

# Tentative Specification

(Under development)

Control No. : ARP-4171300-D 1

Issued on September 3, 2018

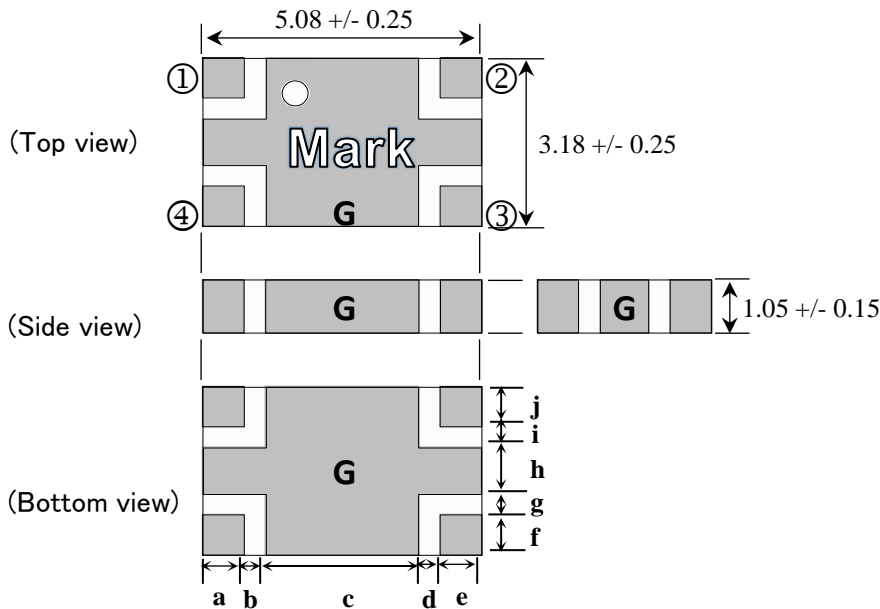
## Application : 20dB Directional Coupler 3200-4000MHz

### 1. Type No.

HMD1713A-20M3500

RoHS Compliant Parts

### 2. Dimension (Unit : mm)



	Configuration1	Configuration2
①	Input	Direct
②	Direct	Input
③	Isolated	Coupled
④	Coupled	Isolated
G	GND	GND

Terminal Dimensions	
a	$0.76 \pm 0.20$
b	$0.38 \pm 0.20$
c	$2.80 \pm 0.20$
d	$0.38 \pm 0.20$
e	$0.76 \pm 0.20$
f	$0.77 \pm 0.20$
g	$0.38 \pm 0.20$
h	$0.89 \pm 0.20$
i	$0.38 \pm 0.20$
j	$0.77 \pm 0.20$

### 3. Electrical characteristics

Parameter		Band1	Band2	Band3	Band4	Unit
Pass band frequency	Specification	3200-4000	3400-3600	3550-3700	3600-3800	MHz
Nominal impedance	Specification	50	50	50	50	ohm
Mean Coupling	Specification	$20.0 \pm 1.0$	$20.0 \pm 1.0$	$20.0 \pm 1.0$	$20.0 \pm 1.0$	dB
	Typical	20.03	19.97	19.95	19.96	
Insertion Loss (at 25deg.C)	Specification	0.075 Max.	0.075 Max.	0.075 Max.	0.075 Max.	dB
	Typical	0.032	0.023	0.023	0.025	
Input port V.S.W.R.	Specification	1.22 Max.	1.15 Max.	1.15 Max.	1.15 Max.	-
	Typical	1.08	1.05	1.02	1.02	
Directivity	Specification	15 Min.	20 Min.	20 Min.	20 Min.	dB
	Typical	24.35	28.49	35.43	35.25	
Frequency Sensitivity	Specification	0.50 Max.	0.30 Max.	0.30 Max.	0.30 Max.	dB
	Typical	0.09	0.02	0.01	0.02	
Group Delay Terminal 1-2	Specification	$0.045 \pm 0.030$	$0.045 \pm 0.030$	$0.045 \pm 0.030$	$0.045 \pm 0.030$	nsec
	Typical	0.048-0.051	0.049-0.051	0.049-0.051	0.049-0.051	
Group Delay Terminal 1-4	Specification	$0.075 \pm 0.030$	$0.075 \pm 0.030$	$0.075 \pm 0.030$	$0.075 \pm 0.030$	nsec
	Typical	0.083-0.088	0.084-0.087	0.083-0.085	0.083-0.085	

### 4. Note

- |                                 |  |
|---------------------------------|--|
| 4.1 Operating Temperature Range | : -55 to +105 deg.C                      |
| 4.2 Storage Temperature Range   | : -20 to +35 deg.C (In a Taping Package) |
| 4.3 Power Capacity              | : 100W max.                              |
| 4.4 Standard Reel Quantity      | : 1,000 pcs (per reel, per bag)          |

Approved by	Confirmed by	Raised by
Y. Mizutani	H. Makino	M. Aiba

SOSHIN ELECTRIC CO., LTD

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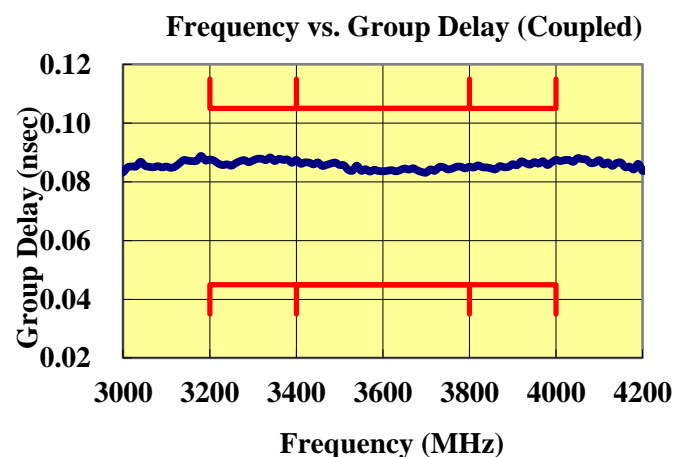
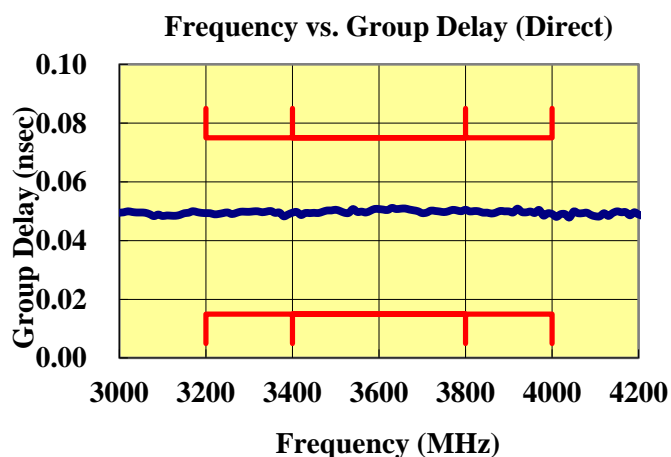
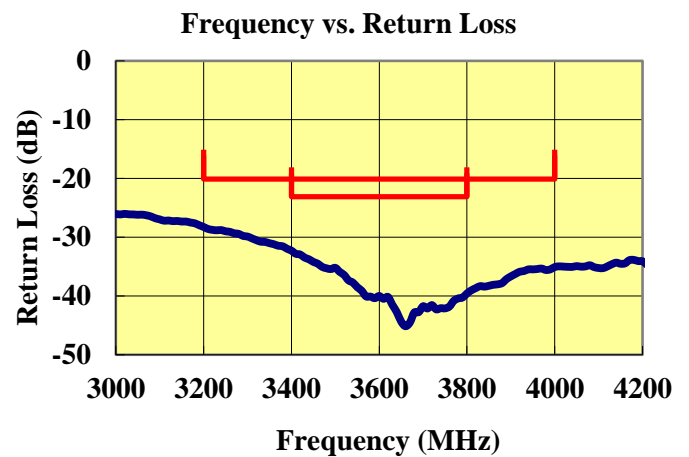
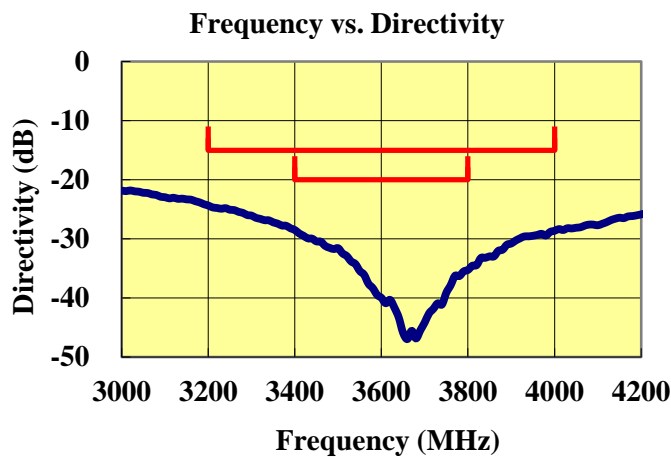
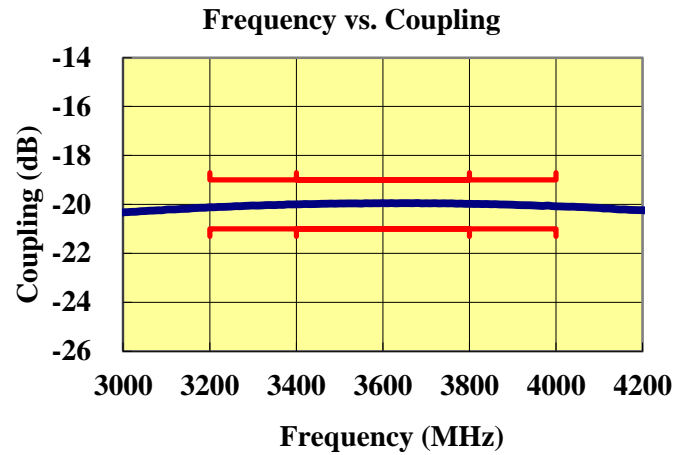
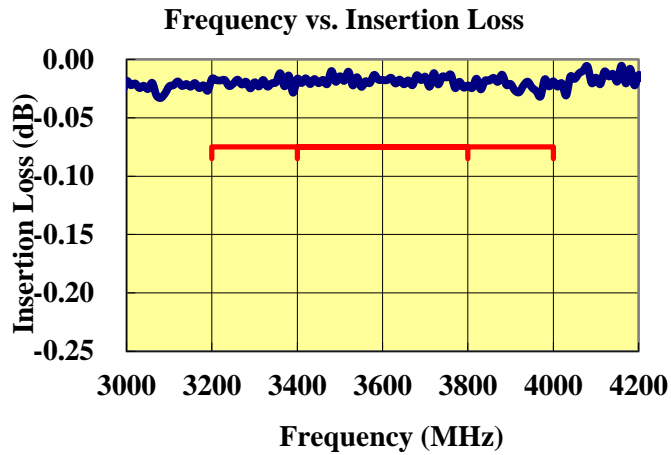
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## 5. Representative characteristics

Measured data



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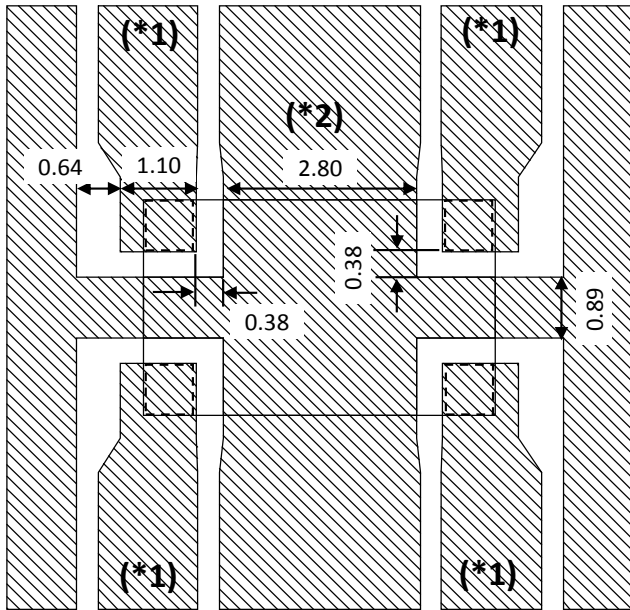
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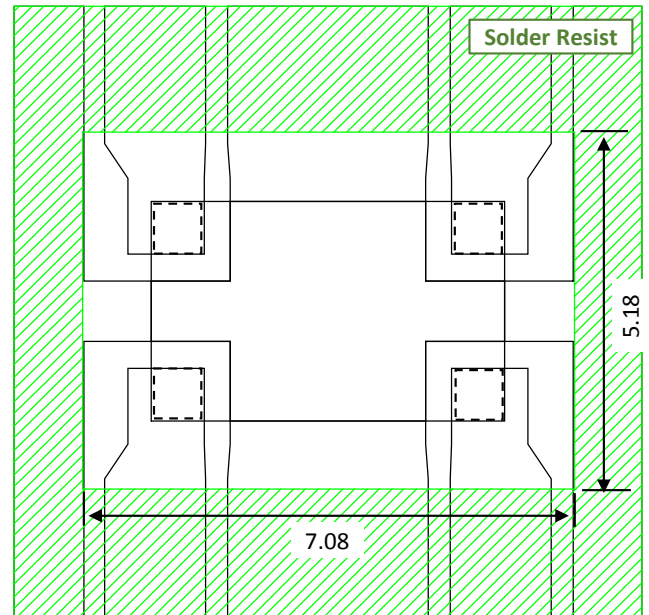
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## 6.Recommended Land Pattern (Unit:mm)

### \*Land Pattern



### \*Resist Pattern



\*1 50 ohm impedance Line

\*2 Ground Plane