



No. CF489-STD

June 27, 2022

# Specification

Chip Multilayer Diplexer

P/N: **LFD182G45PJ2F489**



## Diplexer

Part Number : **LFD182G45PJ2F489**

### 1. Maximam Ratings

	Ratings	Conditions
Operating Temperature	-40 ~ +85 °C	
Power Capacity	1.5W	50Ω Load

### 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	
Return Loss		2400.00 ~ 2500.00	12.0	20.1	-	dB
Attenuation (Absolute value)		4800.00 ~ 5000.00	32.0	40.7	-	dB
		7200.00 ~ 7500.00	25.0	34.7	-	

#### ■ High Band

Item	Frequency (MHz)	SPEC			Unit	
		Min.	Typ.(+25°C)	Max.		
Insertion Loss	at +25°C	5170.00 ~ 7125.00	-	0.77	0.95	dB
	at -40~+85°C	5170.00 ~ 7125.00	-	0.77	1.10	
Return Loss		5170.00 ~ 7125.00	10.0	13.6	-	dB
Attenuation (Absolute value)		2400.00 ~ 2500.00	25.0	36.8	-	dB
		10340.00 ~ 14250.00	25.0	32.7	-	
		15510.00 ~ 21375.00	19.5	27.3	-	

#### ■ Common

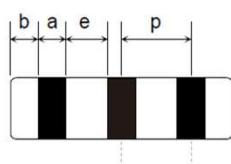
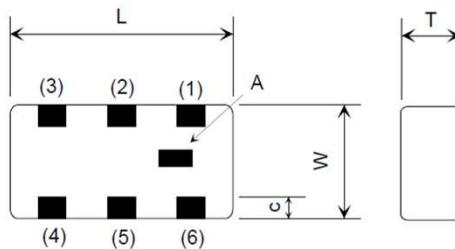
Item	Frequency (MHz)	SPEC			Unit
		Min.	Typ.(+25°C)	Max.	
Return Loss	2400.00 ~ 2500.00	12.0	17.7	-	dB
	5170.00 ~ 7125.00	10.0	13.5	-	

#### ■ Isolation

Item	Frequency (MHz)	SPEC			Unit
		Min.	Typ.(+25°C)	Max.	
Isolation LB-HB	2400.00 ~ 2500.00	25.0	36.3	-	dB
	5170.00 ~ 7125.00	30.0	36.4	-	



3. Construction, Dimensions & Marking

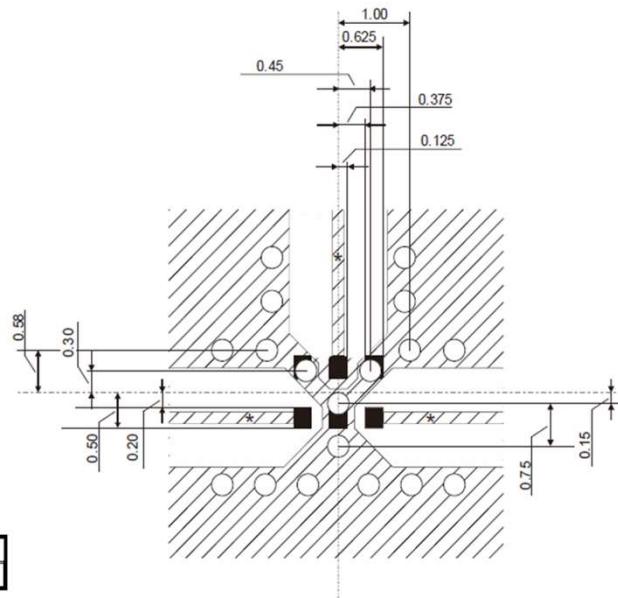


Mark	Meaning				
A	Directional Input Mark				
(in mm)					
Mark	Dimension	Mark	Dimension	Mark	Dimension
L	$1.6 \pm 0.1$	a	$0.2 \pm 0.1$	e	$0.3 \pm 0.1$
W	$0.8 \pm 0.1$	b	$0.20 \pm 0.15$	p	$0.50 \pm 0.05$
T	0.65 max.	c	$0.15 \pm 0.10$	-	-

TERMINAL CONFIGURATION

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

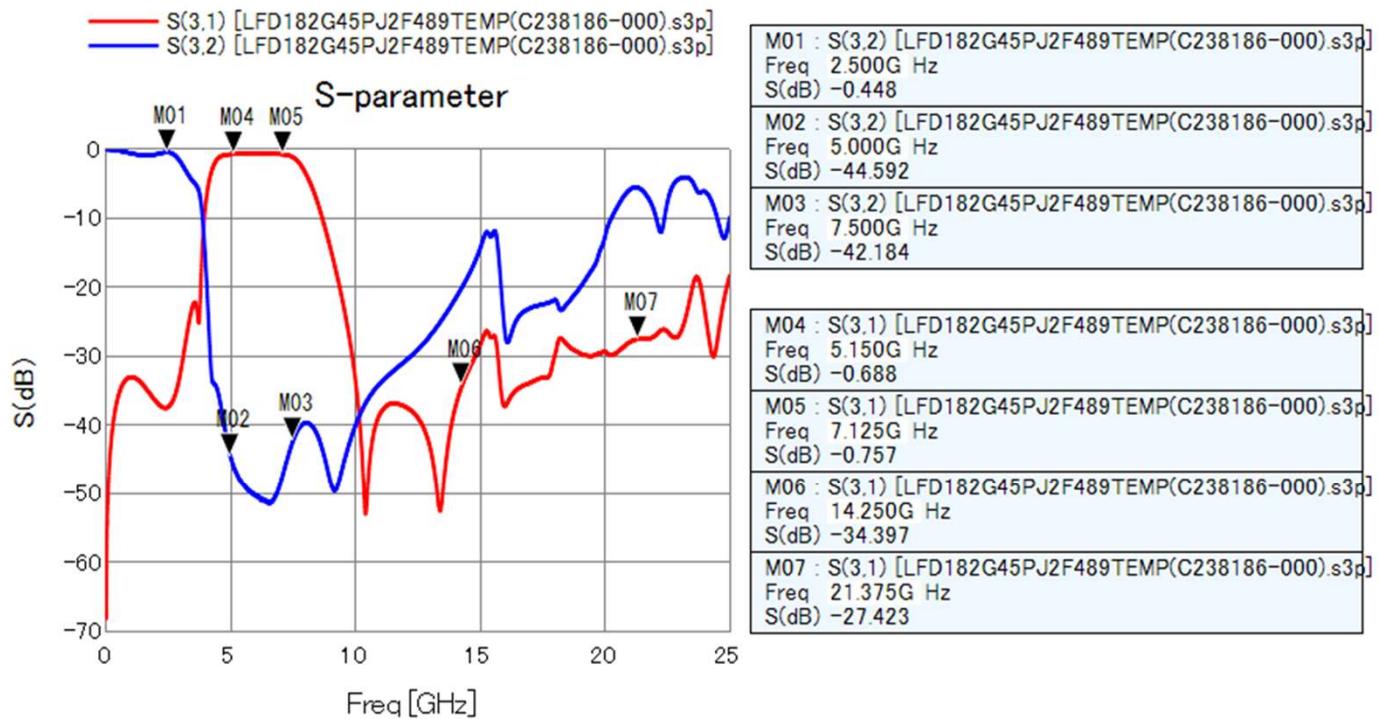
4. Land Pattern



(in mm)

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

\* Line width to be designed to match  $50\Omega$  characteristic impedance, Depending on PCB material and thickness.

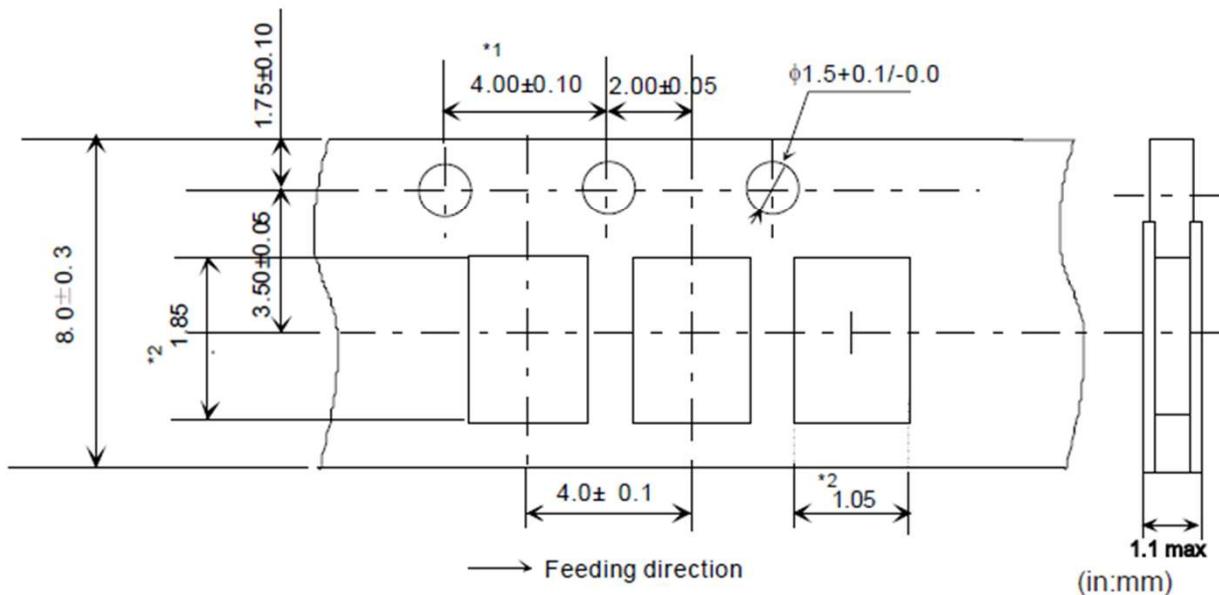


## 5. Tape and Reel Packing

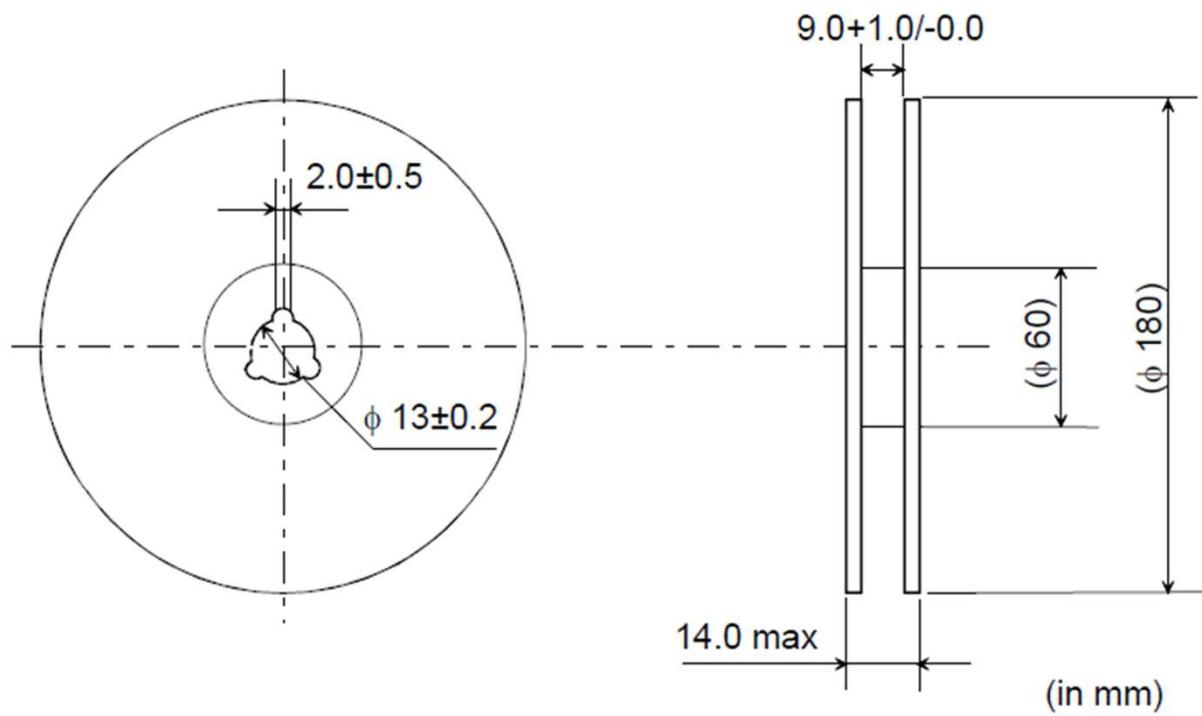
### (1) Dimensions of Tape (Paper tape)

\*1 Cumulative tolerance of max.  $\pm 0.3$  every 10 pitches

\*2 Reference value

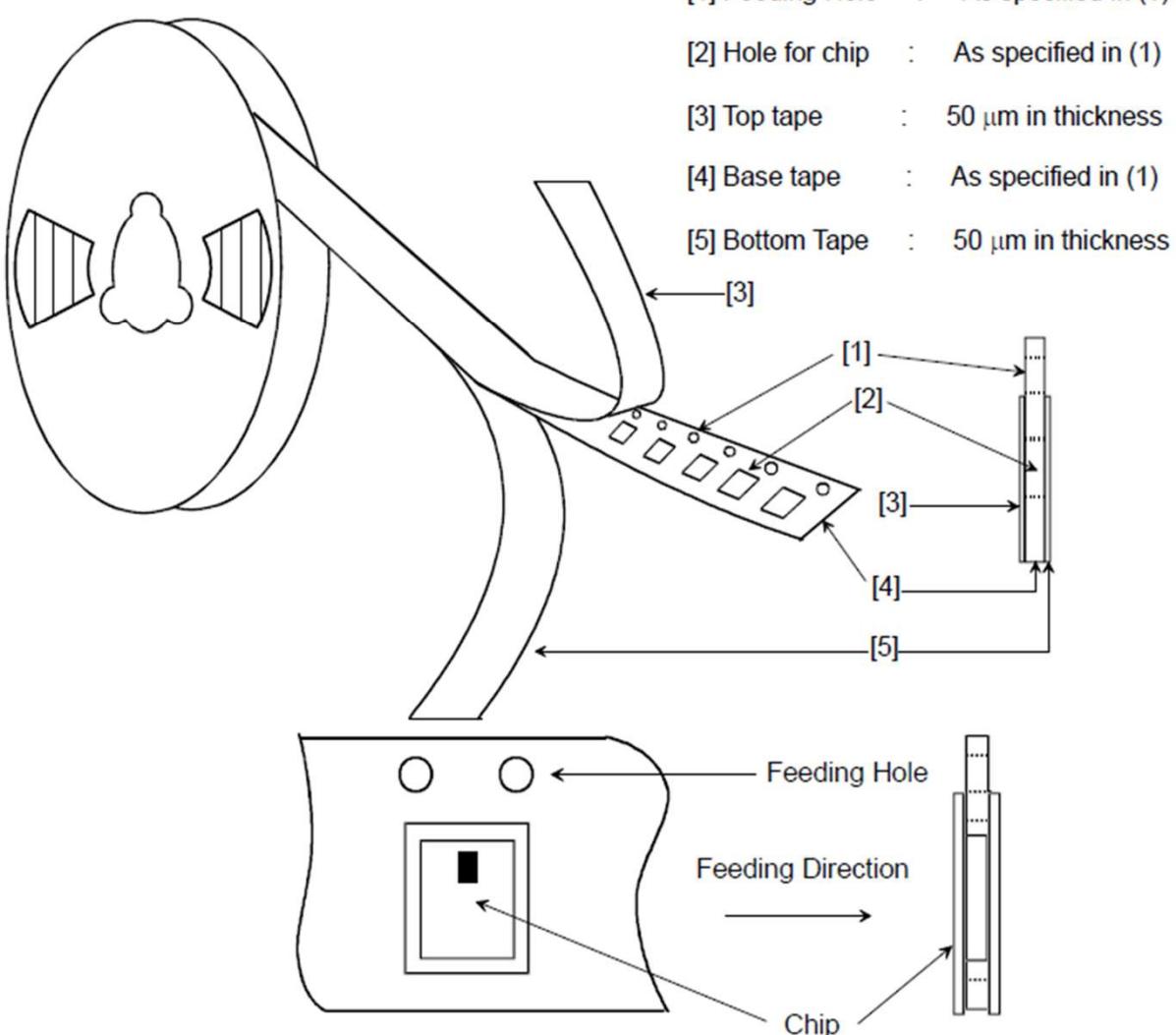


## (2) Dimensions of Reel

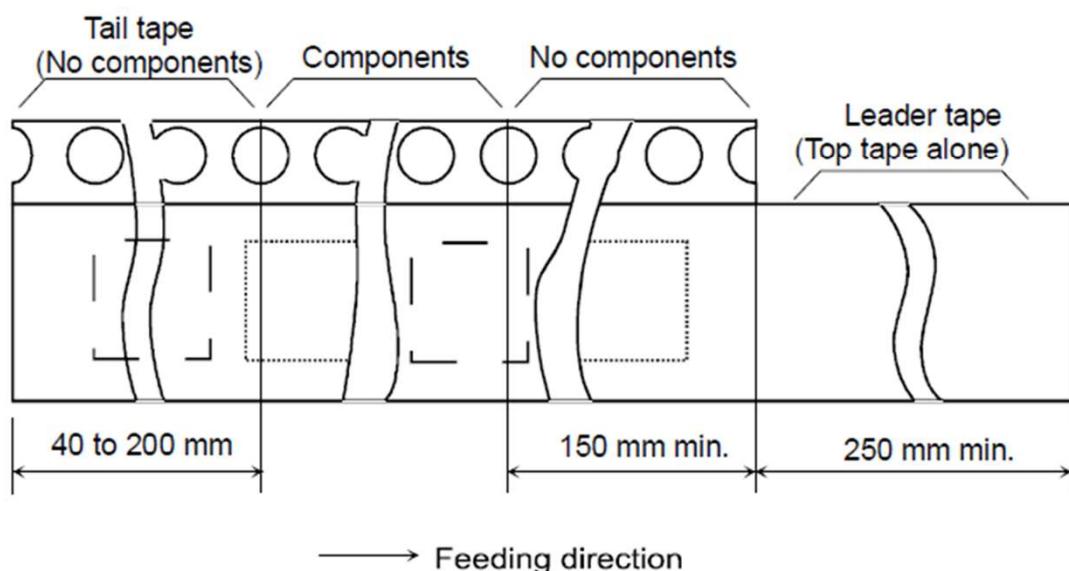




(3) Taping Diagrams



(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.

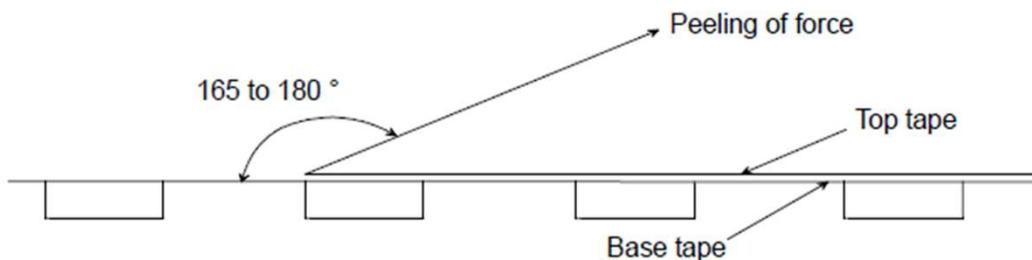
(9) Packaging unit : 4000 pcs. / reel

(10) Material : Base tape .....Paper  
Reel .....Plastic

(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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