



Product Specification

Chip Multilayer Diplexer
WiFi2.4G/WiF5G+6G

for 2400-2500 / 5170-7125 MHz

size : 1.6x0.8mm

P/N : LFD182G45PJ4F520



Part Number : LFD182G45PJ4F520

1. General information

Operating Temperature	-40 ~ +85 °C
Power Capacity	1.5W 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	2400.00 ~ 2500.00	-	0.47	0.60	dB
	at -40~+85°C	2400.00 ~ 2500.00	-	0.47	0.70	dB
Return Loss	2400.00 ~ 2500.00	12.0	22.4	-	dB	
Attenuation (Absolute value)	4800.00 ~ 5000.00	32.0	41.5	-	dB	
	7200.00 ~ 7500.00	25.0	34.8	-	dB	

■ High Band

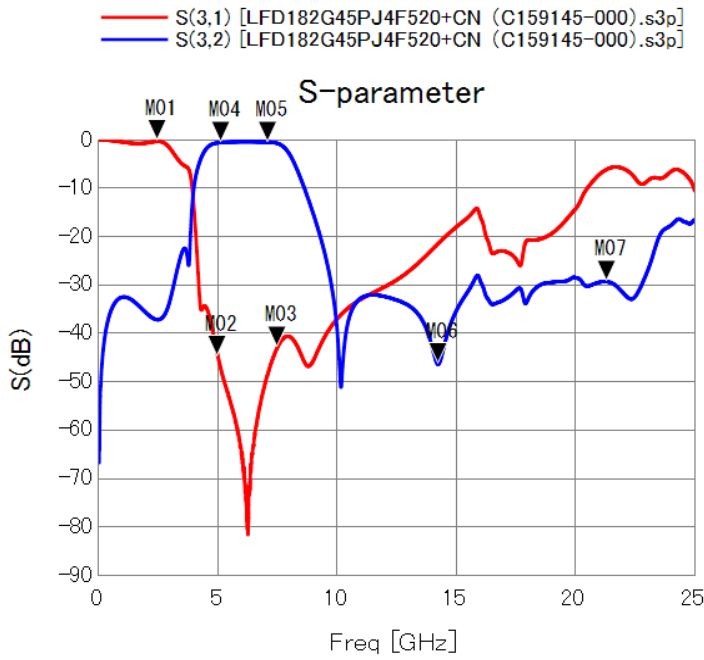
Item	Frequency (MHz)	SPEC			Unit	
		Min.	Typ.(+25°C)	Max.		
Insertion Loss	at +25°C	5170.00 ~ 7125.00	-	0.64	0.95	dB
	at -40~+85°C	5170.00 ~ 7125.00	-	0.64	1.10	dB
Return Loss	5170.00 ~ 7125.00	10.0	17.9	-	dB	
Attenuation (Absolute value)	2400.00 ~ 2500.00	25.0	36.6	-	dB	
	10340.00 ~ 14250.00	25.0	41.5	-	dB	
	15510.00 ~ 21375.00	19.5	28.4	-	dB	

■ Common

Item	Frequency (MHz)	SPEC			Unit
		Min.	Typ.(+25°C)	Max.	
Return Loss	2400.00 ~ 2500.00	12.0	19.1	-	dB
	5170.00 ~ 7125.00	10.0	16.2	-	dB

■ Isolation

Item	Frequency (MHz)	SPEC			Unit
		Min.	Typ.(+25°C)	Max.	
Isolation LB-HB	2400.00 ~ 2500.00	25.0	36.1	-	dB
	5170.00 ~ 7125.00	30.0	37.1	-	dB

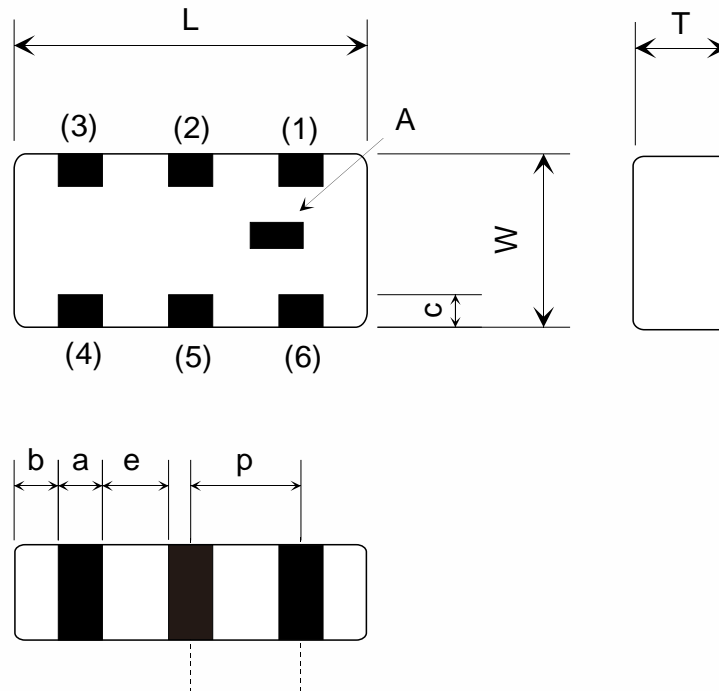


M01 : S(3,1) [LFD182G45PJ4F520+CN (C159145-000).s3p] Freq 2.500G Hz S(dB) -0.350
M02 : S(3,1) [LFD182G45PJ4F520+CN (C159145-000).s3p] Freq 5.000G Hz S(dB) -44.993
M03 : S(3,1) [LFD182G45PJ4F520+CN (C159145-000).s3p] Freq 7.500G Hz S(dB) -42.780

M04 : S(3,2) [LFD182G45PJ4F520+CN (C159145-000).s3p] Freq 5.170G Hz S(dB) -0.576
M05 : S(3,2) [LFD182G45PJ4F520+CN (C159145-000).s3p] Freq 7.125G Hz S(dB) -0.510
M06 : S(3,2) [LFD182G45PJ4F520+CN (C159145-000).s3p] Freq 14.250G Hz S(dB) -46.308
M07 : S(3,2) [LFD182G45PJ4F520+CN (C159145-000).s3p] Freq 21.375G Hz S(dB) -29.385



3. Construction, Dimensions & Marking



Mark	Meaning
A	Directional Input Mark

(in mm)

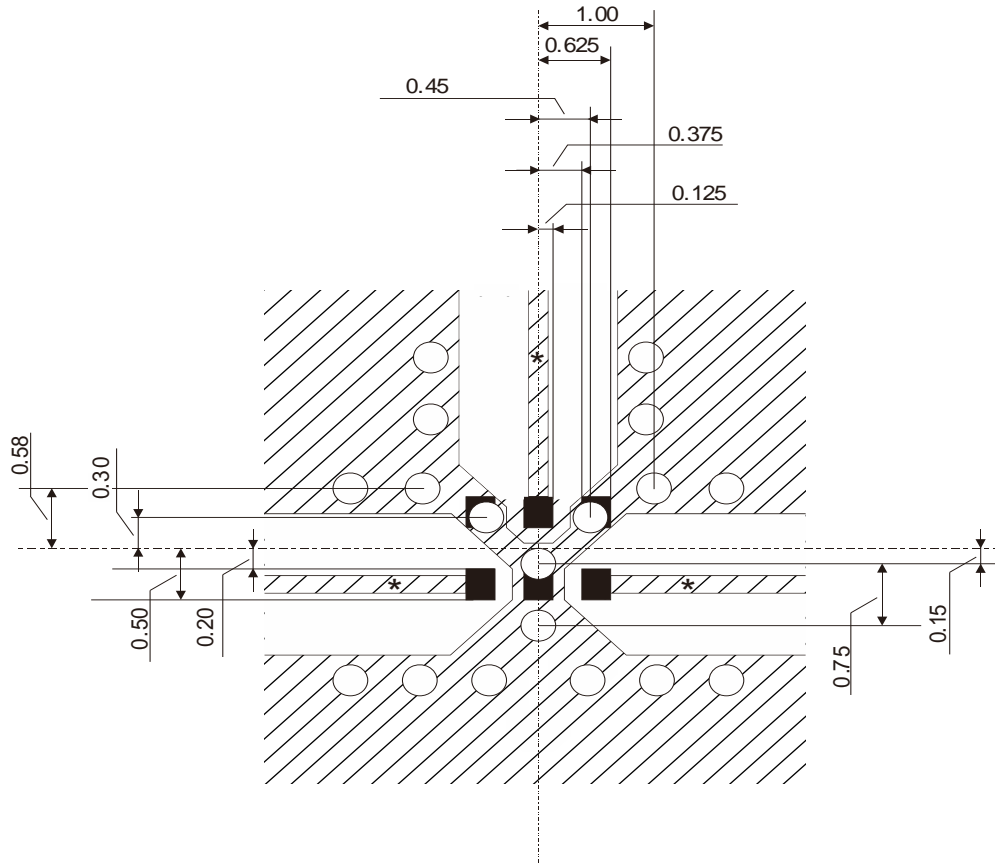
Mark	Dimension	Mark	Dimension	Mark	Dimension
L	1.6 +/- 0.1	a	0.2 +/- 0.1	e	0.3 +/- 0.1
W	0.8 +/- 0.1	b	0.20 +/- 0.15	p	0.50 +/- 0.05
T	0.65 max.	c	0.15 +/- 0.10	-	-

TERMINAL CONFIGURATION





Terminal No.	Terminal Name	Terminal No.	Terminal Name
(1)	GND	(4)	P1:Low Band Port
(2)	P3:Common Port	(5)	GND
(3)	GND	(6)	P2:High Band Port



4. Land Pattern



(in mm)

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

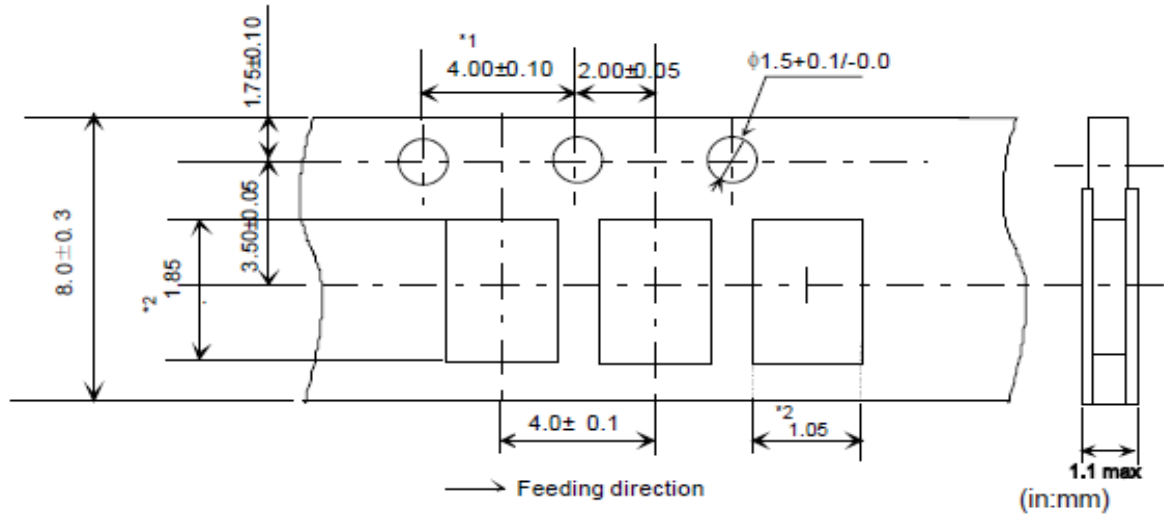
* Line width to be designed to match 50 Ω characteristic impedance,
Depending on PCB material and thickness.
Strongly recommended to keep the through hole position
in order to reproduce the performance of specification



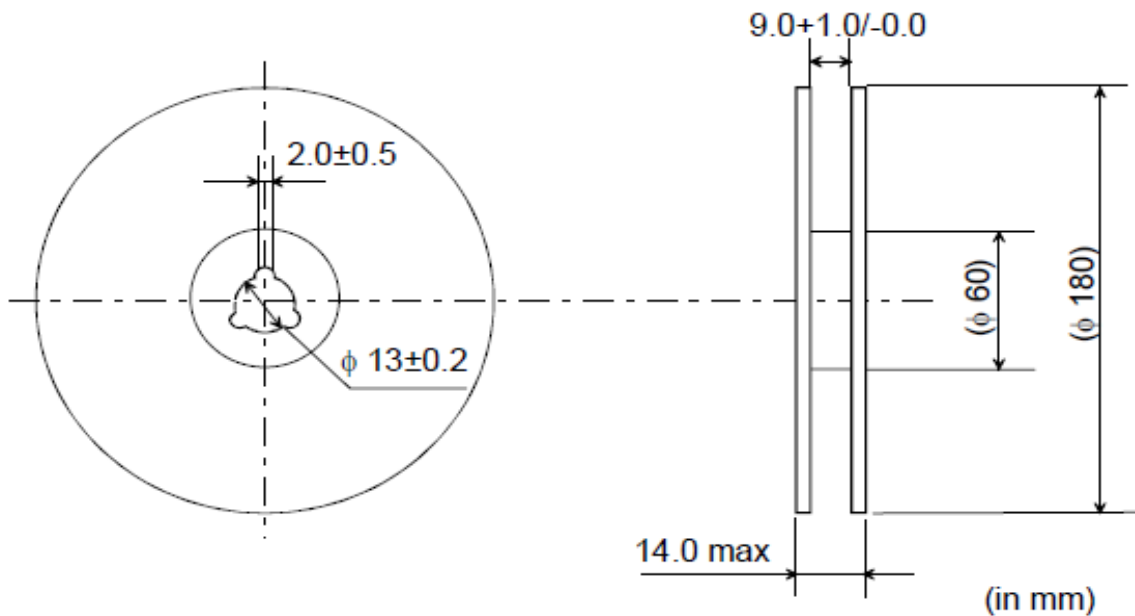
5. Tape and Reel Packing

(1) Dimensions of Tape (Paper tape)

- *1 Cumulative tolerance of max. ± 0.3 every 10 pitches
- *2 Reference value

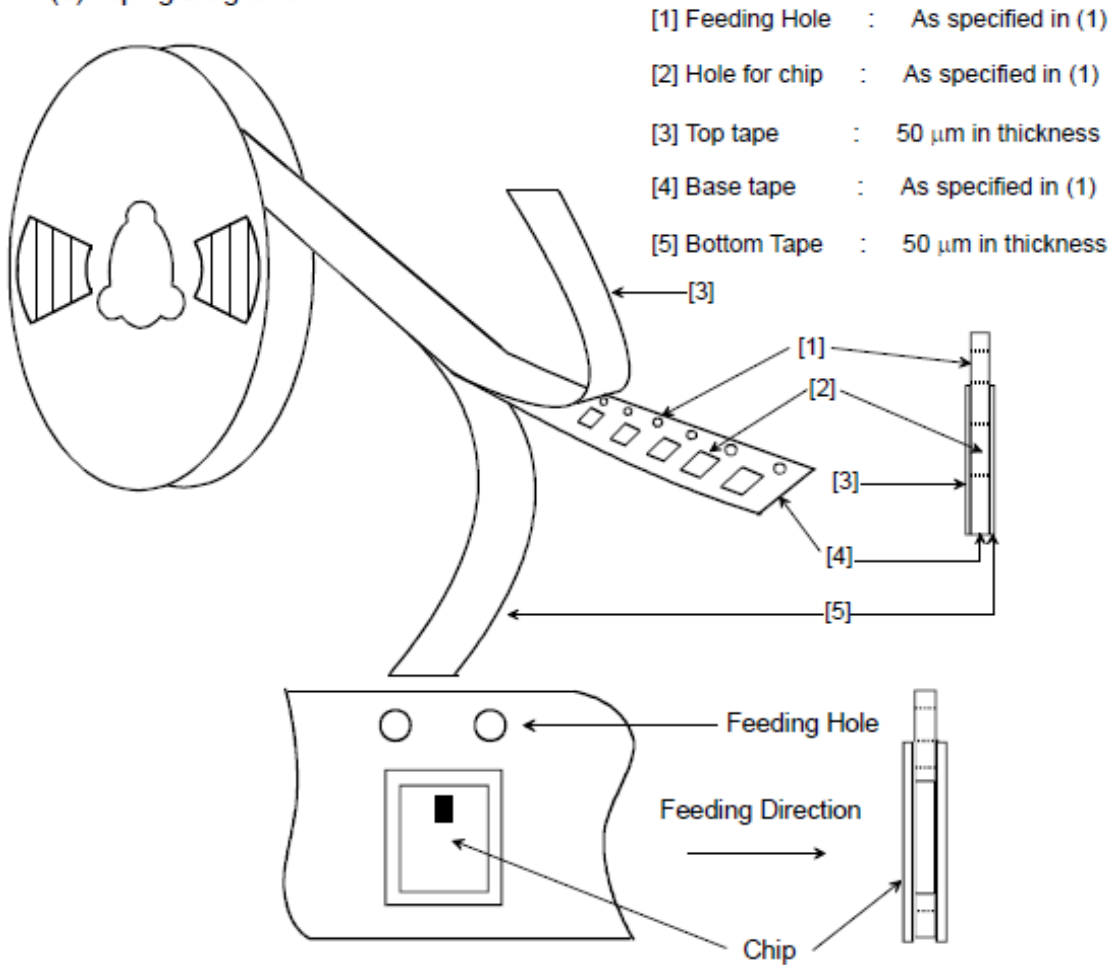


(2) Dimensions of Reel

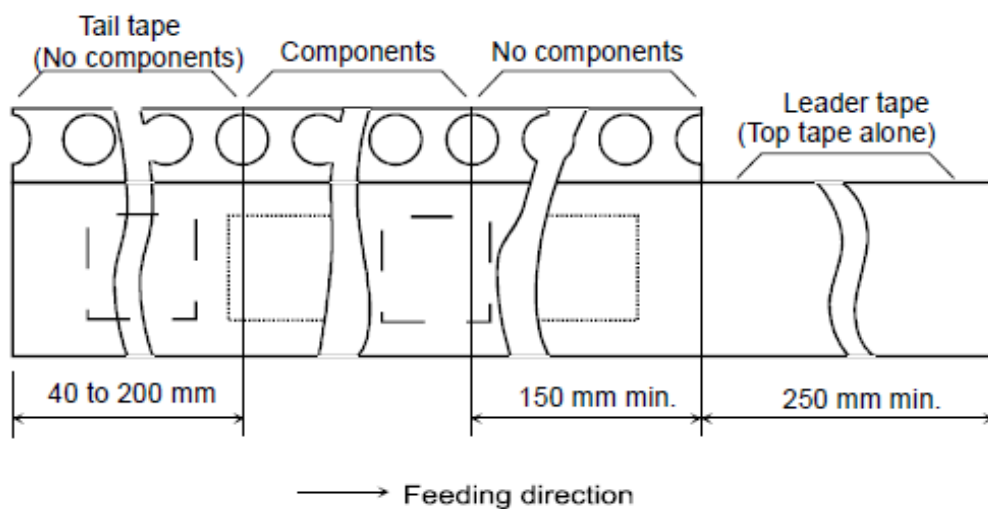




(3) Taping Diagrams



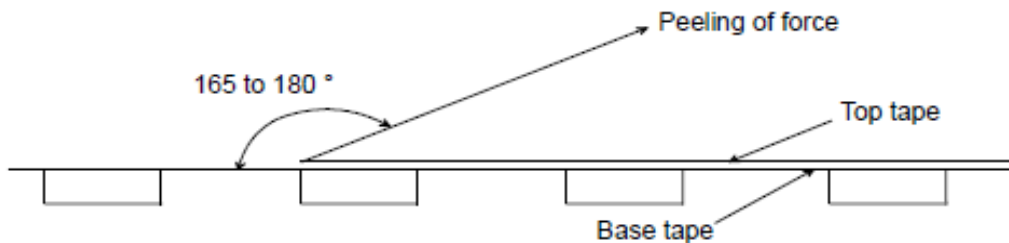
(4) Leader and Tail tape





- (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 : 4000 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
12-56mm	1.3N
72-200mm	1.5N





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Change History

Revision No.	Date	Comment
-	2022/4/14	Initial
A	2025/11/17	Updated format