

Multilayer Balun Transformers

For 2.4GHz W-LAN/Bluetooth

HHM Series

Type: **HHM1710D1 (1.6×0.8×0.6mm)**
 HHM1711D1 (1.6×0.8×0.6mm)
 HHM1712D1 (1.6×0.8×0.6mm)
 HHM1713E2 (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.
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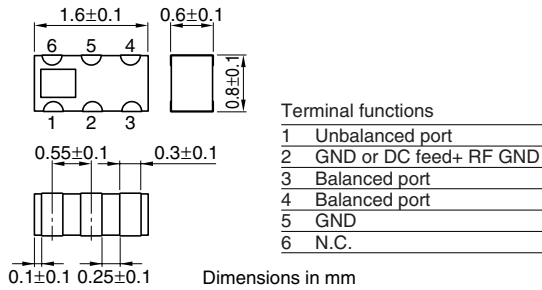
Multilayer Chip Baluns

For Bluetooth & 2.4GHz W-LAN

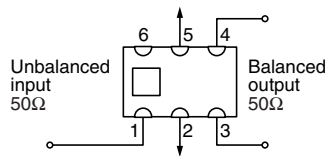
Conformity to RoHS Directive

HHM Series HHM1710D1

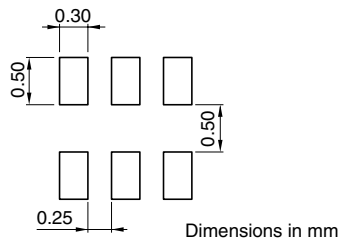
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance		50Ω
Balanced impedance		50Ω
Frequency range		2400 to 2500MHz
Unbalanced port return loss		10dB min.
Phase imbalance at balanced port		180±10deg.
Amplitude imbalance at balanced port		0±2.0dB
Insertion loss		1.2dB max.
Temperature range	Operating	−40 to +85°C
	Storage	−40 to +85°C
Packaging style and quantities		4000pieces/reel

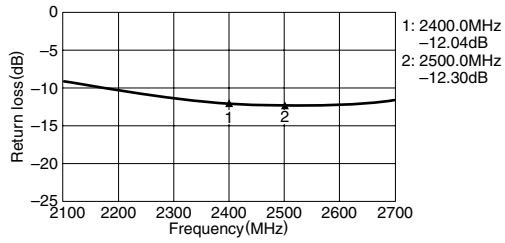
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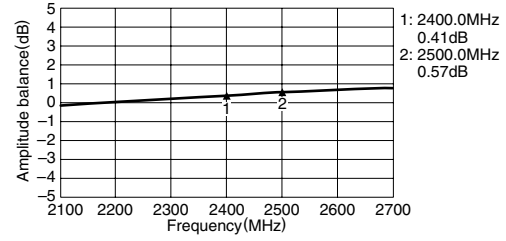
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 50Ω

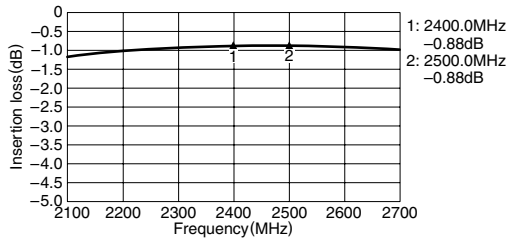
RETURN LOSS



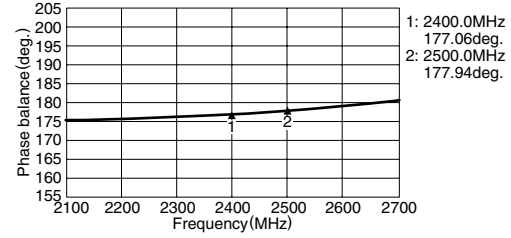
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



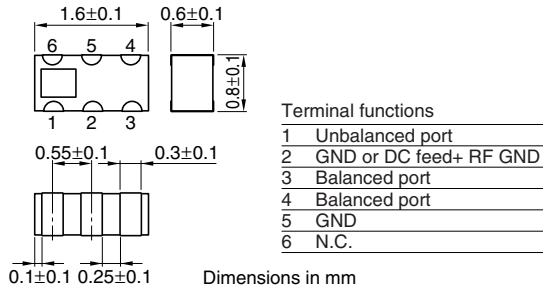
Multilayer Chip Baluns

For Bluetooth & 2.4GHz W-LAN

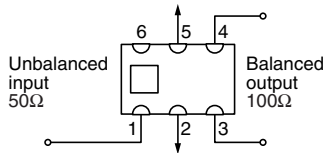
Conformity to RoHS Directive

HHM Series HHM1711D1

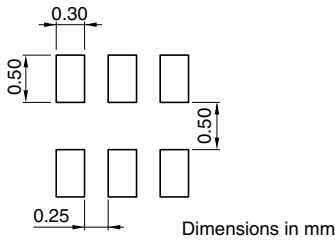
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	100Ω
Frequency range	2400 to 2500MHz
Unbalanced port return loss	10dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±2.0dB
Insertion loss	1.2dB max.
Temperature range	Operating Storage
	−40 to +85°C −40 to +85°C
Packaging style and quantities	4000pieces/reel

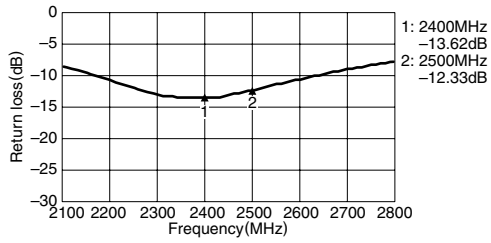
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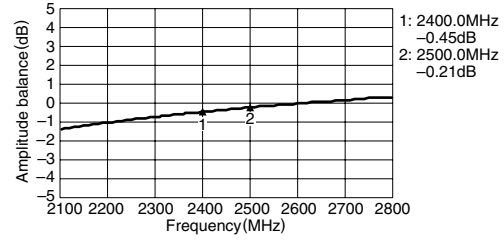
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 100Ω

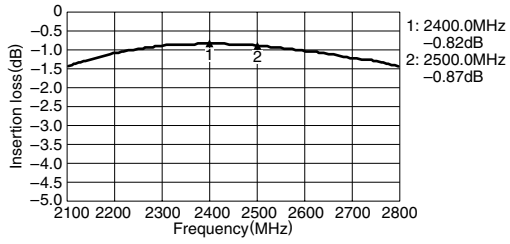
RETURN LOSS



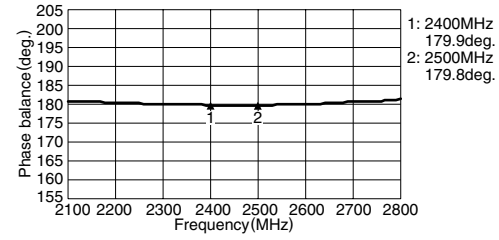
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



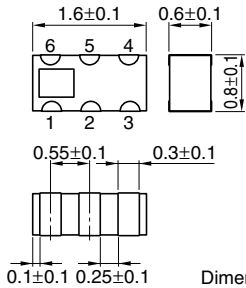
Multilayer Chip Baluns

For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

HHM Series HHM1712D1

SHAPES AND DIMENSIONS

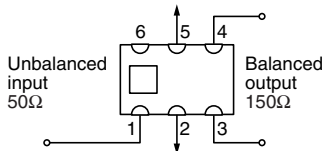


Terminal functions

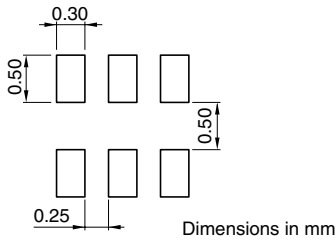
1	Unbalanced port
2	GND or DC feed+ RF GND
3	Balanced port
4	Balanced port
5	GND
6	N.C.

Dimensions in mm

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	150Ω
Frequency range	2400 to 2500MHz
Unbalanced port return loss	10dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±2.0dB
Insertion loss	1.2dB max.
Temperature range	Operating -40 to +85°C
	Storage -40 to +85°C
Packaging style and quantities	4000pieces/reel

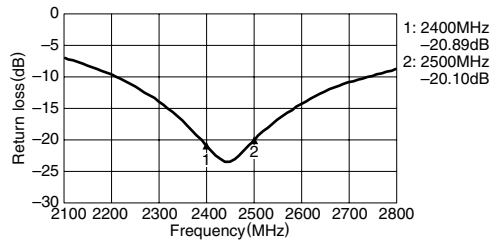
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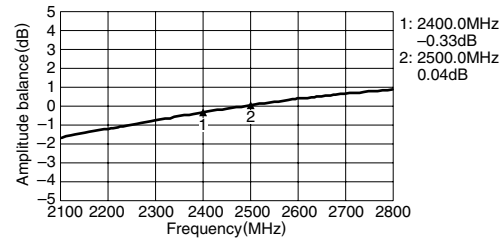
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 150Ω

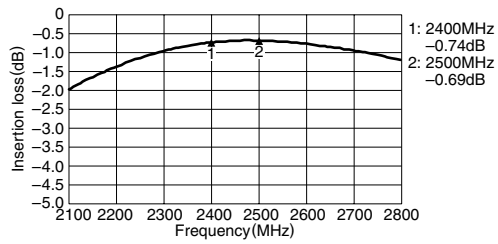
RETURN LOSS



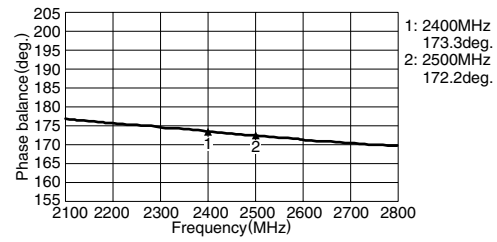
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



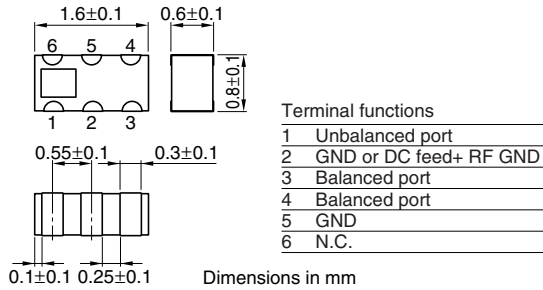
Multilayer Chip Baluns

For Bluetooth & 2.4GHz W-LAN

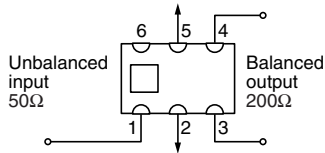
Conformity to RoHS Directive

HHM Series HHM1713E2

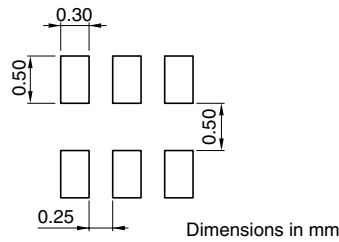
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	200Ω
Frequency range	2400 to 2500MHz
Unbalanced port return loss	10dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±1.7dB
Insertion loss	1.2dB max.
Temperature range	Operating -40 to +85°C
	Storage -40 to +85°C
Packaging style and quantities	4000pieces/reel

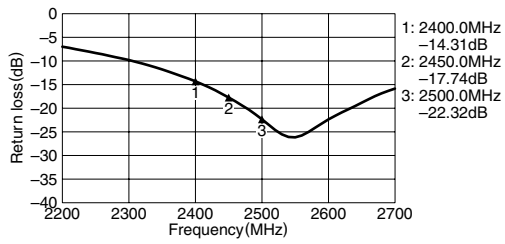
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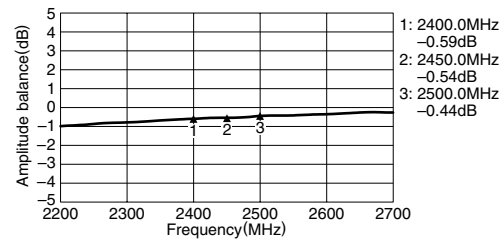
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/ Balance 200Ω

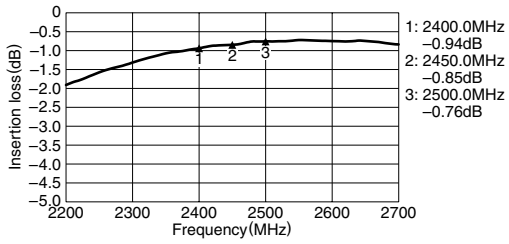
RETURN LOSS



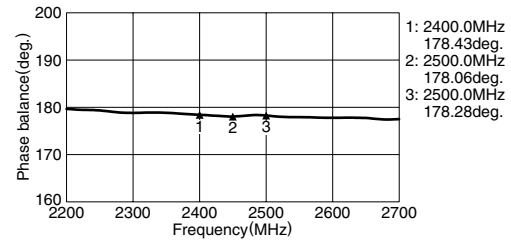
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

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