

MPD0938W2D21

0.6 way Power Splitter/Combiners



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Applications

1. GNSS Antenna
2. Multi-frequency signal combined
3. GSM, CDMA and LTE

Features

1. Low Insertion Loss 0.8dB typ based on IPD technology
2. Based on IPD technology
3. High isolation
4. Frequency wide Band
5. AECQ-200 qualified

Description

The MPD0938W2D21 is a low cost, high performance two ways power splitters in an easy to use surface mount package. It is ideal for multi -frequency signal combined, indoor antenna distribution system and multi-frequency Small Cell & Pico. MPD0938W2D21 is Based on IPD technology which possess excellent electrical and mechanical stability. All components are 100% RF tested.

Electrical Specifications

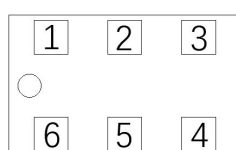
Table 1. MPD0938W2D21 Electrical Specifications

Item	Min.	Type.	Max.	Unit
Frequency Range	1000		4000	MHz
Insertion Loss (above 3 dB)	0.3	0.8	1.3	dB
Isolation	10		16	dB
Amplitude Unbalance	-0.5		+0.5	
Phase Unbalance	-3	2	+3	Deg.
Return loss (Port 2)	-21		-10	dB
Return loss (Port 4,6)	-21		-10	dB
Operating Temp.	-40		+85	°C
Power Input (2 port)			0.5	Watt

All the above data are based on specified demo board and tested in 25° environment.

Port Configurations

Figure 1. MPD0938W2D21 Port Configurations (Bottom View)



Pin #	Connection
1/3/5/	GND
2	In
4/6	Out

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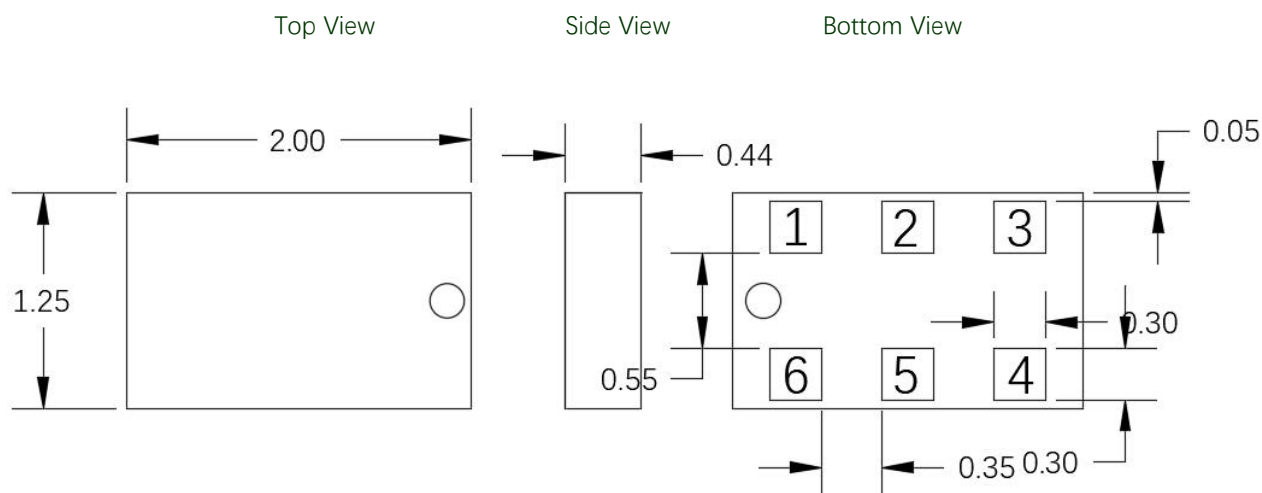
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Outline Drawing

Figure 2. MPD0938W2D21 Outline Drawing



Typical Performance

Figure 3. MPD0938W2D21 Insertion Loss



Figure 5. MPD0938W2D21 Return Loss (S44)

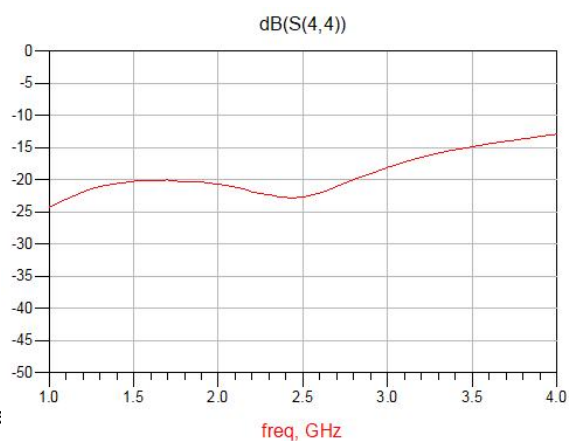


Figure 4. MPD0938W2D21 Return Loss (S22)

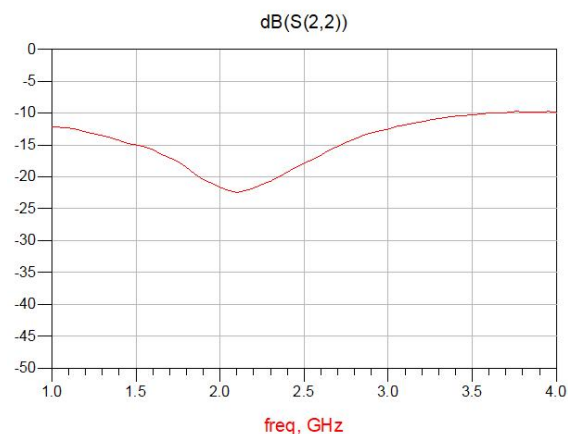
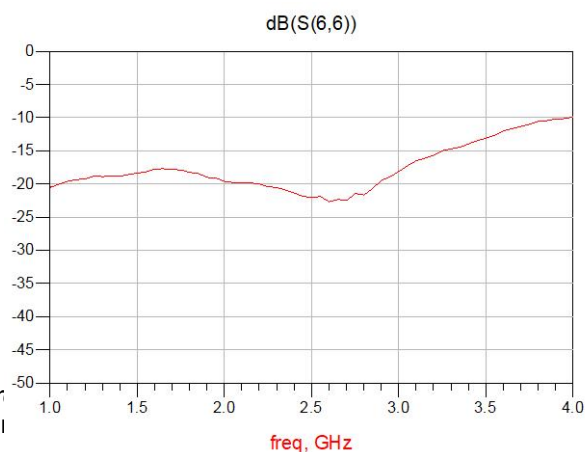


Figure 6. MPD0938W2D21 Return Loss (S66)



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Figure 7. MPD0938W2D21 Isolation

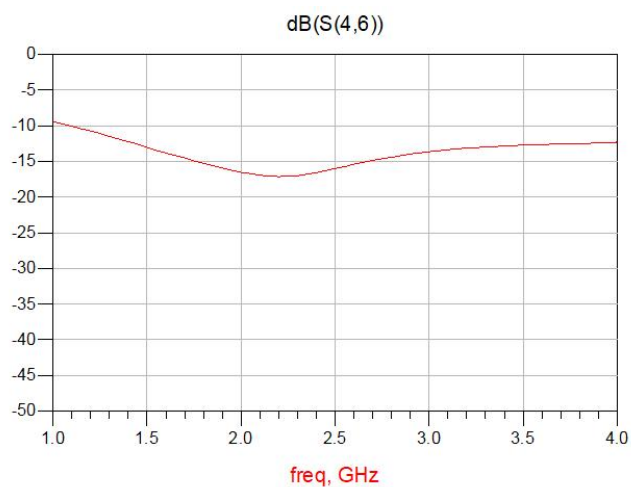
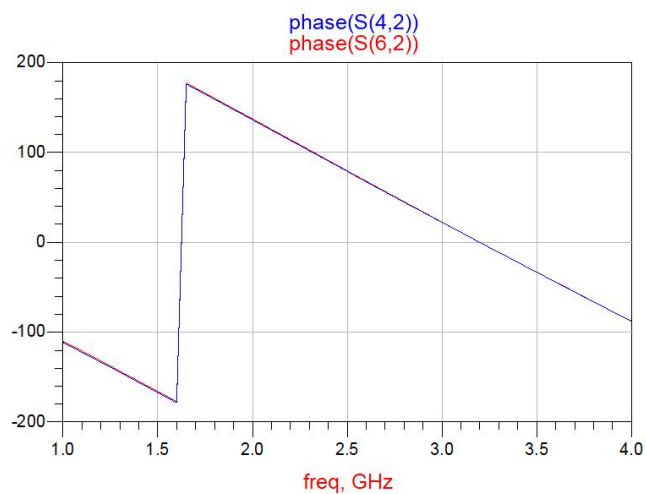


Figure 8. MPD0938W2D21 Phase



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Packaging and Ordering Information

Figure 9. MPD0938W2D21 Packaging Specifications

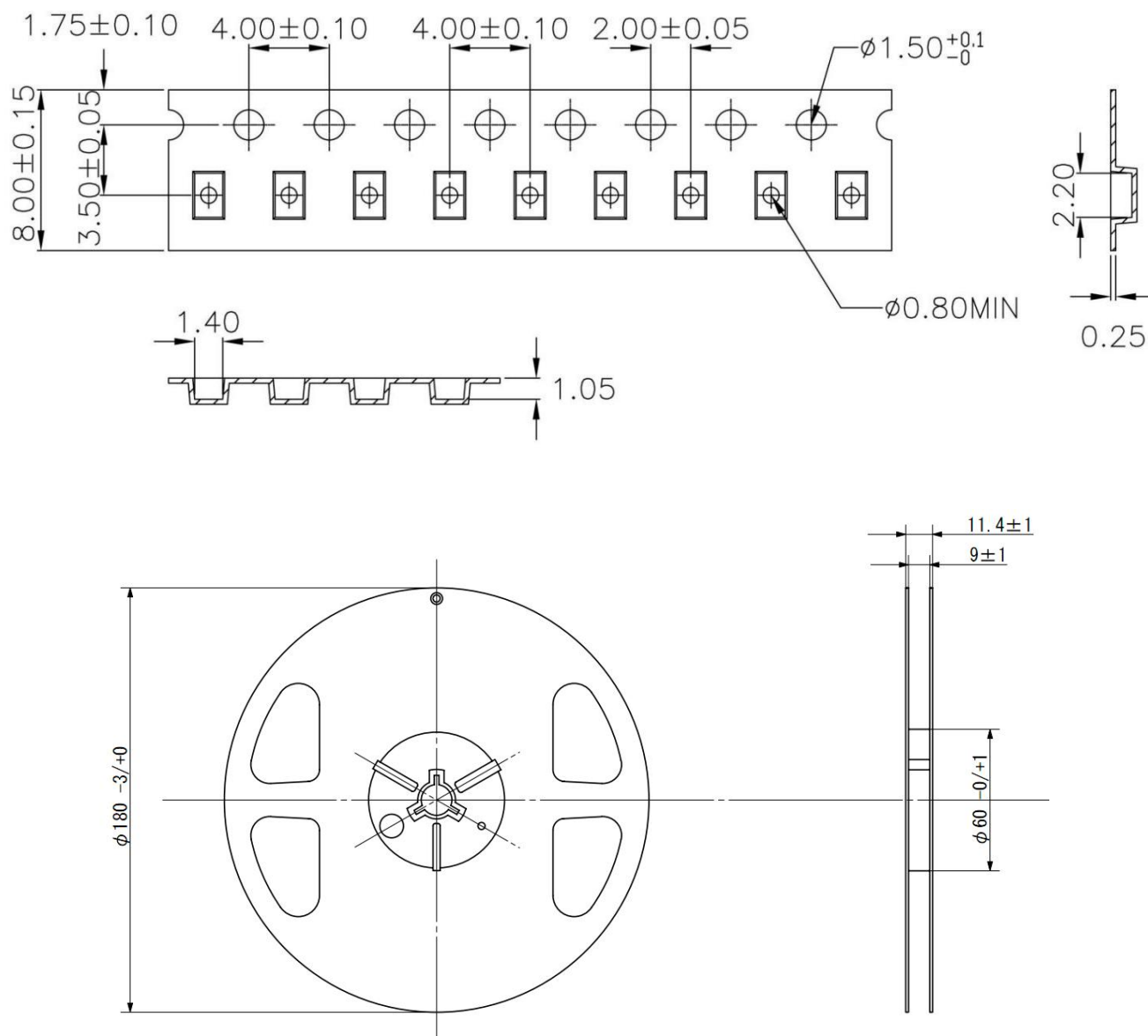


Table 2. MPD0938W2D21 Ordering Information

Device	Package	Reel	Shipping
MPD0938W2D21	2*1.25mm	7"	4000/Reel

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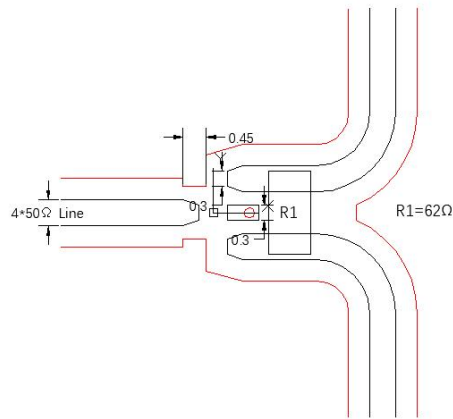
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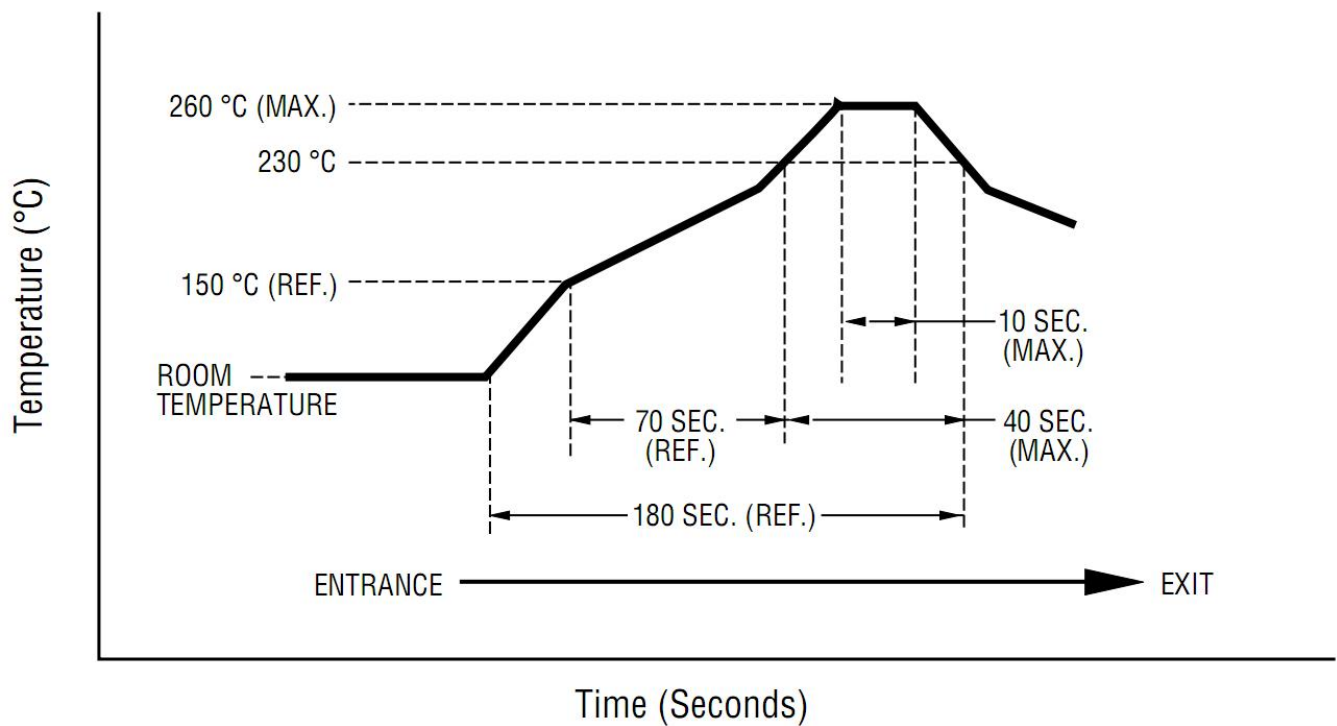
Recommended PCB Layout

Figure 10. Recommended PCB Layout



Recommended Reflow Solder Profile

Figure 11. MPD0938W2D21 Recommended Reflow Solder Profile



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Revision	Description	Date
Rev1	Preliminary	2023/10/28
Rev2	Packaging	2023/11/21
Rev2	Typical Performance, Packaging	2024/03/15

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