

Multilayer Directional Couplers

For DCS Tx

HHM Series

Type: **HHM2204SA1 (1.6×0.8×0.6mm)**
 HHM2209SA1 (1.6×0.8×0.6mm)

Issue date: December 2010

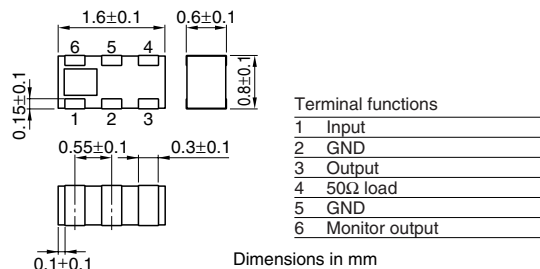
- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Multilayer Chip Directional Couplers For DCS/Tx

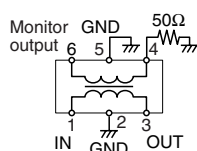
Conformity to RoHS Directive

HHM Series HHM2204SA1

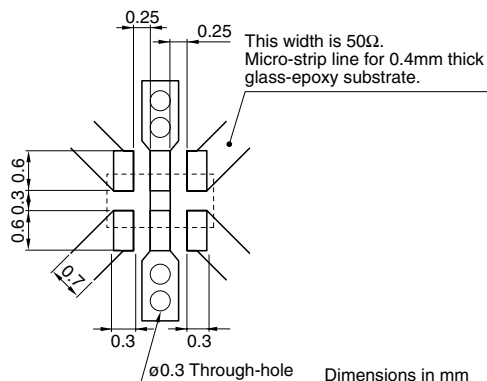
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Frequency range	1710 to 1785MHz	
Coupling factor	15.0±1.0dB	
Insertion loss	0.30dB max.*1	
	0.35dB max.*2	
Isolation	25dB min.	
VSWR	1.3 max.	
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C

*1 25°C

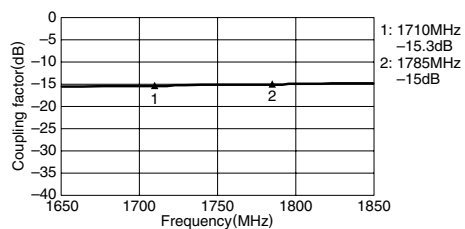
*2 Operating temperature

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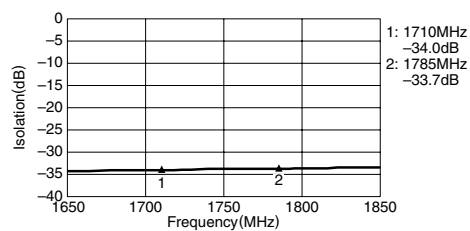
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FREQUENCY CHARACTERISTICS

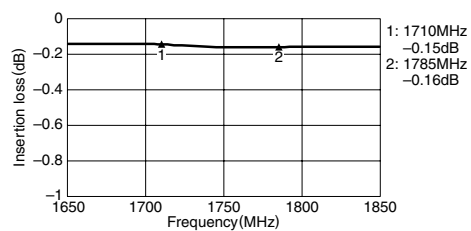
COUPLING



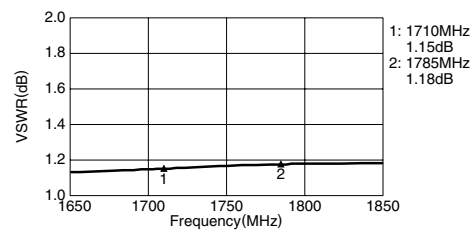
ISOLATION



INSERTION LOSS



VSWR

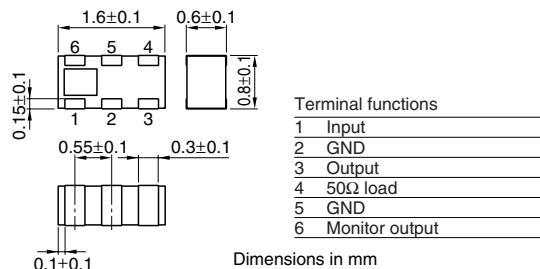


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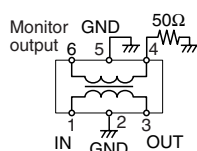
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HHM Series HHM2209SA1

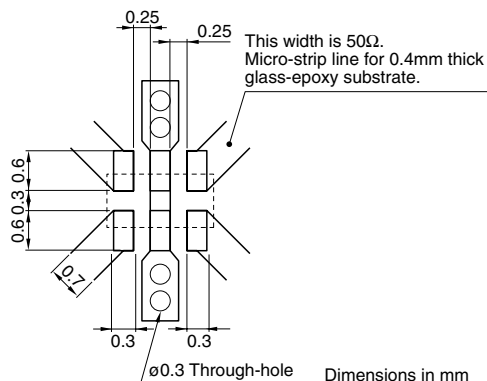
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Frequency range	1710 to 1785MHz	
Coupling factor	12.0±1.0dB	
Insertion loss	0.55dB max.*1	
	0.60dB max.*2	
Isolation	20dB min.	
VSWR	1.3 max.	
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C

*1 25°C

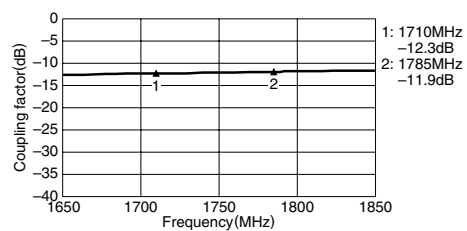
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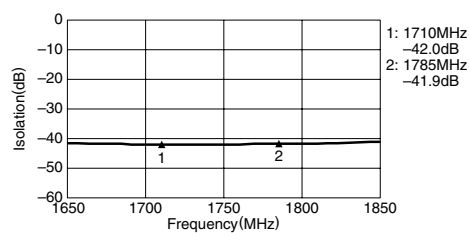
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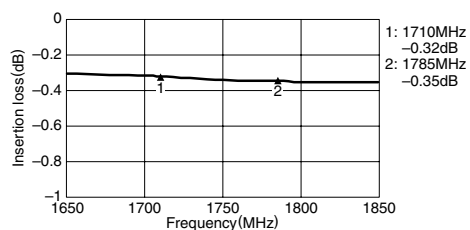
COUPLING



ISOLATION



INSERTION LOSS



VSWR

