

Product Information

Control No. : ARP-4170100-H 1

Issued on July 13, 2020

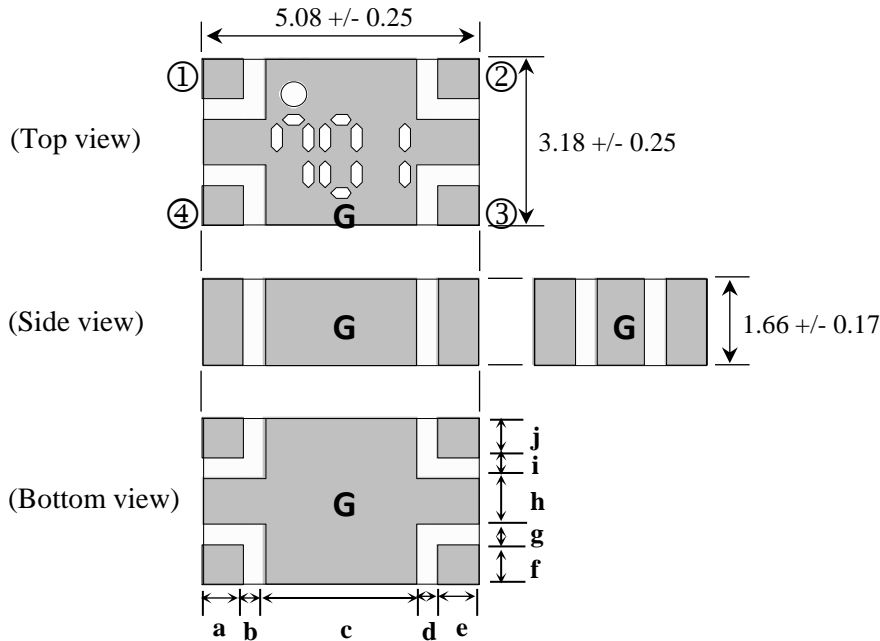
Application : 3dB 90deg Hybrid Coupler for 800-1000MHz

1. Type No.

HMD1701A-HYB0900

RoHS Compliant Part

2. Dimension (Unit : mm)



Terminal	
①	IN
②	ISOLATION
③	OUT(90deg)
④	OUT(0deg)
G	GND

Terminal Dimensions	
a	0.76 +/- 0.20
b	0.38 +/- 0.20
c	2.80 +/- 0.20
d	0.38 +/- 0.20
e	0.76 +/- 0.20
f	0.77 +/- 0.20
g	0.38 +/- 0.20
h	0.89 +/- 0.20
i	0.38 +/- 0.20
j	0.77 +/- 0.20

3. Electrical characteristics

Parameter		Band1	Band2	Band3	Unit	Remark
Pass band frequency	Specification	800-1000	869-894	925-960	MHz	
Nominal impedance	Specification	50	50	50	ohm	
Input port VSWR	Specification	1.15 Max.	1.12 Max.	1.12 Max.	-	
	Typical	1.03	1.00	1.02		
Isolation	Specification	23 Min.	26 Min.	26 Min.	dB	
	Typical	34.0	37.6	42.9		
Insertion Loss at 25degC.	Specification	0.16 Max.	0.15 Max.	0.16 Max.	dB	
	Typical	0.13	0.12	0.12		
Amplitude balance	Specification	0.3 Max.	0.3 Max.	0.3 Max.	dB	
	Typical	0.09	0.06	0.09		
Phase balance	Specification	90 +/- 4	90 +/- 3	90 +/- 4	deg	
	Typical	91.0	90.6	90.8		
Group Delay Terminal 1-3	Specification	0.23 +/- 0.04	0.23 +/- 0.04	0.23 +/- 0.04	nsec	
	Typical	0.25 - 0.259	0.251 - 0.252	0.254 - 0.257		
Group Delay Terminal 1-4	Specification	0.23 +/- 0.04	0.23 +/- 0.04	0.23 +/- 0.04	nsec	
	Typical	0.244 - 0.251	0.244 - 0.245	0.247 - 0.249		

4. Note

- | | |
|---------------------------------|--|
| 4.1 Operating Temperature Range | : -55 to +125 deg.C |
| 4.2 Storage Temperature Range | : -20 to +35 deg.C (In a Taping Package) |
| 4.3 Max Input Power | : 45W Avg/CW at 125deg.C |
| 4.4 Standard Reel Quantity | : 1,000 pcs (per reel, per bag) |

Approved by	Confirmed by	Raised by
Y. Imai	T. Hasegawa	M. Aiba

SOSHIN ELECTRIC CO., LTD

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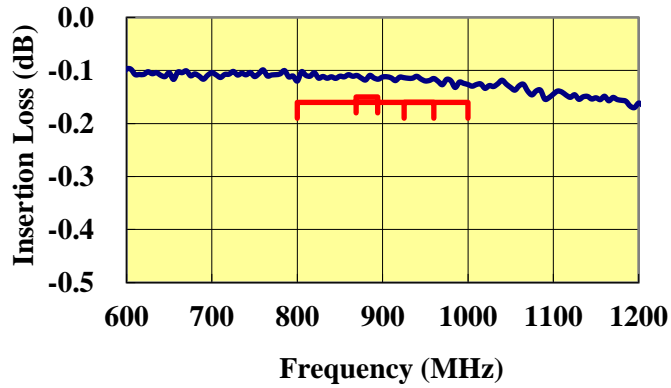
Control No. : ARP-4170100-H 2

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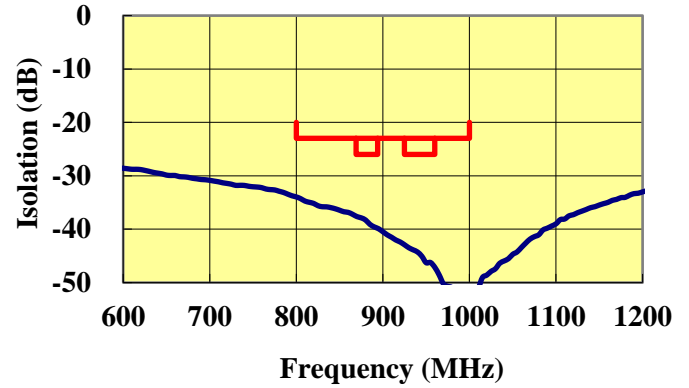
5.Representative characteristics

Measured Data

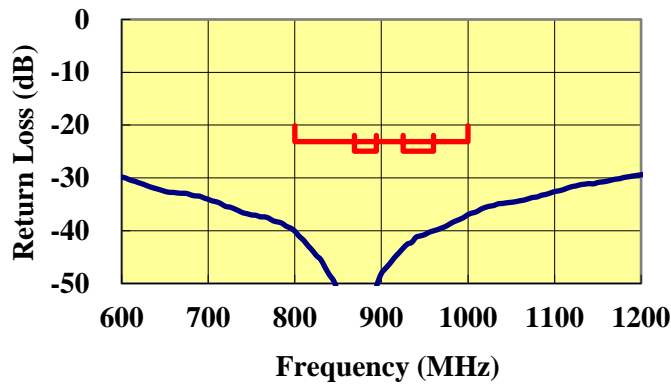
Frequency vs. Insertion Loss



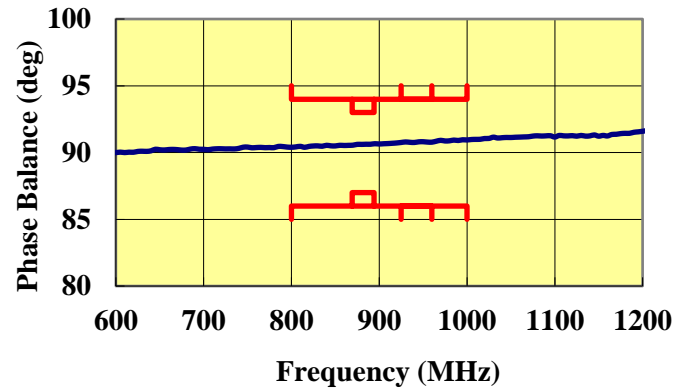
Frequency vs. Isolation



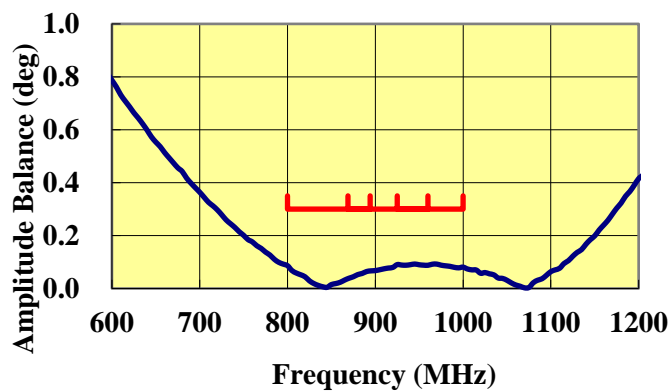
Frequency vs. Return Loss



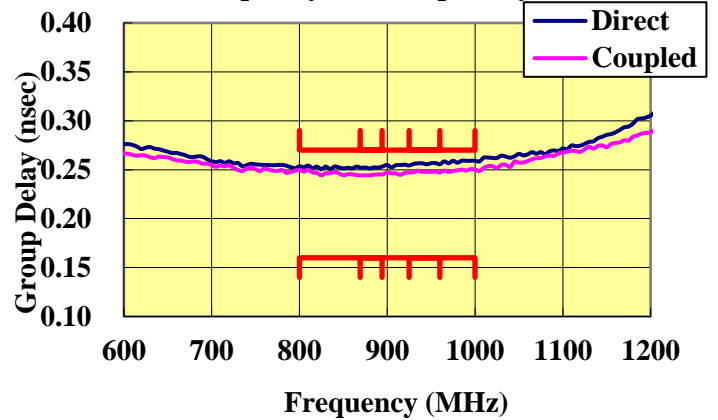
Frequency vs. Phase Balance



Frequency vs. Amplitude Balance

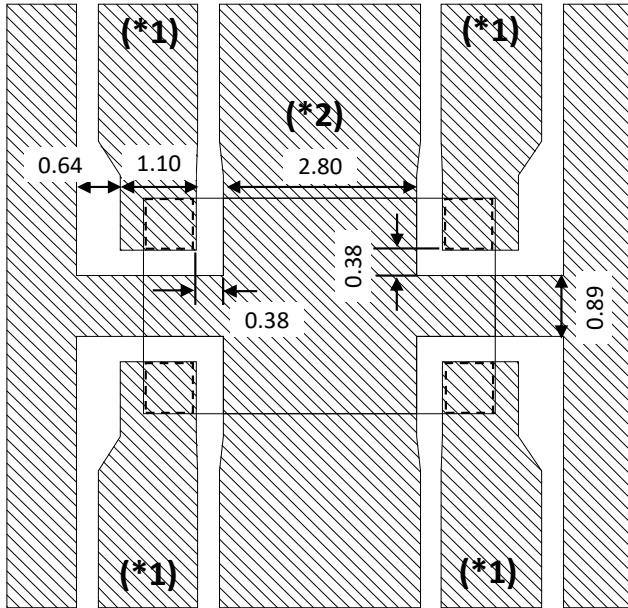


Frequency vs. Group Delay

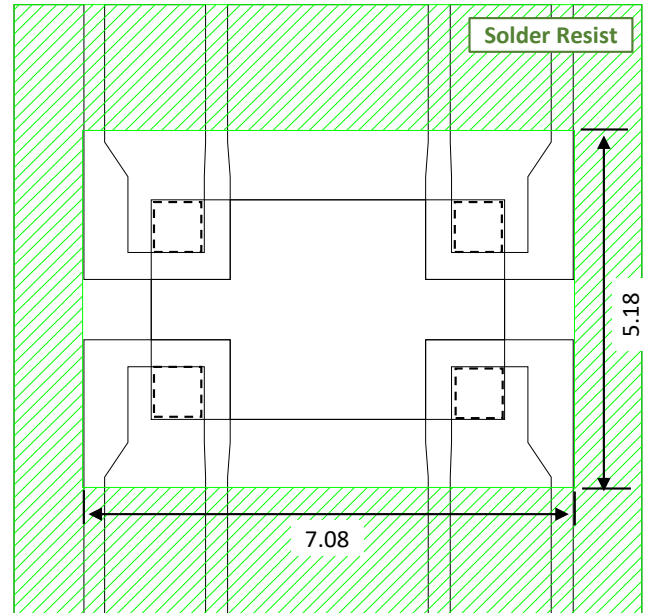


6.Recommended Land Pattern (Unit:mm)

*Land Pattern



*Resist Pattern



*1 50 ohm impedance Line

*2 Ground Plane