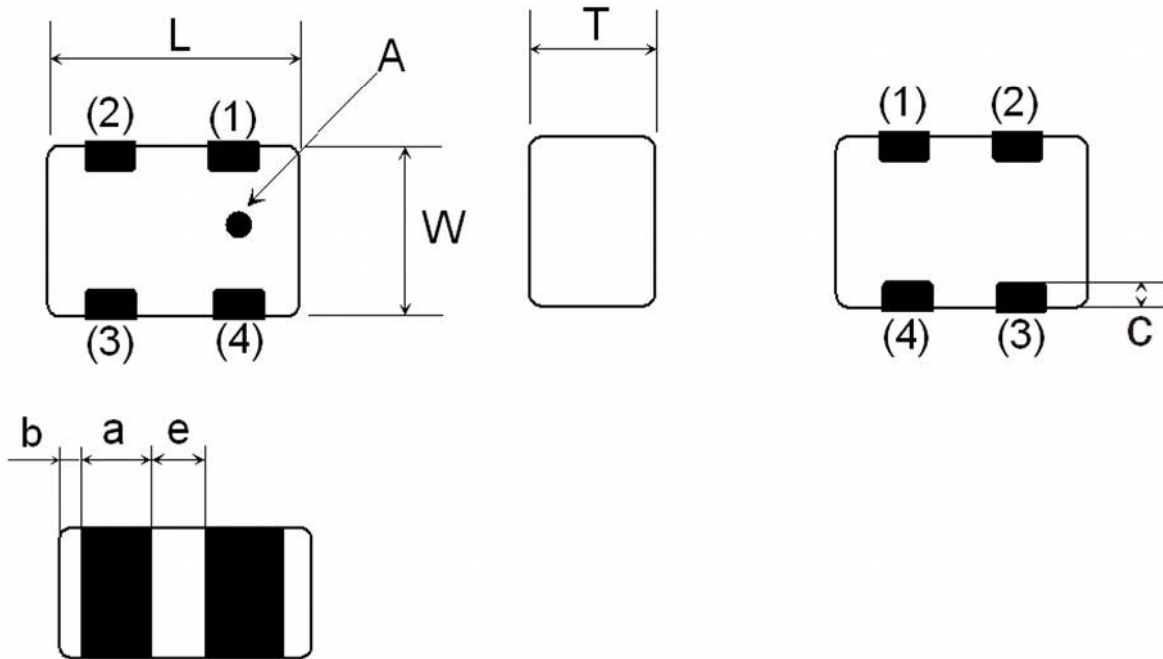
Freq (MHz)	S(dB)
617	36.169
2500	33.233
5150	23.637
5950	23.029
6245	24.557
7125	43.186



3. Construction, Dimensions & Marking

<Top View>

<Bottom View>



(in mm)

Mark	Meaning
A	Directional Input Mark

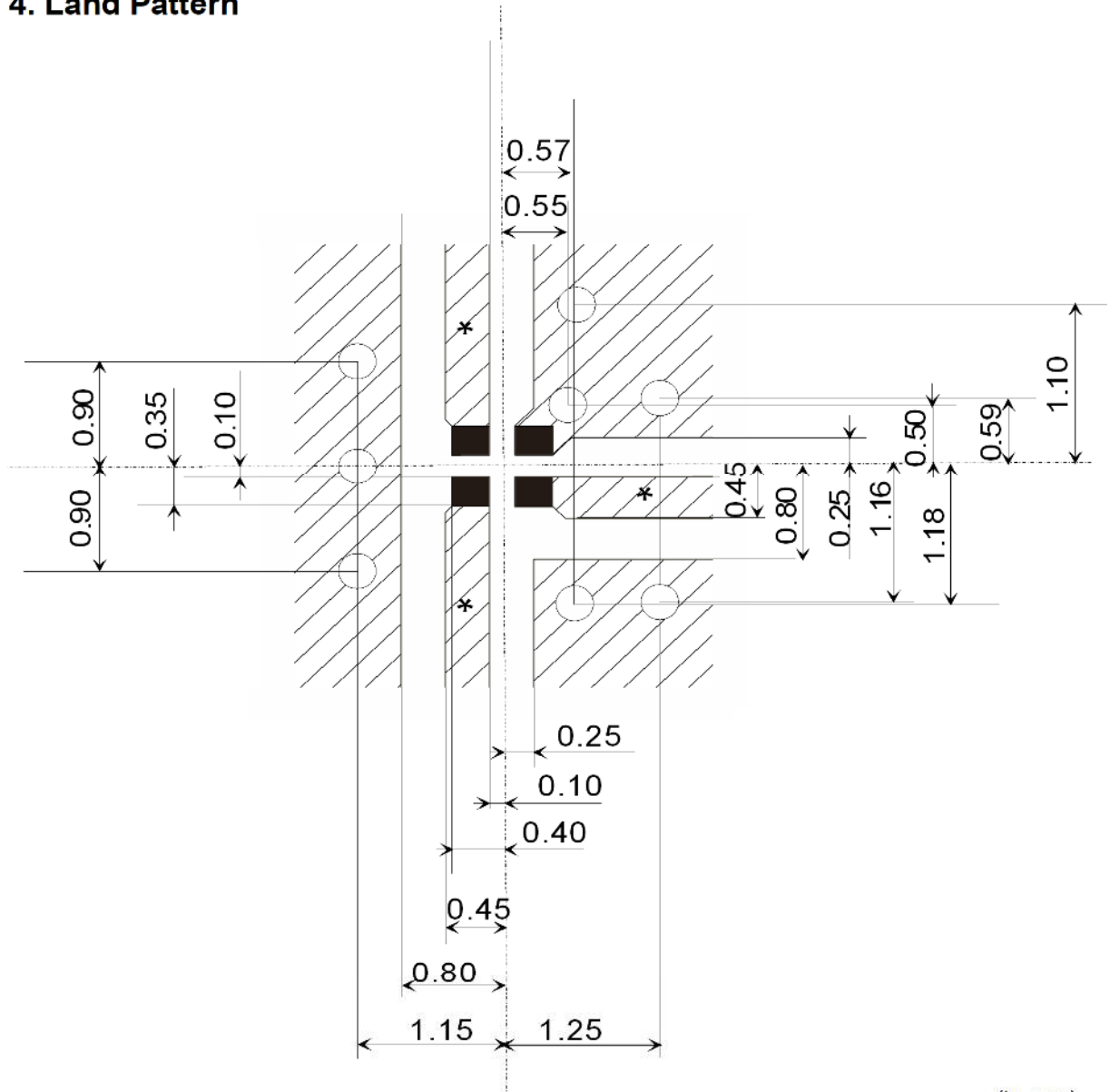
Mark	Dimension	Mark	Dimension
L	1.000+0.050/-0.075	b	0.10+/-0.10
W	0.50+/-0.05	c	0.12+/-0.07
T	0.40 max.	e	0.20+/-0.10
a	0.30+/-0.10		

TERMINAL CONFIGURATION

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



4. Land Pattern



(in mm)

-  Land
-  Solder resist
-  No pattern
Solder resist
-  Through Hole $\phi 0.30$

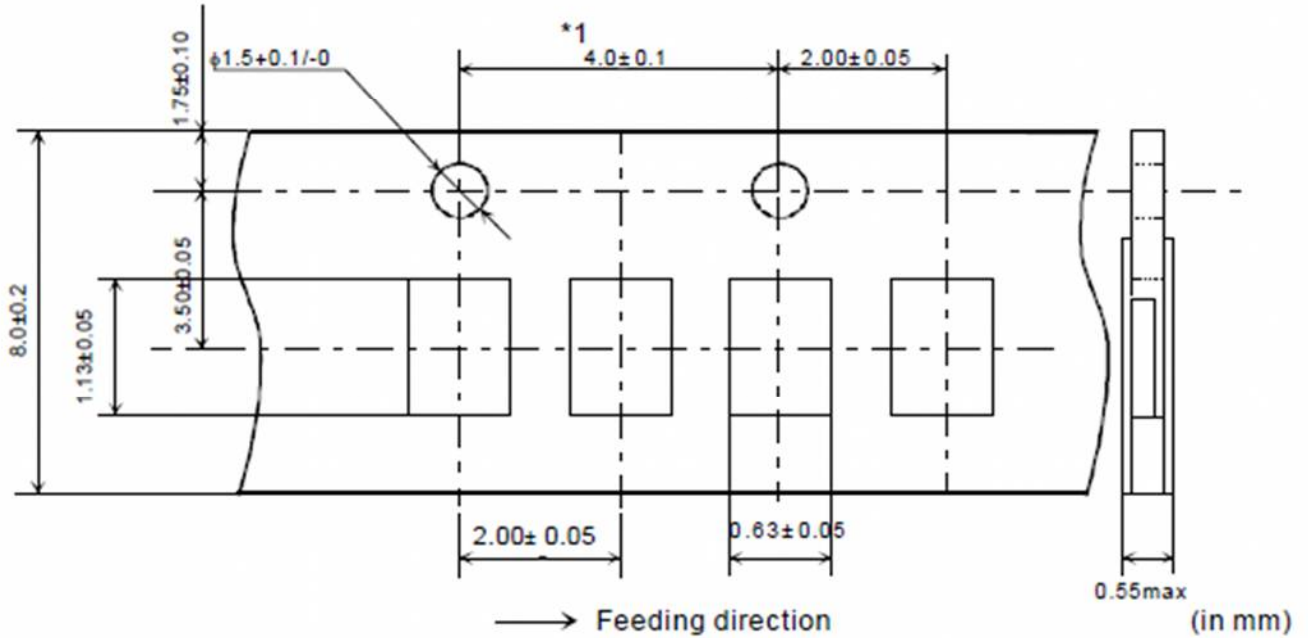
* Line width to be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.



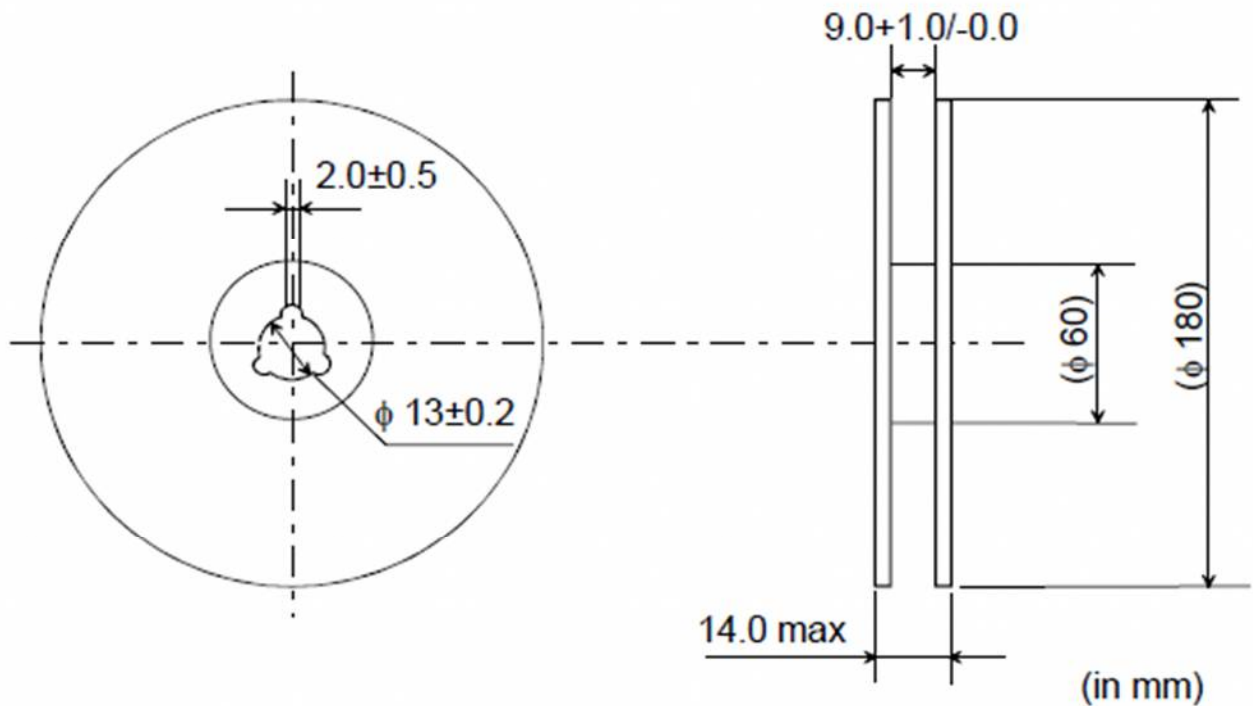
5. Tape and Reel Packing

(1) Dimensions of Tape (Paper tape)

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

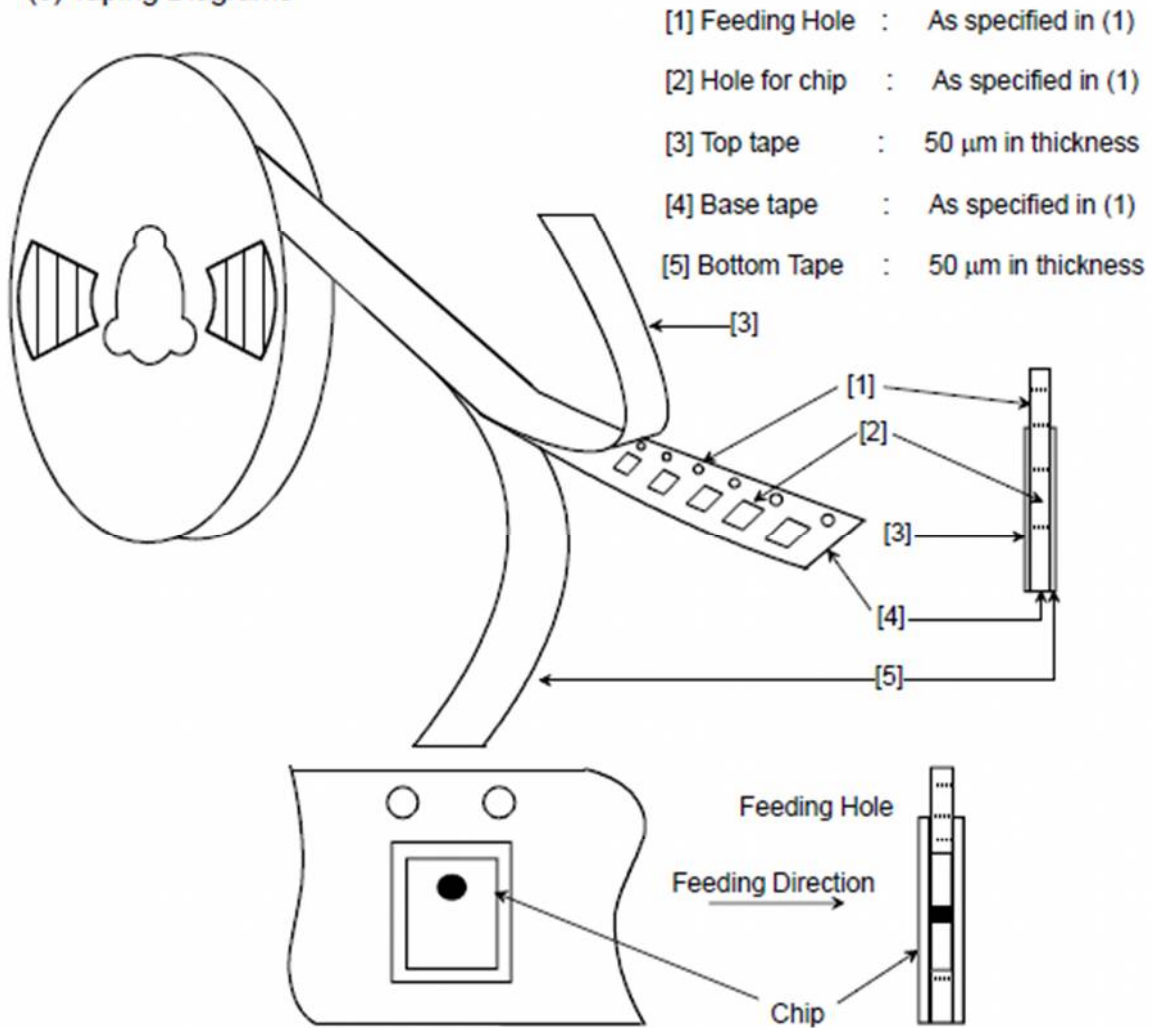


(2) Dimensions of Reel

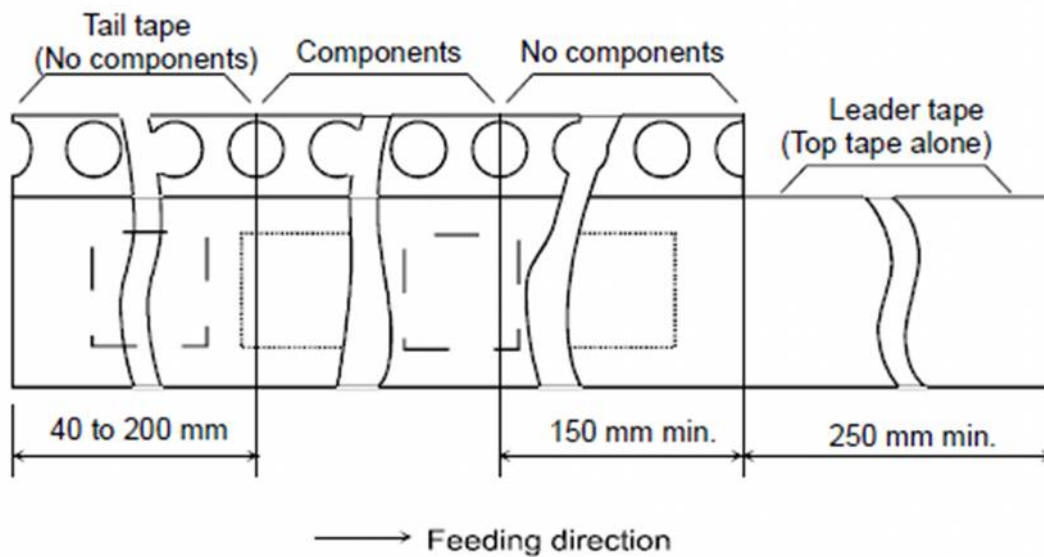




(3) Taping Diagrams



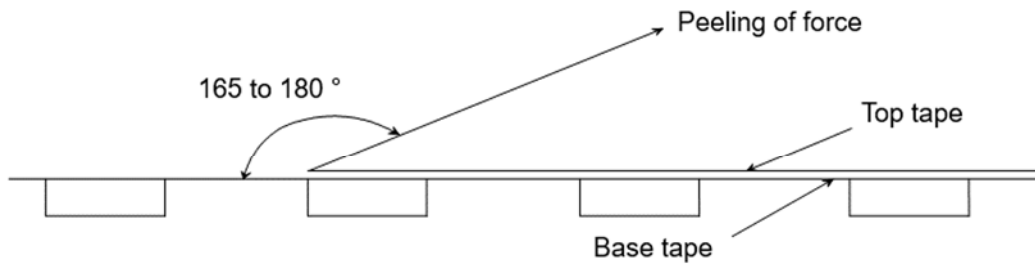
(4) Leader and Tail tape





- (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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- deviation or lapse in function of engineering sample,
- improper use of engineering samples.

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Change History

Revision No.	Date	Comment
-	2022/11/10	Initial
A	2025/9/29	Update Format