

TDK RF Products for Wireless LAN

3/5/2004

for 2.4GHz & 5GHz

Diplexer

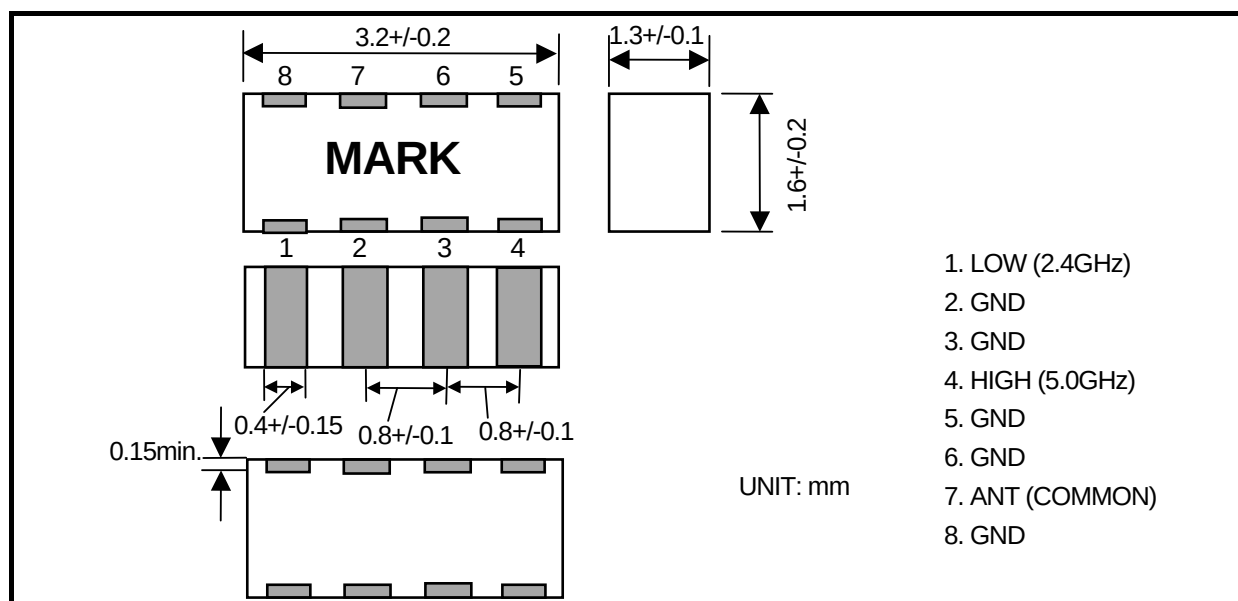
Start Freq. MHz	Stop Freq. MHz	Ins. Loss dB (MAX)	Start Freq. MHz	Stop Freq. MHz	Ins. Loss dB (MAX)	Size mm (typ.)	Part No.
2300	2500	1.5	4900	5950	1.2	3.2x1.6x1.3	DPX315950DT-5006A1
2300	2500	0.7	4900	5950	1	3.2x1.6x1.3	DPX315850DT-5005B1
2300	2500	0.65	4900	5950	1.4	2.0x1.25x0.95	DPX205950FT-9008A1
2300	2500	0.65	4900	5950	1.4	2.0x1.25x0.95	DPX205950FT-9108A1

	Sample Available
	New Products
	Under Developing

3216 TYPE MULTILAYER DIPLEXER FOR 2.4GHz 5GHz W-LAN

P/N: **DPX315950DT-5006A1**

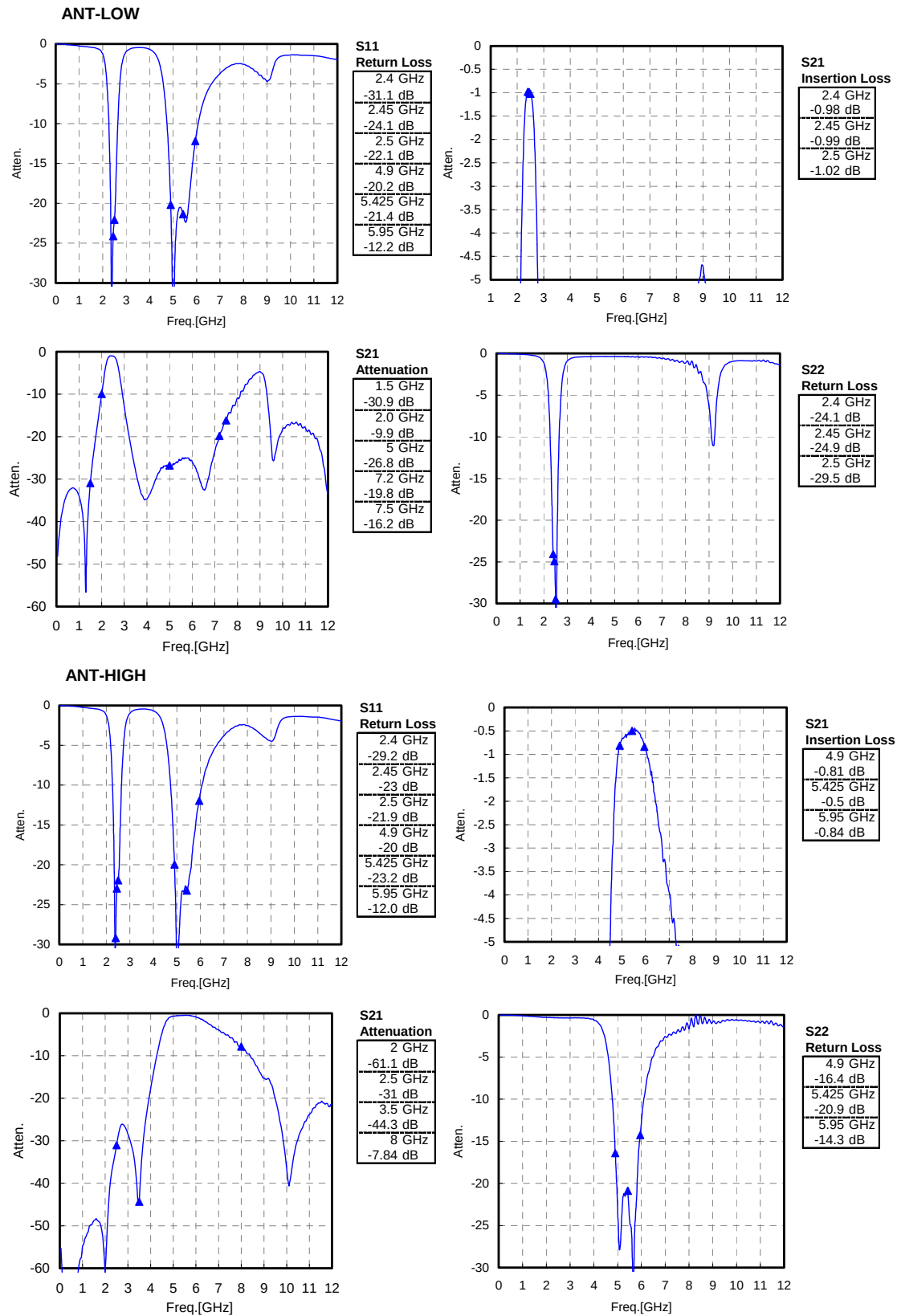
[MECHANICAL DIMENSIONS]



[ELECTRICAL CHARACTERISTICS]

No.	PARAMETER	PORT	FREQ (MHz)	MIN	TYP	MAX	UNIT
1	Insertion loss (25±5 °C)	ANT-LOW	2400-2500	-	1.0	1.5	dB
2	Attenuation	ANT-LOW	DC-1500	25	30	-	dB
3	Attenuation	ANT-LOW	4800-5950	21	25	-	dB
4	Attenuation	ANT-LOW	6500-7500	10	16	-	dB
5	Return Loss	ANT-LOW	2400-2500	10	-	-	dB
6	Insertion loss (25±5 °C)	ANT-HIGH	4900-5950	-	0.8	1.2	dB
7	Attenuation	ANT-HIGH	DC-1500	40	48	-	dB
8	Attenuation	ANT-HIGH	1500-2000	30	48	-	dB
9	Attenuation	ANT-HIGH	2500-3500	20	26	-	dB
10	Attenuation	ANT-HIGH	8000-9000	-	7	-	dB
11	Attenuation	ANT-HIGH	9000-10000	9	15		dB
12	Return Loss	ANT-HIGH	4900-5950	9	-	-	dB
13							dB
14							dB
15	Operating temperature			-40	+85		°C
16	Storage temperature			-40	+85		°C

*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

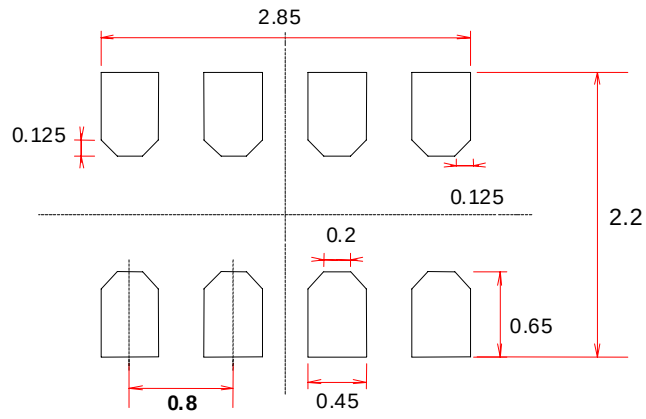
**[FREQUENCY RESPONSE]**

*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

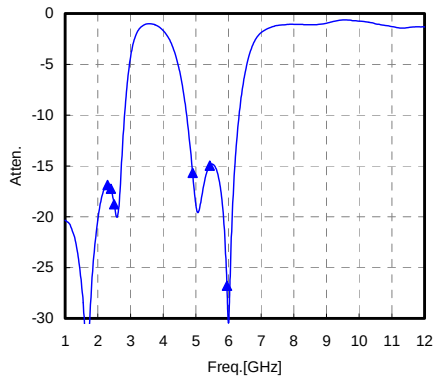


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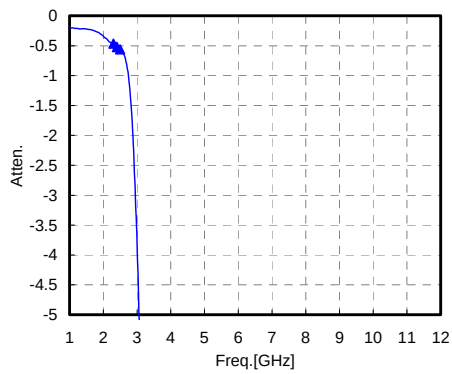
[RECOMMENDED LAND PATTERN]



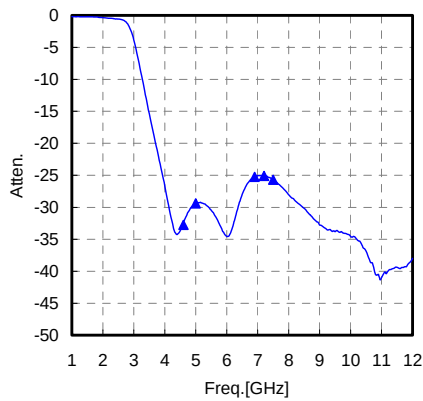
*Note: This document is PRELIMINARY. All specifications are subject to change without notice and are not guaranteed.

**[FREQUENCY RESPONSE]**

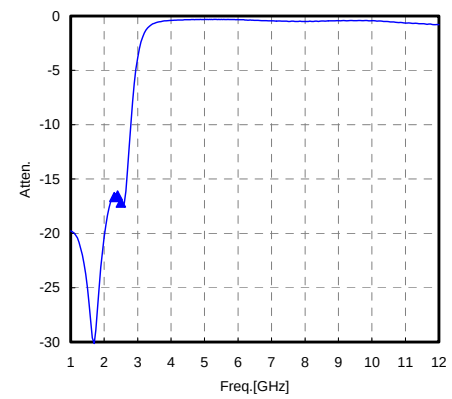
S11 Return Loss	
2.3 GHz	-16.9 dB
2.4 GHz	-17.2 dB
2.5 GHz	-18.8 dB
4.9 GHz	-15.7 dB
5.425 GHz	-15 dB
5.95 GHz	-26.8 dB



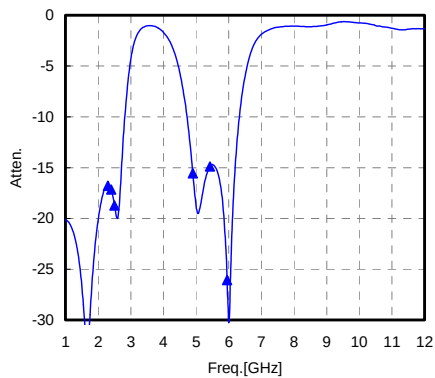
S21 Insertion Lo	
2.3 GHz	-0.46 dB
2.4 GHz	-0.52 dB
2.5 GHz	-0.56 dB



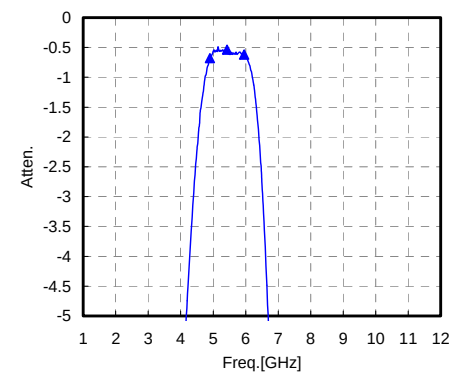
S21 Attenuation	
4.6 GHz	-32.7 dB
5.0 GHz	-29.4 dB
6.9 GHz	-25.3 dB
7.2 GHz	-25.1 dB
7.5 GHz	-25.7 dB



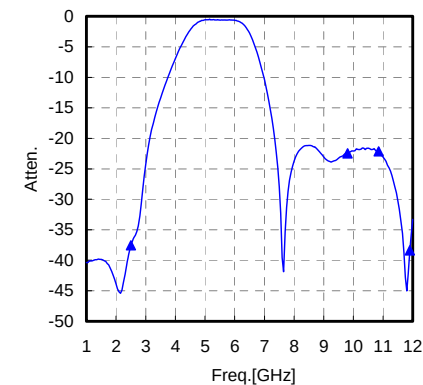
S22 Return Loss	
2.3 GHz	-16.7 dB
2.4 GHz	-16.5 dB
2.5 GHz	-17.2 dB

ANT-HIGH

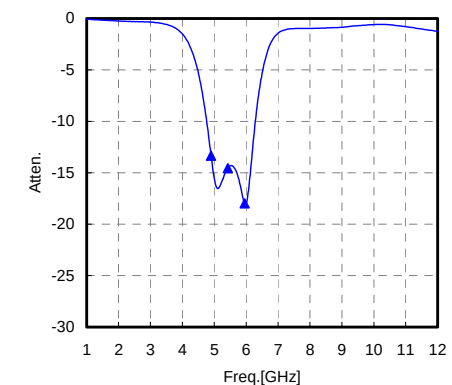
S11 Return Loss	
2.3 GHz	-16.8 dB
2.4 GHz	-17.2 dB
2.5 GHz	-18.7 dB
4.9 GHz	-15.6 dB
5.425 GHz	-14.9 dB
5.95 GHz	-26.1 dB



S21 Insertion Lo	
4.9 GHz	-0.68 dB
5.425 GHz	-0.54 dB
5.95 GHz	-0.62 dB



S21 Attenuation	
2.5 GHz	-37.5 dB
9.8 GHz	-22.5 dB
10.85 GHz	-22.2 dB
11.9 GHz	-38.4 dB



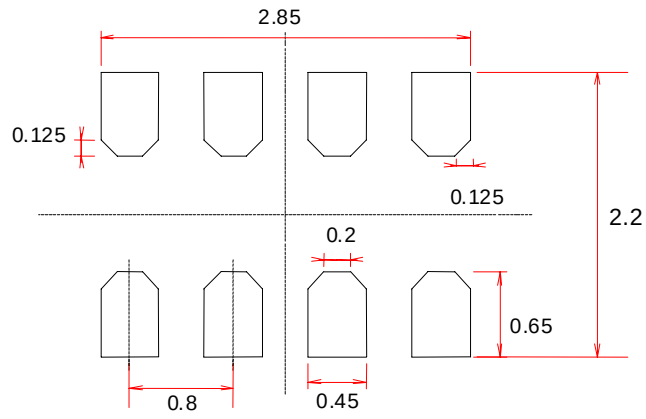
S22 Return Loss	
4.9 GHz	-13.3 dB
5.425 GHz	-14.6 dB
5.95 GHz	-18 dB

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[RECOMMENDED LAND PATTERN]

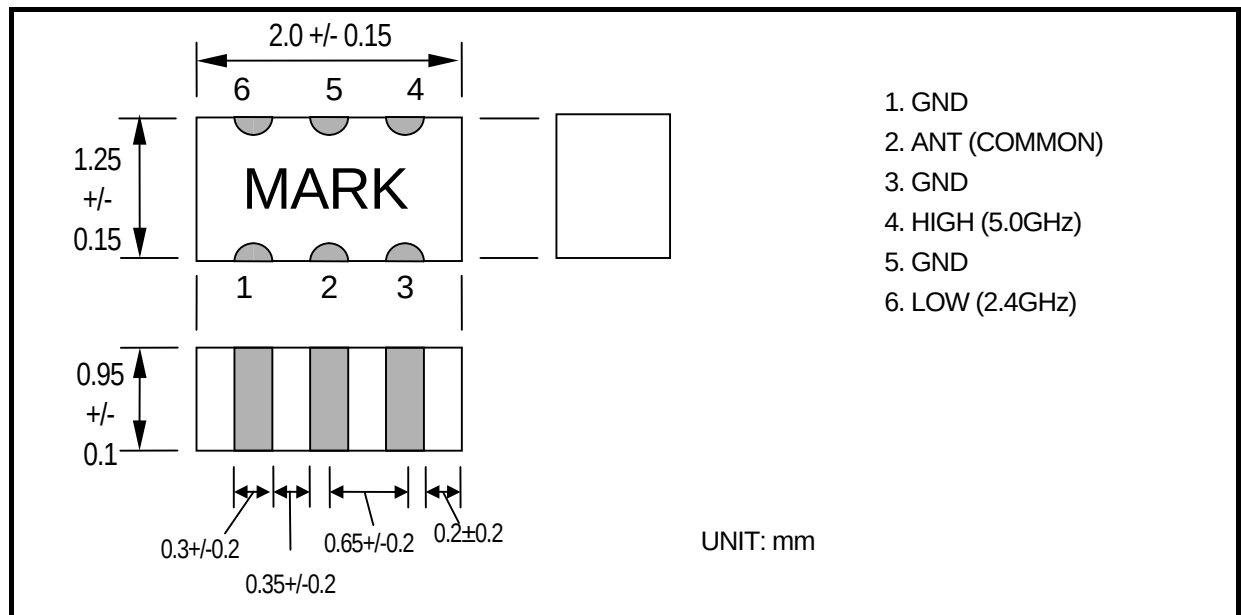


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2012 TYPE MULTILAYER DIPLEXER FOR 2.4GHz 5GHz W-LAN

P/N: **DPX205950DT-9008A1**

[MECHANICAL DIMENSIONS]



[ELECTRICAL CHARACTERISTICS]

No.	PARAMETER	PORT	FREQ (MHz)	MIN	TYP.	MAX	UNIT
1	Insertion loss (25±5 °C)	ANT-LOW	2300-2500	-	0.45	0.65	dB
2	Insertion loss (-40 to +85 °C)	ANT-LOW	2300-2500	-	-	0.8	dB
3	Insertion loss (25±5 °C)	ANT-HIGH	4900-5950	-	0.90	1.4	dB
4	Insertion loss (-40 to +85 °C)	ANT-HIGH	4900-5950	-	-	1.6	dB
5	Attenuation	ANT-LOW	4600-5000	20	23	-	dB
7	Attenuation	ANT-LOW	6900-7500	20	26	-	dB
8	Attenuation	ANT-HIGH	2300-2500	20	24		
9	Attenuation	ANT-HIGH	9800-11900	13	20		
11	Return Loss	ANT	2300-2500	10	20	-	dB
12	Return Loss	ANT	4900-5950	9	11	-	dB
13	Return Loss	LOW	2400-2500	10	20	-	dB
14	Return Loss	HIGH	4900-5950	9	11	-	dB
15	Operating temperature			-40		+85	degC
16	Storage temperature			-40		+85	degC

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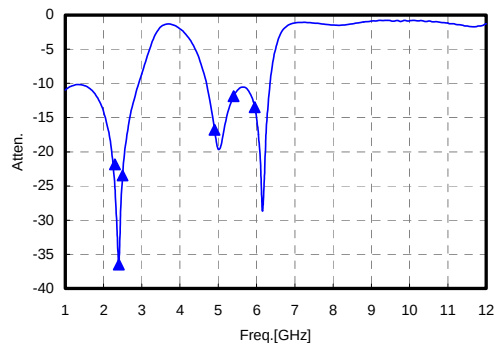
**[FREQUENCY RESPONSE]**

DPX205950DT-9008A1

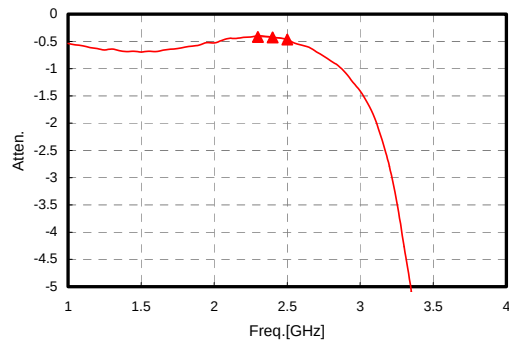
Mark:E-2

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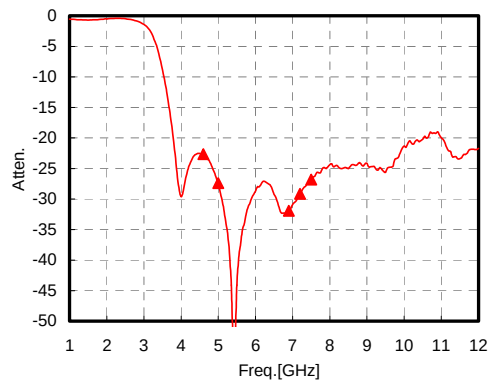
ANT-LOW



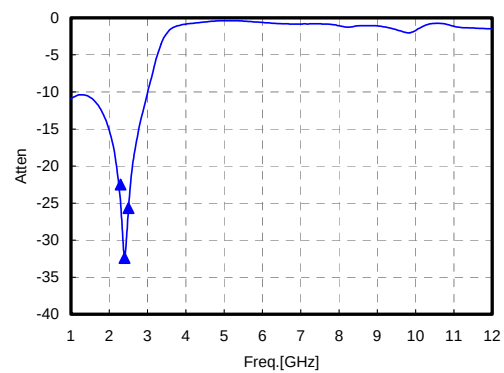
S11 Return Loss	
2.3 GHz	-21.83 dB
2.4 GHz	-36.5 dB
2.5 GHz	-23.5 dB
4.9 GHz	-16.8 dB
5.4 GHz	-11.9 dB
5.95 GHz	-13.5 dB



S21 Insertion Loss	
2.3 GHz	-0.417 dB
2.4 GHz	-0.427 dB
2.5 GHz	-0.465 dB

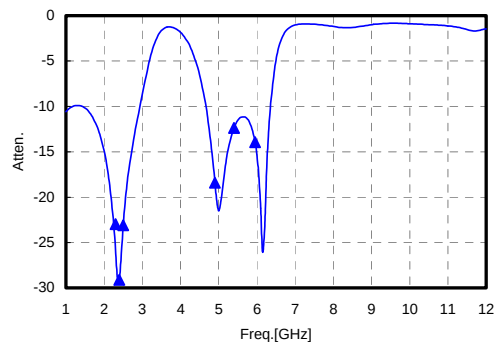


S21 Attenuation	
4.6 GHz	-22.66 dB
5.0 GHz	-27.4 dB
6.9 GHz	-31.93 dB
7.2 GHz	-29.16 dB
7.5 GHz	-26.82 dB

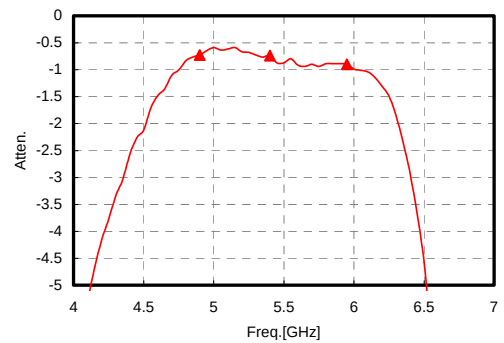


S22 Return Loss	
2.3 GHz	-22.5 dB
2.4 GHz	-32.4 dB
2.5 GHz	-25.68 dB

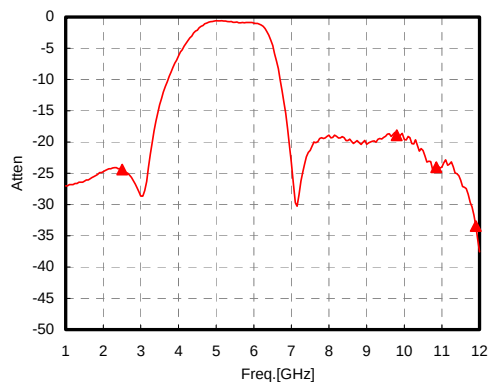
ANT-HIGH



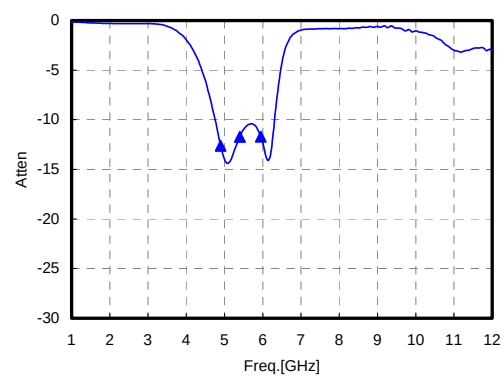
S11 Return Loss	
2.3 GHz	-22.97 dB
2.4 GHz	-29.12 dB
2.5 GHz	-23.1 dB
4.9 GHz	-18.42 dB
5.4 GHz	-12.36 dB
5.95 GHz	-13.9 dB



S21 Insertion Loss	
4.9 GHz	-0.725 dB
5.4 GHz	-0.737 dB
5.95 GHz	-0.901 dB



S21 Attenuation	
2.5 GHz	-24.4 dB
9.8 GHz	-18.89 dB
10.85 GHz	-24.03 dB
11.9 GHz	-33.43 dB



S22 Return Loss	
4.9 GHz	-12.62 dB
5.4 GHz	-11.73 dB
5.95 GHz	-11.7 dB

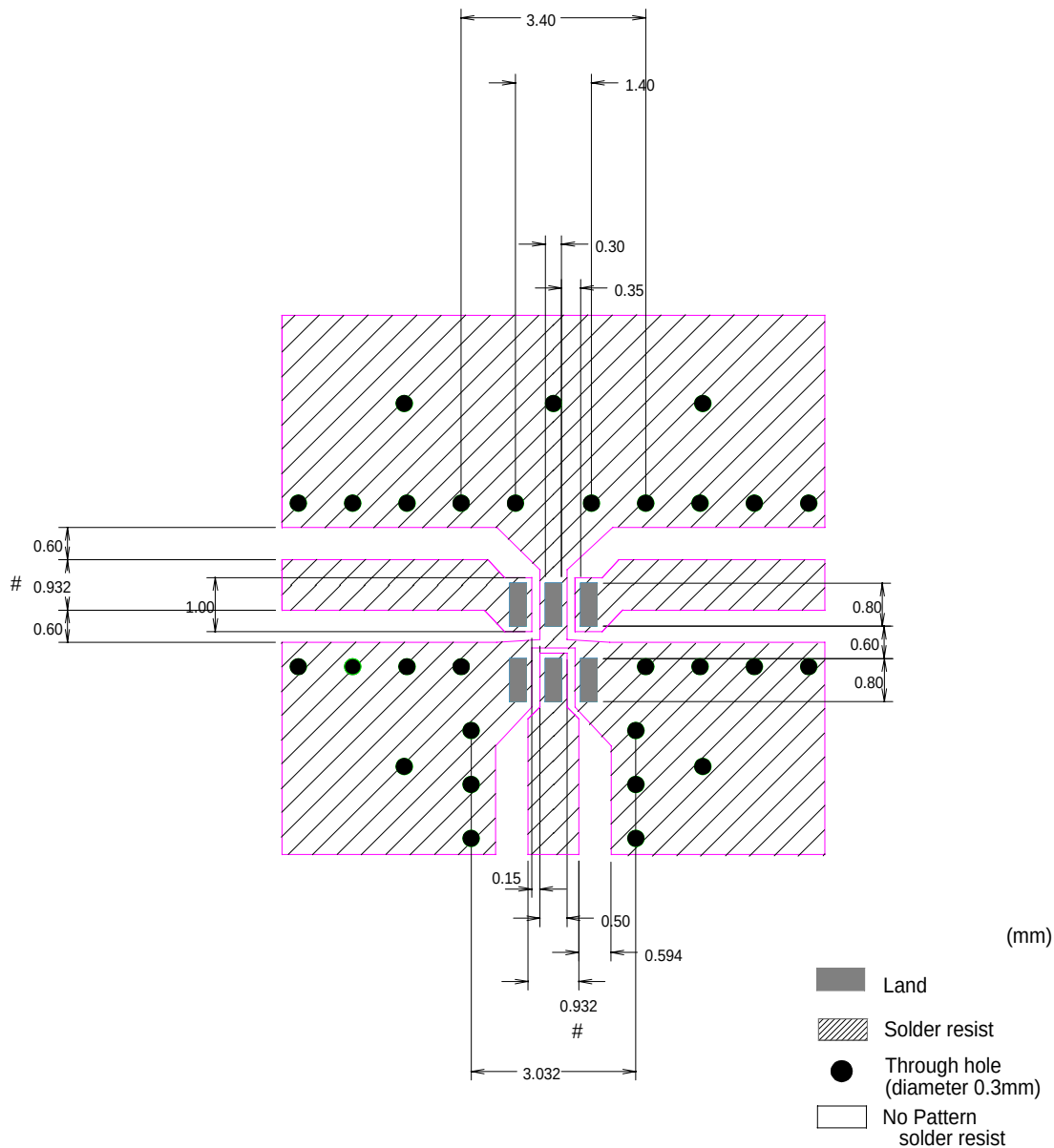
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[RECOMMENDED LAND PATTERN]

Recommended Land pattern
DPX-9***

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

Notes: All the technical data and information contained herein are subject to change without prior notice.

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[FREQUENCY RESPONSE]

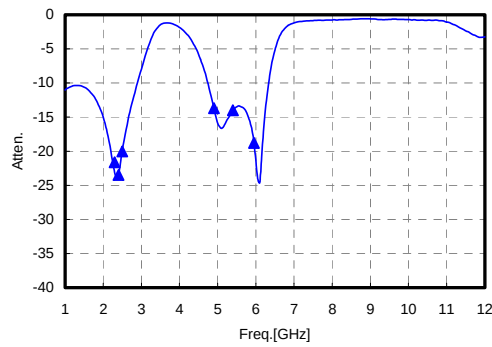
DPX205950DT-9108A1

Mark:E-14

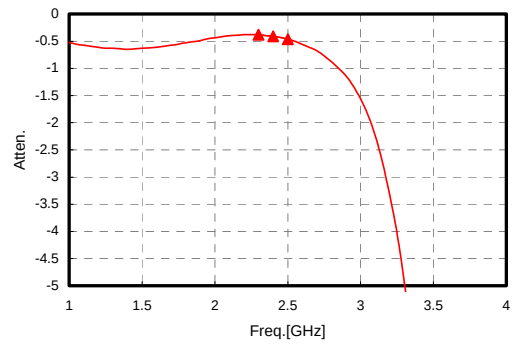
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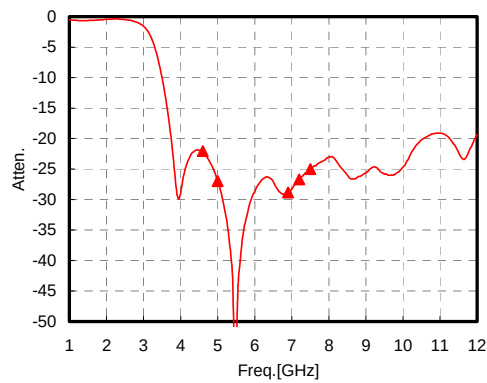
ANT-LOW



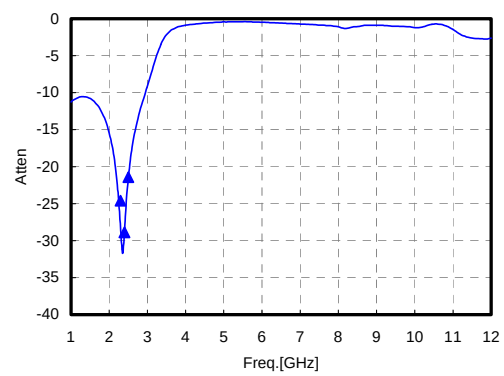
S11 Return Loss	
2.3 GHz	-21.62 dB
2.4 GHz	-23.5 dB
2.5 GHz	-20.0 dB
4.9 GHz	-13.7 dB
5.4 GHz	-14.0 dB
5.95 GHz	-18.8 dB



S21 Insertion Loss	
2.3 GHz	-0.381 dB
2.4 GHz	-0.409 dB
2.5 GHz	-0.465 dB

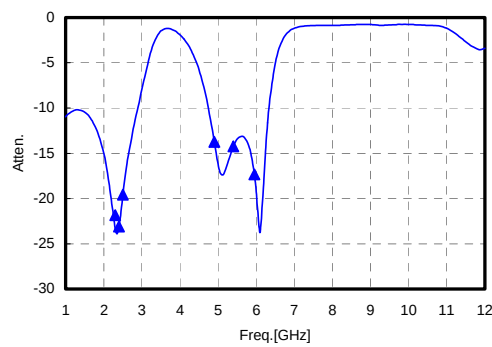


S21 Attenuation	
4.6 GHz	-22.05 dB
5.0 GHz	-27.0 dB
6.9 GHz	-28.82 dB
7.2 GHz	-26.7 dB
7.5 GHz	-25 dB

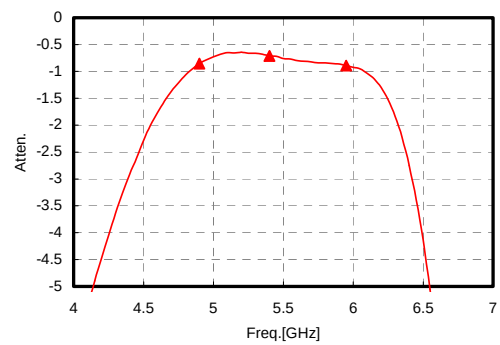


S22 Return Loss	
2.3 GHz	-24.6 dB
2.4 GHz	-28.9 dB
2.5 GHz	-21.41 dB

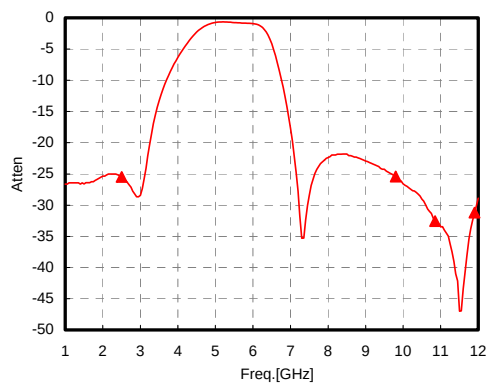
ANT-HIGH



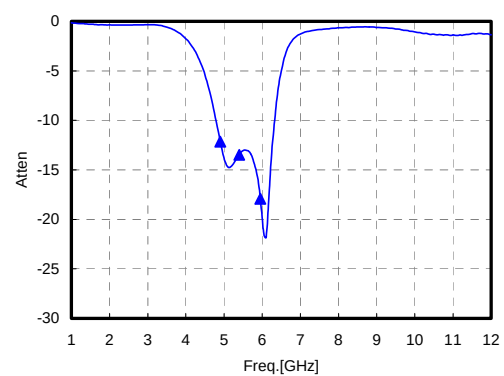
S11 Return Loss	
2.3 GHz	-21.83 dB
2.4 GHz	-23.1 dB
2.5 GHz	-19.58 dB
4.9 GHz	-13.72 dB
5.4 GHz	-14.24 dB
5.95 GHz	-17.3 dB



S21 Insertion Loss	
4.9 GHz	-0.855 dB
5.4 GHz	-0.71 dB
5.95 GHz	-0.893 dB



S21 Attenuation	
2.5 GHz	-25.49 dB
9.8 GHz	-25.4 dB
10.85 GHz	-32.55 dB
11.9 GHz	-31.2 dB



S22 Return Loss	
4.9 GHz	-12.15 dB
5.4 GHz	-13.47 dB
5.95 GHz	-17.92 dB

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Recommended Land pattern
DPX-9***

Technical drawing of a PCB layout showing dimensions and a legend.

Dimensions (mm):

- Overall width: 3.40
- Overall height: 3.032
- Top horizontal segments: 1.40, 0.30, 0.35
- Bottom horizontal segments: 0.15, 0.50, 0.594
- Vertical segments: 0.60, 0.932, 0.60, 0.80, 0.60, 0.80
- Internal horizontal segments: 1.00, 0.932

Legend:

- Land (Solid gray)
- Solder resist (Hatched pattern)
- Through hole (diameter 0.3mm) (Black circle)
- No Pattern solder resist (White area)

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