

MPD1020W2D21

2 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 0.7dB typ based on IPD technology
2. Based on IPD technology
3. High isolation
4. Frequency wide Band
5. AEC-Q200 qualified

Description

The MPD1020W2D21 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. MPD1020W2D21 is Based on IPD technology which possess excellent electrical and mechanical stability. All components are 100% RF tested.

Electrical Specifications

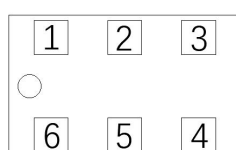
Table 1. MPD1020W2D21 Electrical Specifications

Item	Min.	Type.	Max.	Unit
Frequency Range	1100		1700	MHz
Insertion Loss (above 3 dB)		0.7	0.8	dB
Isolation	16	20		dB
Amplitude Unbalance	-0.3	0.2	+0.3	
Phase Unbalance	-3	2	+3	Deg.
Return loss (Port 2)	-25		-14	dB
Return loss (Port 4,6)		-22	-16	dB
Operating Temp.	-55		+125	°C
Power Input (Port 2)			0.5	Watt

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

Port Configurations

Figure 1. MPD1020W2D21 Port Configurations (Bottom View)



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

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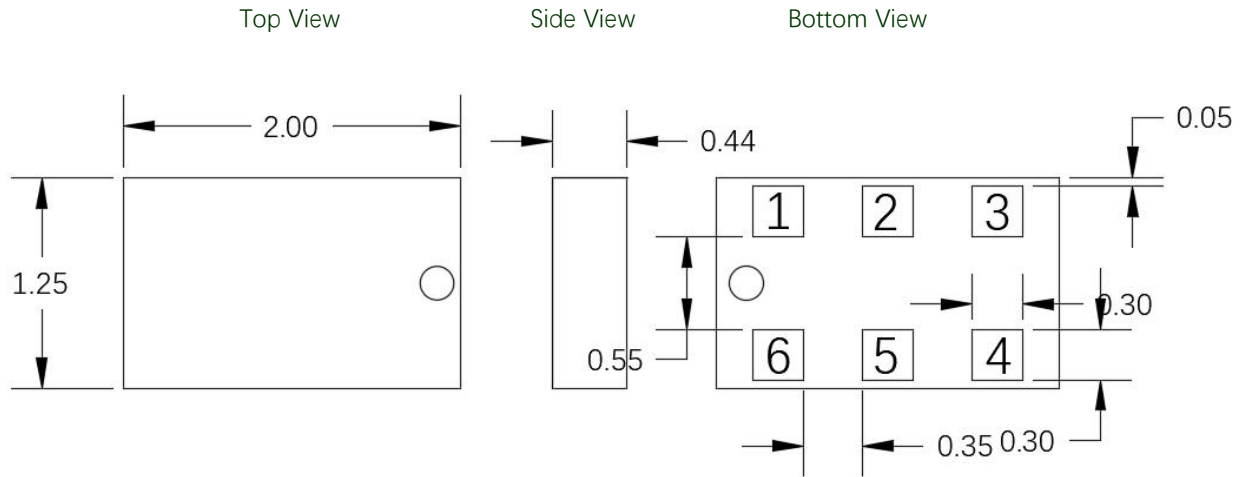
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Outline Drawing

Figure 2. MPD1020W2D21 Outline Drawing



Typical Performance

Figure 3. MPD1020W2D21 Insertion Loss

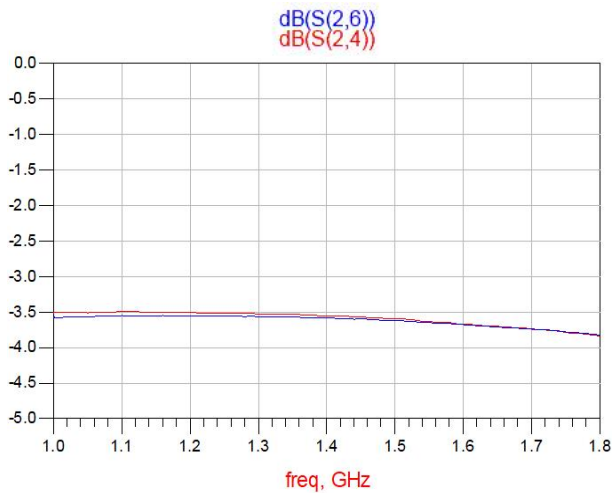


Figure 4. MPD1020W2D21 Return Loss (S22)



Figure 5. MPD1020W2D21 Return Loss (S44)

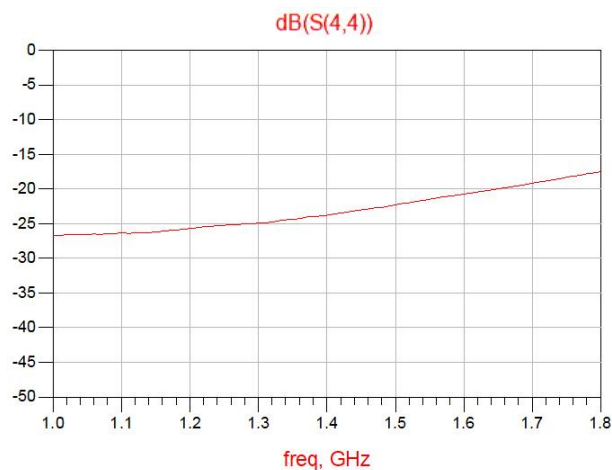
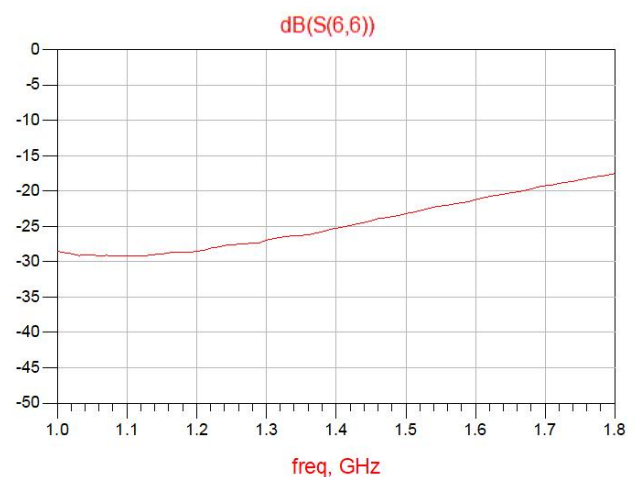


Figure 6. MPD1020W2D21 Return Loss (S66)



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Figure 7. MPD1020W2D21 Isolation

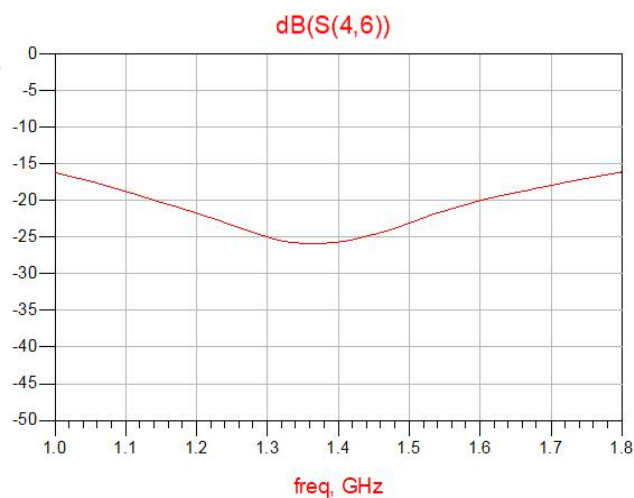
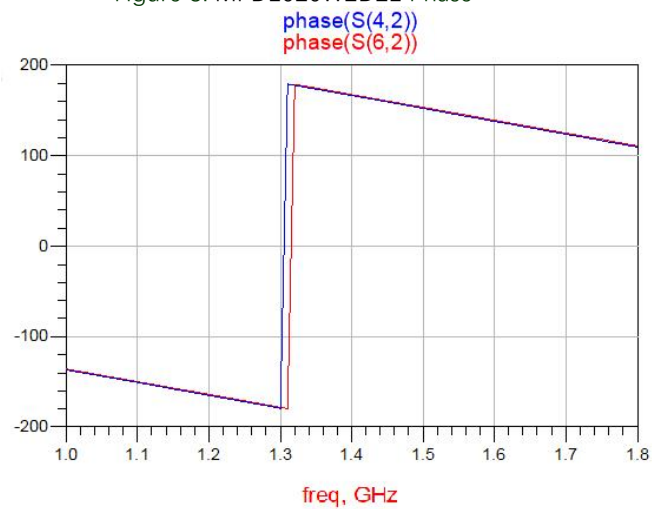


Figure 8. MPD1020W2D21 Phase



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Packaging and Ordering Information

Figure 9. MPD1020W2D21 Packaging Specifications

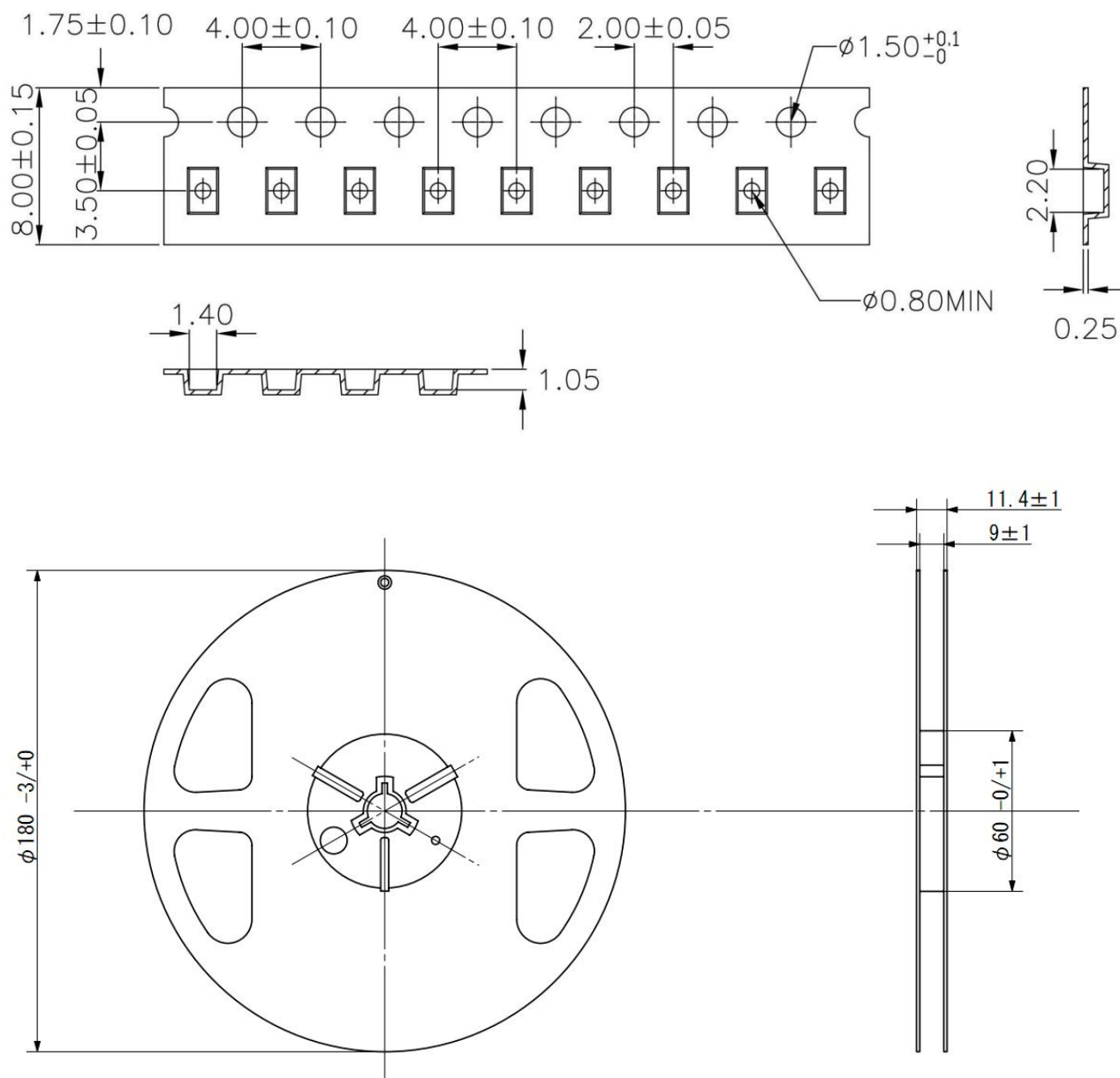


Table 2. MPD1020W2D21 Ordering Information

Device	Package	Reel	Shipping
MPD1020W2D21	2*1.25mm	7"	4000/Reel

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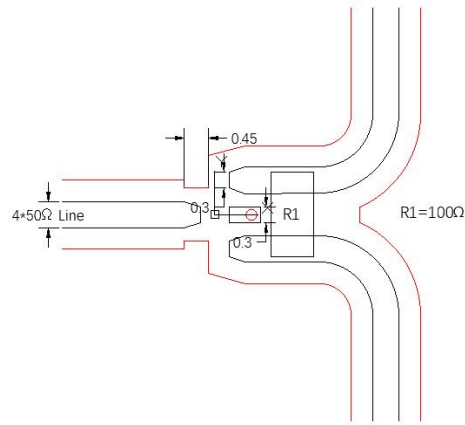
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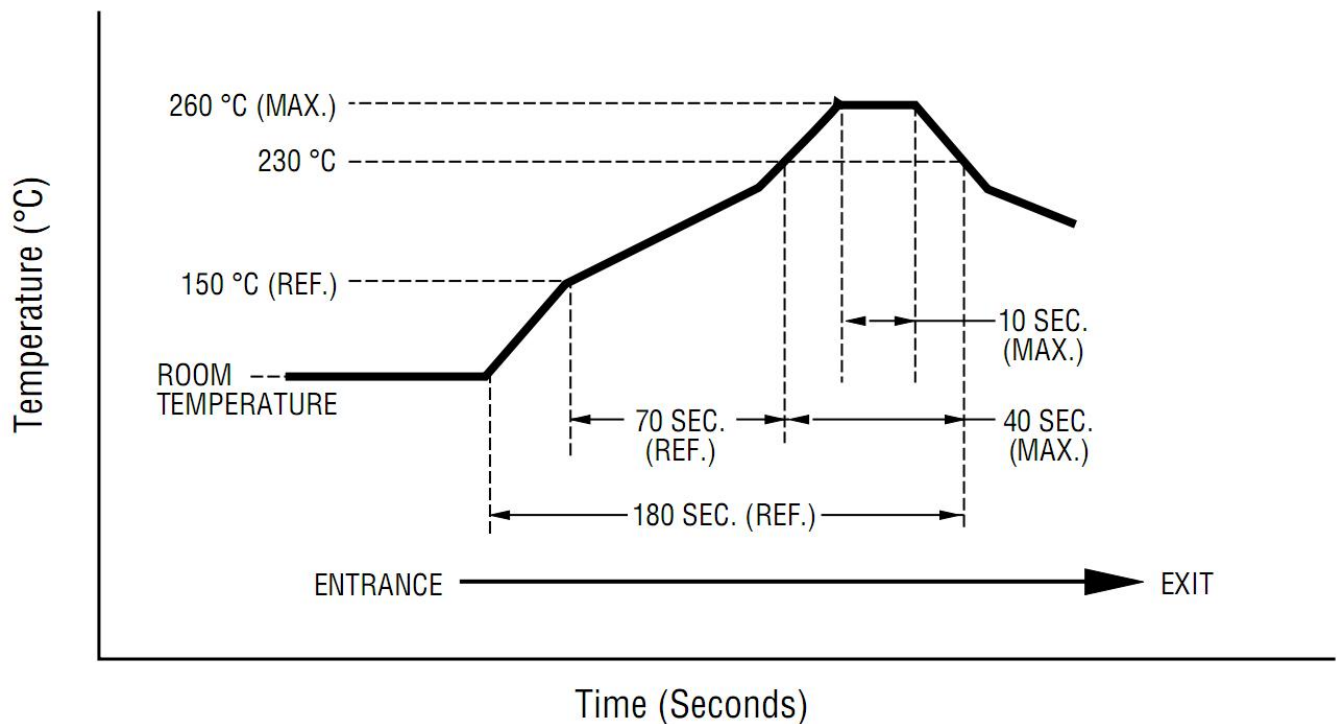
Recommended PCB Layout

Figure 10. Recommended PCB Layout



Recommended Reflow Solder Profile

Figure 11. MPD1020W2D21 Recommended Reflow Solder Profile



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Revision	Description	Date
Rev1	Preliminary	2024/10/28
Rev2	Update	2025/10/30
Rev2	Update	2025/11/07
Rev3	Update	2026/4/08

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