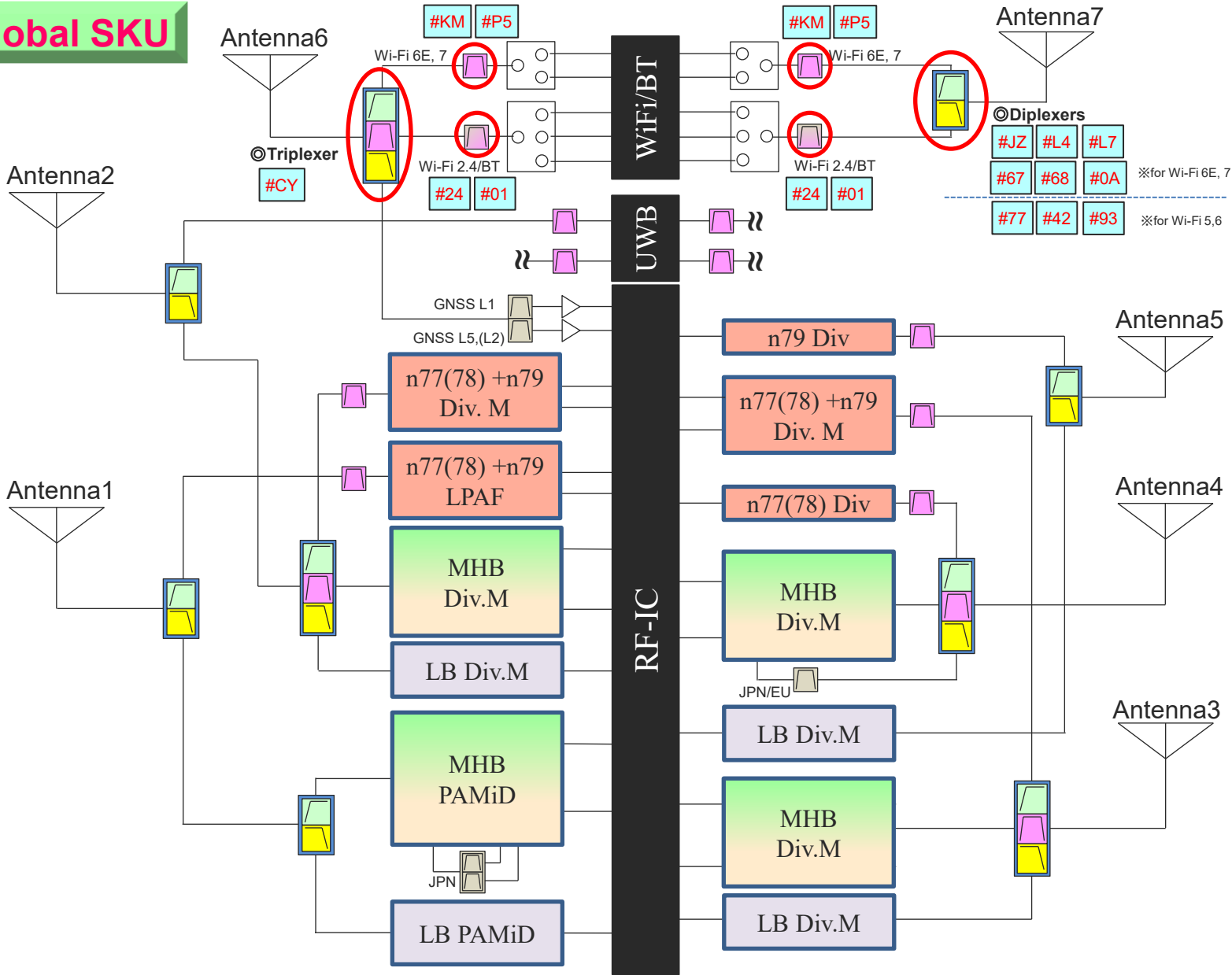


Example RF Block Diagram (Generic image only)

Global SKU



RE

Sim3

Type	Size	PN	Terminal	Band	Specification				Thickness (mm) Max.	Status	Datasheet Version	Recommended Items	Ref. / Std
					Freq. (MHz)	I.L. (dB) Max [Typ.]	Freq. (MHz)	Att. (dB) Min [Typ.]					
Diplexer 2.4/Wi-Fi 6E,7	1608 (6pins)	TSD1N18D2G45NV067T	Low	2.4GHz	2400~2482	b) 0.5 [0.26]	4800~5000	18 [23/0]	0.65	MP	PG20240402-T03	Qualified	I
							5150~7125	23 [28.8]					
							7200~7250	23 [29.3]					
			High	Wi-Fi 6E,7	5170~7125	b) 1.7 [1.21]	700~2690	25 [29.1]					
							3400~3800	25 [41.2]					
							3800~4200	20 [28.8]					
							10340~14250	[31.0]					
Diplexer 2.4/Wi-Fi 6E,7	1608 (6pins)	TSD1N18D2G45NV068T (mirror of TSD1N18D2G45NV067T)	Low	2.4GHz	2400~2482	b) 0.5 [0.26]	4800~5000	18 [23/0]	0.65	MP	PG20240402-T02	Qualified	I
							5150~7125	23 [28.8]					
							7200~7250	23 [29.3]					
			High	Wi-Fi 6E,7	5170~7125	b) 1.7 [1.21]	700~2690	25 [29.1]					
							3400~3800	25 [41.2]					
							3800~4200	20 [28.8]					
							10340~14250	[31.0]					

TAIYO YUDEN

b) @-40~+85degC

Type	Size	PN	Terminal	Band	Specification				Thickness (mm) Max.	Status	Datasheet Version	Recommended Items	Ref. / Std
					Freq. (MHz)	I.L. (dB) Max [Typ.]	Freq. (MHz)	Att. (dB) Min [Typ.]					
Duplexer 2.4/Wi-Fi 6E,7	1608 (LGA)	TSD1N18D2G45LV0JZT	Low	2.4GHz	2400~2500	b) 1.1 [0.69]	3300~3700	13 [21.8]	0.65	MP	PG20230126-O01	Qualified	Q
							3700~3800	22 [30.4]					
							3800~5925	25 [30.4]					
							5925~7125	10 [35.8]					
			High	Wi-Fi 6E,7	5150~7125	b) 1.65 [1.07]	617~2690	25 [29.8]					
							3300~4200	15 [27.6]					
Duplexer 2.4/Wi-Fi 6E,7	1608 (LGA)	TSD1N18D2G45LV0L4T (mirror of TSD1N18D2G45LV0JZT)	Low (LPF)	2.4GHz	2400~2500	b) 1.1 [0.69]	3300~3700	13 [21.8]	0.65	MP	PG20230126-O02	Proposal	Std
							3700~3800	22 [30.4]					
							3800~5925	25 [30.4]					
							5925~7125	10 [35.8]					
			High (BPF)	Wi-Fi 6E,7	5150~7125	b) 1.65 [1.07]	617~2690	25 [29.8]					
							3300~4200	15 [27.6]					

1608mm(0603inch)Diplexer

RB

F

MP

TSD1N18D2G45NV067T

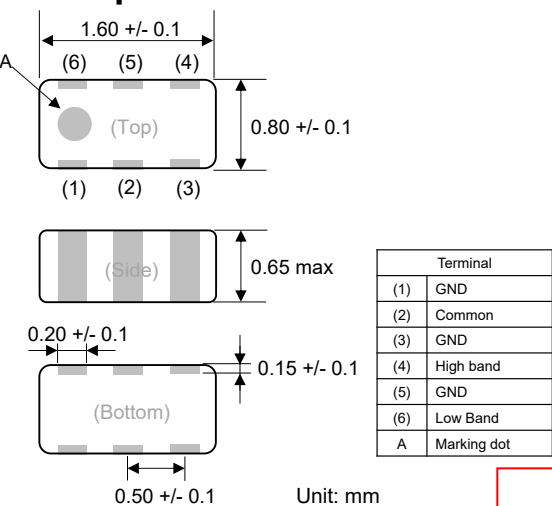
Electrical Characteristics

No.	TSD1N18D2G45NV067T		Specification			Unit	Remarks
			Min.	Typ.	Max.		
Low							(2)Com-(6)Low
1	Pass Band Frequency		2400	-	2482	MHz	
2	Insertion loss	2400-2482 MHz	-	0.26	0.40	dB	Ta= +25°C
			-	-	0.50	dB	Ta= -40 to +85°C
3	V.S.W.R.		-	1.17	1.43	-	Ta= -40 to +85°C
4	Attenuation	4800-5000 MHz	18	23.0	-	dB	
		5170-7125 MHz	23	28.8	-	dB	
		7200-7500 MHz	23	29.3	-	dB	
		9600-10000 MHz (*)	-	30.0	-	dB	
		12000-20000 MHz (*)	-	13.1	-	dB	
High							(2)Com-(4)High
1	Pass Band Frequency		5170	-	7125	MHz	
2	Insertion loss	5170-7125 MHz	-	1.21	1.50	dB	Ta= +25°C
			-	-	1.70	dB	Ta= -40 to +85°C
3	V.S.W.R.		-	1.28	1.67	-	Ta= -40 to +85°C
4	Attenuation	700-2690 MHz	25	29.1	-	dB	
		3400-3800 MHz	25	41.2	-	dB	
		3800-4200 MHz	20	28.8	-	dB	
		3840-4440 MHz	5	15.8	-	dB	
		10340-14250 MHz (*)	-	31.0	-	dB	
		15510-20000 MHz (*)	-	22.6	-	dB	
Isolation							
1	(6)Low to (4)High	700-2690 MHz	25	29.0	-	dB	Ta= -40 to +85°C
		3400-3800 MHz	25	40.3	-	dB	
		3800-4200 MHz	20	34.8	-	dB	
		5170-7125 MHz	23	29.6	-	dB	
Impedance							
1	Impedance		-	50	-	Ohm	All port
Power Handling at Pass Band							
1	Power Handling		-	-	+30	dBm	CW

(*)Reference Operating Temp. -40 to +85 deg-C

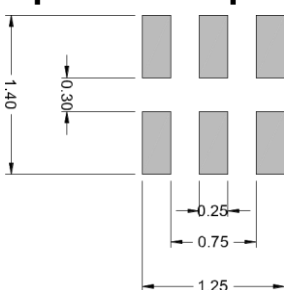
Notice : All the technical data and specifications are subject to change without prior notice. This product is only intended for use in general communications applications and not intended for applications such as automotive embedded systems where higher safety and reliability are required. Before making final selection, please check product specification.

Shapes & Dimensions



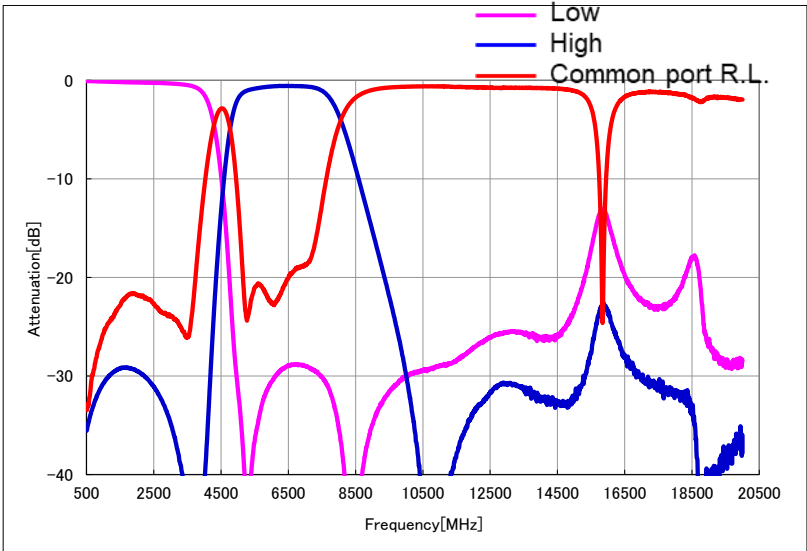
Unit: mm

Example of land pattern



- (1) Metal mask thickness ; 0.08mm
- (2) Metal opening ratio ; 100% of land pattern

Plot Data



Measured DATA

1608mm(0603inch)Diplexer

RB

F

TSD1N18D2G45NV068T

MP

Electrical Characteristics

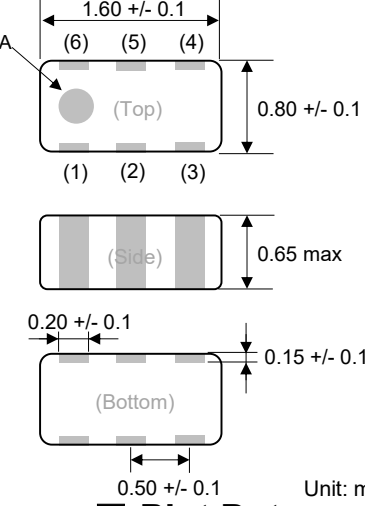
No.	TSD1N18D2G45NV068T		Specification			Unit	Remarks
			Min.	Typ.	Max.		
Low							(2)Com-(4)Low
1	Pass Band Frequency		2400	-	2482	MHz	
2	Insertion loss	2400-2482 MHz	-	0.26	0.40	dB	Ta= +25°C
			-	-	0.50	dB	Ta= -40 to +85°C
3	V.S.W.R.	2400-2482 MHz	-	1.17	1.43	-	Ta= -40 to +85°C
4	Attenuation	4800-5000 MHz	18	23.0	-	dB	
		5170-7125 MHz	23	28.8	-	dB	
		7200-7500 MHz	23	29.3	-	dB	
		9600-10000 MHz (*)	-	30.0	-	dB	
		12000-20000 MHz (*)	-	13.1	-	dB	
High							(2)Com-(6)High
1	Pass Band Frequency		5170	-	7125	MHz	
2	Insertion loss	5170-7125 MHz	-	1.21	1.50	dB	Ta= +25°C
			-	-	1.70	dB	Ta= -40 to +85°C
3	V.S.W.R.	5170-7125 MHz	-	1.28	1.67	-	Ta= -40 to +85°C
4	Attenuation	700-2690 MHz	25	29.1	-	dB	
		3400-3800 MHz	25	41.2	-	dB	
		3800-4200 MHz	20	28.8	-	dB	
		3840-4440 MHz	5	15.8	-	dB	
		10340-14250 MHz (*)	-	31.0	-	dB	
		15510-20000 MHz (*)	-	22.6	-	dB	
Isolation							
1	(4)Low to (6)High	700-2690 MHz	25	29.0	-	dB	Ta= -40 to +85°C
		3400-3800 MHz	25	40.3	-	dB	
		3800-4200 MHz	20	34.8	-	dB	
		5170-7125 MHz	23	29.6	-	dB	
Impedance							
1	Impedance		-	50	-	Ohm	All port
Power Handling at Pass Band							
1	Power Handling		-	-	+30	dBm	CW

(*)Reference

Operating Temp. -40 to +85 deg-C

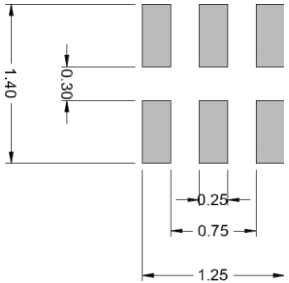
Notice : All the technical data and specifications are subject to change without prior notice. This product is only intended for use in general communications applications and not intended for applications such as automotive embedded systems where higher safety and reliability are required. Before making final selection, please check product specification.

Shapes & Dimensions



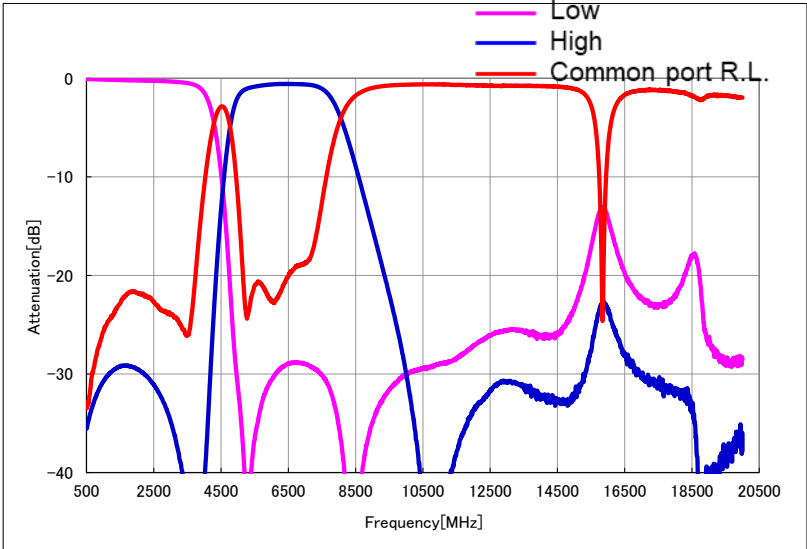
Terminal	
(1)	GND
(2)	Common
(3)	GND
(4)	Low band
(5)	GND
(6)	High Band
A	Marking dot

Example of land pattern



- (1) Metal mask thickness ; 0.08mm
- (2) Metal opening ratio ; 100% of land pattern

Plot Data



Measured DATA

1608mm(0603inch) Diplexer

RB

F

Sim1

Sim2

Sim3

MP

TSD1N18D2G45LV0JZT

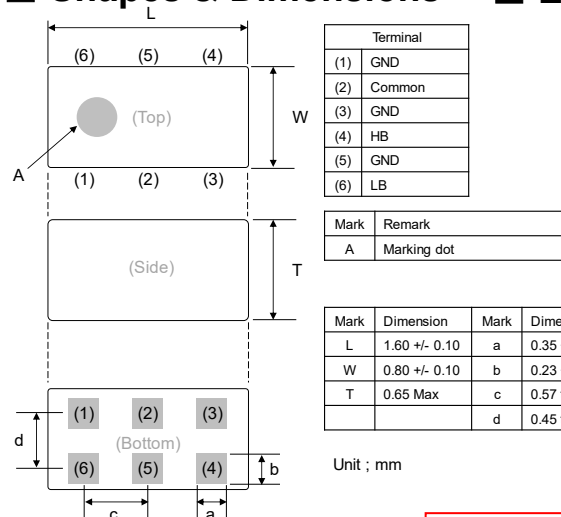
Electrical Characteristics

No.	TSD1N18D2G45LV0JZT		Specification			Unit	Remarks
			Min.	Typ.	Max.		
Low							(2)Com-(6)Low
1	Pass Band Frequency		2400	-	2500	MHz	
2	Insertion loss	2400-2500 MHz	-	0.69	1.00	dB	Ta= +25°C
			-	-	1.10	dB	Ta= -40 to +85°C
3	V.S.W.R.	2400-2500 MHz	-	1.1	2.0	-	
4	Attenuation	3300-3700 MHz	13	21.8	-	dB	Ta= -40 to +85°C
		3700-3800 MHz	22	30.4	-	dB	
		3800-5925 MHz	25	30.4	-	dB	
		5925-7125 MHz	10	35.8	-	dB	
High							(2)Com-(4)High
1	Pass Band Frequency		5150	-	7125	MHz	
2	Insertion loss	5150-7125 MHz	-	1.07	1.55	dB	Ta= +25°C
			-	-	1.65	dB	Ta= -40 to +85°C
3	V.S.W.R.	5150-7125 MHz	-	1.7	2.1	-	
4	Attenuation	617-2690 MHz	25	29.8	-	dB	Ta= -40 to +85°C
		3300-4200 MHz	15	27.6	-	dB	
		9200-10000 MHz (*)	10	29.0	-	dB	
Isolation							
1	(6)Low to (4)High	617-2690 MHz	25	30.8	-	dB	Ta= -40 to +85°C
		3300-4200 MHz	30	47.6	-	dB	
		5150-7125 MHz	28	37.7	-	dB	
Impedance							
1	Impedance		-	50	-	Ohm	All port
Power Handling at Pass Band							
1	Power Handling		-	-	+30	dBm	CW

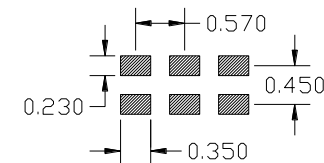
(*)Reference

Operating Temp. -40 to +85 deg-C

Shapes & Dimensions

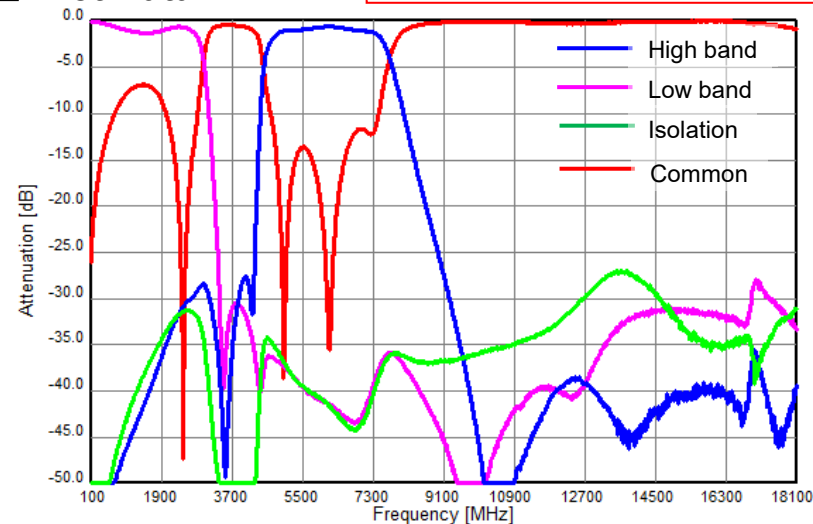


Example of land pattern



- (1) Metal mask thickness ; 0.08mm
 (2) Metal opening ratio ; 100% of land pattern

Plot Data



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1608mm(0603inch) Diplexer

RB

F

MP

TSD1N18D2G45LV0L4T

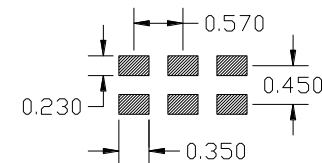
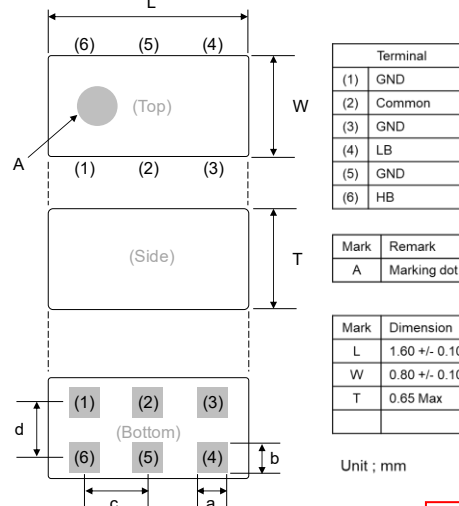
Electrical Characteristics

No.	TSD1N18D2G45LV0L4T		Specification			Unit	Remarks
			Min.	Typ.	Max.		
Low							(2)Com-(4)Low
1	Pass Band Frequency		2400	-	2500	MHz	
2	Insertion loss	2400-2500 MHz	-	0.69	1.00	dB	Ta= +25°C
			-	-	1.10	dB	Ta= -40 to +85°C
3	V.S.W.R.	2400-2500 MHz	-	1.1	2.0	-	Ta= -40 to +85°C
4	Attenuation	3300-3700 MHz	13	21.8	-	dB	
		3700-3800 MHz	22	30.4	-	dB	
		3800-5925 MHz	25	30.4	-	dB	
		5925-7125 MHz	10	35.8	-	dB	
High							(2)Com-(6)High
1	Pass Band Frequency		5150	-	7125	MHz	
2	Insertion loss	5150-7125 MHz	-	1.07	1.55	dB	Ta= +25°C
			-	-	1.65	dB	Ta= -40 to +85°C
3	V.S.W.R.	5150-7125 MHz	-	1.7	2.1	-	Ta= -40 to +85°C
4	Attenuation	617-2690 MHz	25	29.8	-	dB	
		3300-4200 MHz	15	27.6	-	dB	
		9200-10000 MHz (*)	10	29.0	-	dB	
Isolation							
1	(4)Low to (6)High	617-2690 MHz	25	30.8	-	dB	Ta= -40 to +85°C
		3300-4200 MHz	30	47.6	-	dB	
		5150-7125 MHz	28	37.7	-	dB	
Impedance							
1	Impedance		-	50	-	Ohm	All port
Power Handling at Pass Band							
1	Power Handling		-	-	+30	dBm	CW

(*)Reference

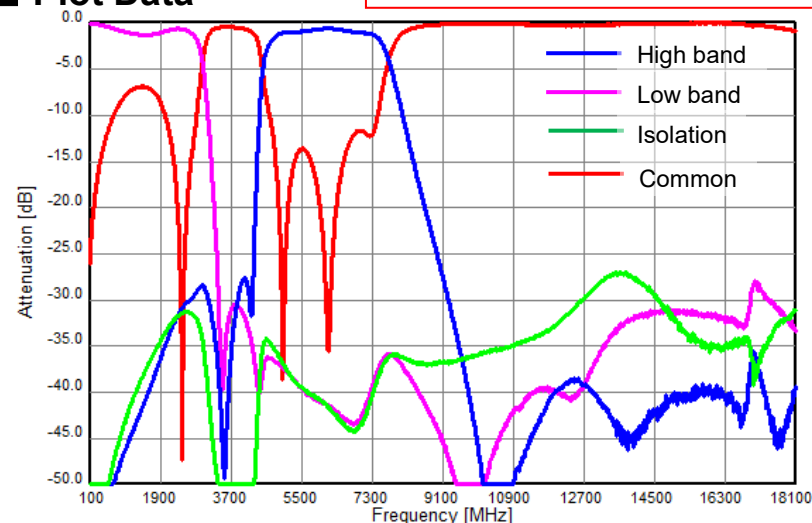
Operating Temp. -40 to +85 deg-C

Shapes & Dimensions ■ Example of land pattern



- (1) Metal mask thickness ; 0.08mm
(2) Metal opening ratio ; 100% of land pattern

Plot Data



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TST1M18D1G57LM0CYT

■ Electrical Characteristics

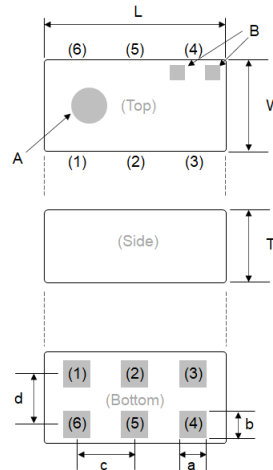
No.	TST1M18D1G57LM0CYT	Specification			Unit	Remarks		
		Min.	Typ.	Max.				
Low						(2)Com-(6)Low		
1	Pass Band Frequency	617	-	1606	MHz			
2	Insertion loss	617-960 MHz	-	0.53	0.70	Ta= +25°C		
			-	-	0.80	Ta= -40 to +85°C		
		1160-1606 MHz	-	0.79	1.00	Ta= +25°C		
			-	-	1.10	Ta= -40 to +85°C		
3	V.S.W.R.	617-960 MHz	-	1.40	2.0			
			-	1.38	2.0			
4	Amplitude ripple@20MHz	-	0.06	0.5	dB	Ta= -40 to +85°C		
5	Attenuation	2400-2500 MHz	15	21.1	-		dB	
		5150-5950 MHz	20	27.2	-		dB	
		5950-7125 MHz	20	29.9	-		dB	
Mid						(2)Com-(5)Mid		
1	Pass Band Frequency	2400	-	2500	MHz			
2	Insertion loss	2400-2500 MHz	-	0.79	1.10	Ta= +25°C		
			-	-	1.20	Ta= -40 to +85°C		
3	V.S.W.R.	2400-2500 MHz	-	1.43	2.0			
4	Amplitude ripple@20MHz	-	0.02	0.4	dB			
5	Attenuation	617-960 MHz	13	17.3	-	dB	Ta= -40 to +85°C	
		1160-1606 MHz	13	18.1	-	dB		
		4800-5000 MHz	10	18.7	-	dB		
		5150-5950 MHz	15	22.6	-	dB		
		5950-7125 MHz	18	25.8	-	dB		
High						(2)Com-(4)High		
1	Pass Band Frequency	5150	-	7125	MHz			
2	Insertion loss	5150-7125 MHz	-	0.63	1.10	Ta= +25°C		
			-	-	1.20	Ta= -40 to +85°C		
3	V.S.W.R.	5150-7125 MHz	-	1.69	2.2			
4	Amplitude ripple@20MHz	-	0.02	0.5	dB			
5	Attenuation	617-960 MHz	30	39.3	-	dB	Ta= -40 to +85°C	
		1160-1606 MHz	30	39.4	-	dB		
		1805-1950 MHz	18	23.4	-	dB		
		1950-2400 MHz	18	22.8	-	dB		
		2400-2500 MHz	22	29.0	-	dB		
		2496-2690 MHz	15	25.7	-	dB		
		10300-15000 MHz (*)	5	10.4	-	dB		
Isolation								
1	(6)Low to (5)Mid	617-960 MHz	12	16.5	-	dB	Ta= -40 to +85°C	
		1160-1606 MHz	13	17.7	-	dB		
		2400-2500 MHz	15	22.3	-	dB		
	(6)Low to (4)High	617-960 MHz	30	38.7	-	dB		
		1160-1606 MHz	30	39.8	-	dB		
		5150-7125 MHz	20	29.1	-	dB		
	(5)Mid to (4)High	2400-2500 MHz	18	25.3	-	dB		
		5150-7125 MHz	15	22.2	-	dB		
	Impedance							
	1	Impedance	-	50	-	Ohm		All port
Power Handling								
1	Power Handling at Passs Band	-	-	+30	dBm	CW		

(*)Reference

Operating Temp. -40 to +85 deg-C

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■ Shapes & Dimensions



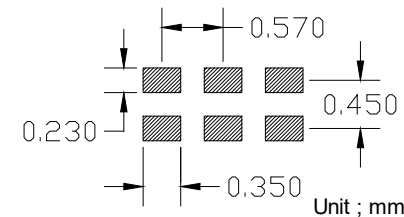
Terminal	
(1)	GND
(2)	Common
(3)	GND
(4)	High band
(5)	Mid band
(6)	Low band

Mark	Remark
A	Marking dot
B	Test Point (Internal Use Only)

Mark	Dimension	Mark	Dimension
L	1.60 +/- 0.10	a	0.35 +/- 0.10
W	0.80 +/- 0.10	b	0.23 +/- 0.10
T	0.65 Max	c	0.57 typ.
		d	0.45 typ.

Unit : mm

■ Land pattern (aperture size)



Unit : mm

- (1) Metal mask thickness ;
0.08mm
(2) Metal opening ratio : 100%
of land pattern

Measured DATA

■ Plot Data

