

Multilayer Balun Transformers

For WiMAX

HHM Series

Type: **HHM1710J1 (1.6×0.8×0.6mm)**
 HHM1711E1 (1.6×0.8×0.6mm)
 HHM1727D1 (1.6×0.8×0.6mm)
 HHM1715E1 (1.6×0.8×0.6mm)

Issue date: December 2010

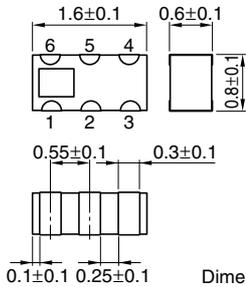
- All specifications are subject to change without notice.
 - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.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

Conformity to RoHS Directive

HHM Series HHM1710J1

SHAPES AND DIMENSIONS

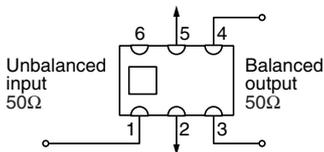


Terminal functions

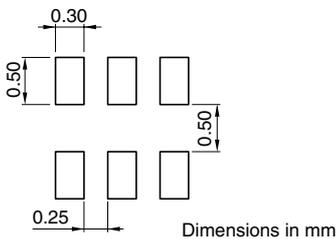
1	Unbalanced port
2	GND or DC feed+ RF GND
3	Balanced port
4	Balanced port
5	GND
6	N.C.

Dimensions in mm

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω	
Balanced impedance	50Ω	
Frequency range	2300 to 2700MHz	
Unbalanced port return loss	10dB min.	
Phase imbalance at balanced port	180±10deg.	
Amplitude imbalance at balanced port	0±1.5dB	
Insertion loss	1.2dB max.	
Attenuation	[800 to 960MHz]	6dB min.
	[1700 to 1900MHz]	1dB min.
	[1900 to 1980MHz]	1dB min.
Power capacity	0.5W max.	
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C
Packaging style and quantities	4000pieces/reel	

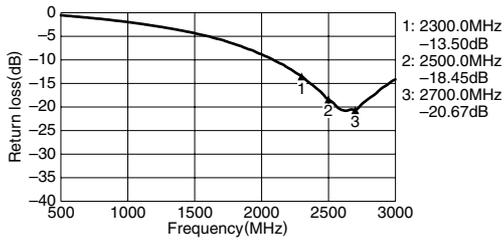
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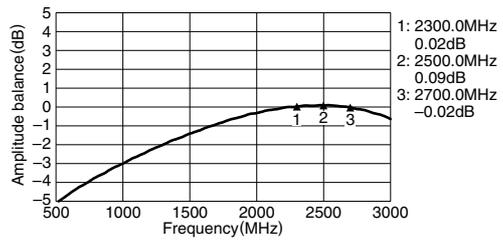
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 50Ω

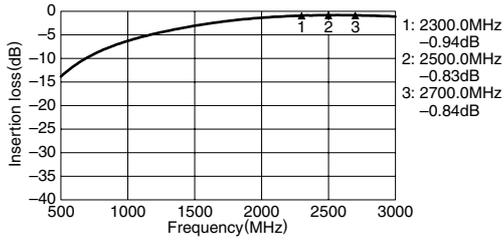
RETURN LOSS



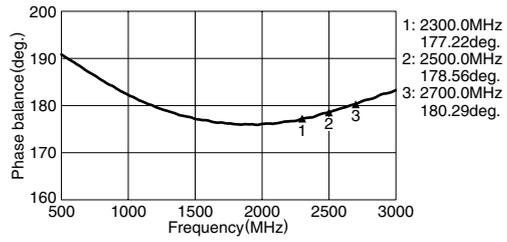
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE

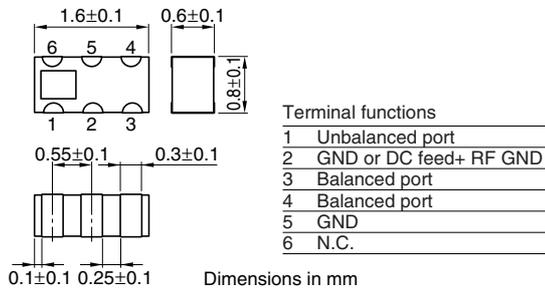


Multilayer Chip Baluns For WiMAX

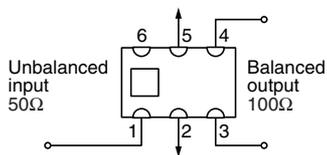
Conformity to RoHS Directive

HHM Series HHM1711E1

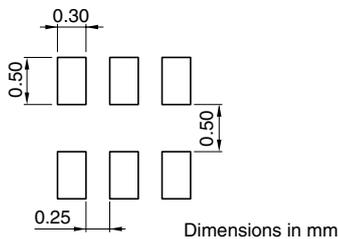
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω	
Balanced impedance	100Ω	
Frequency range	2300 to 2700MHz	
Unbalanced port return loss	10dB min.	
Phase imbalance at balanced port	180±12deg.	
Amplitude imbalance at balanced port	0±1.5dB	
Insertion loss	1.2dB max.	
Power capacity	0.5W max.	
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C
Packaging style and quantities	4000pieces/reel	

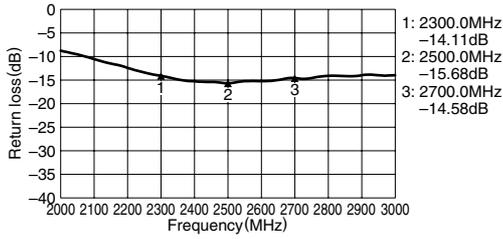
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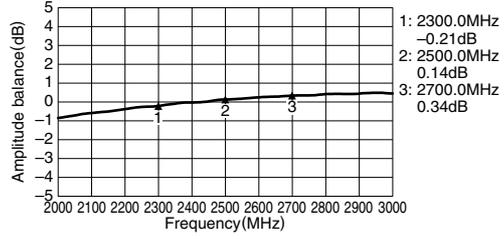
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 100Ω

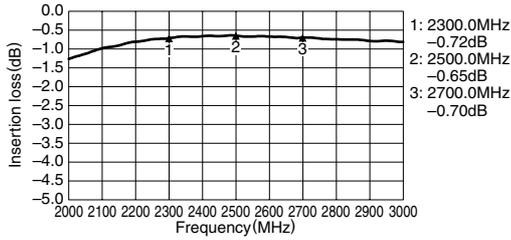
RETURN LOSS



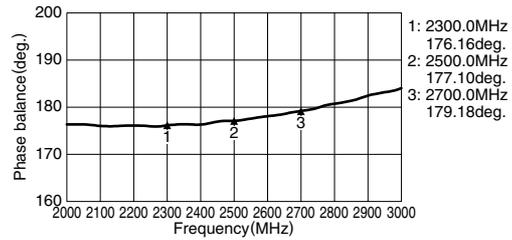
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



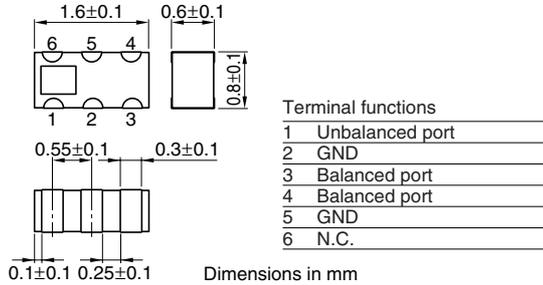
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Multilayer Chip Baluns For WiMAX

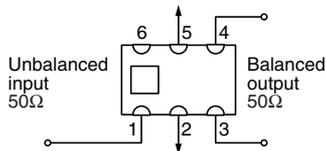
Conformity to RoHS Directive

HHM Series HHM1727D1

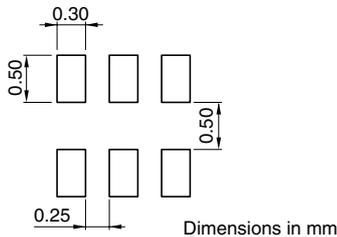
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance		50Ω
Balanced impedance		50Ω
Frequency range		3300 to 3900MHz
Unbalanced port return loss		10dB min.
Phase imbalance at balanced port		180±15deg.
Amplitude imbalance at balanced port		0±1.5dB
Insertion loss		1.2dB
Attenuation	[800 to 960MHz]	11dB min.
	[1700 to 1900MHz]	4dB min.
	[1900 to 1980MHz]	3.5dB min.(4dB typ.)
Power capacity		0.5W max.
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C
Packaging style and quantities		4000pieces/reel

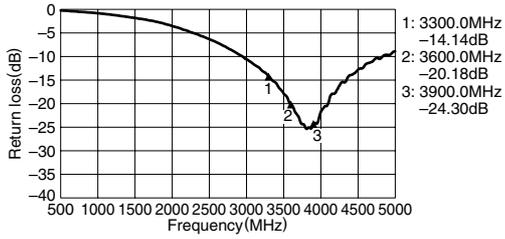
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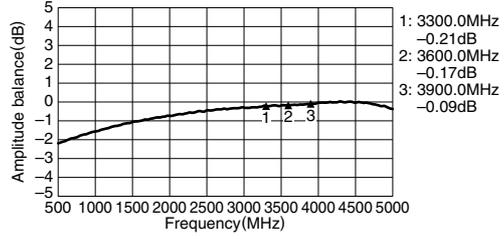
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 50Ω

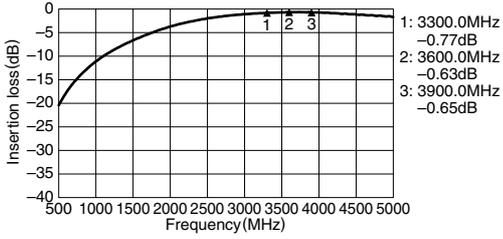
RETURN LOSS



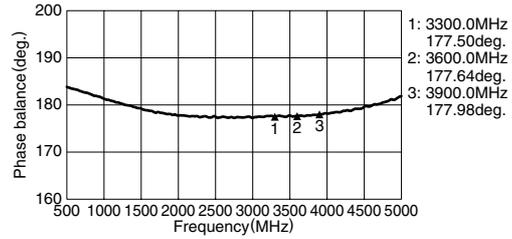
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



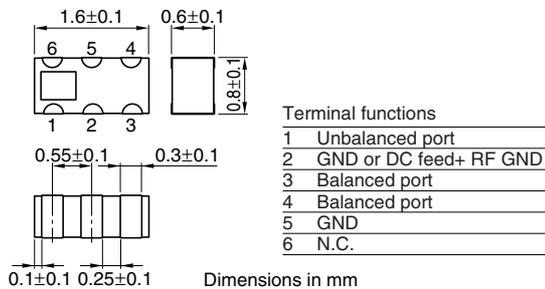
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Multilayer Chip Baluns For WiMAX

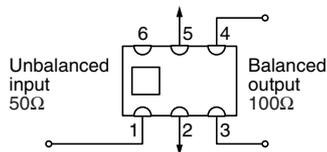
Conformity to RoHS Directive

HHM Series HHM1715E1

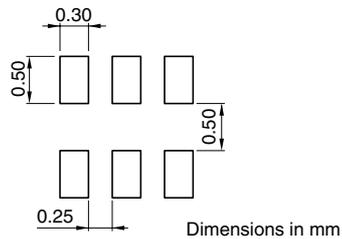
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω	
Balanced impedance	100Ω	
Frequency range	3300 to 3900MHz	
Unbalanced port return loss	10dB min.	
Phase imbalance at balanced port	180±15deg.	
Amplitude imbalance at balanced port	0±1.2dB	
Insertion loss	1.0dB max.	
Power capacity	0.5W max.	
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C
Packaging style and quantities	4000pieces/reel	

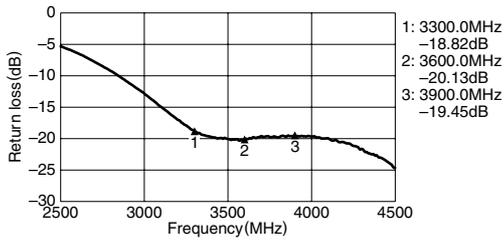
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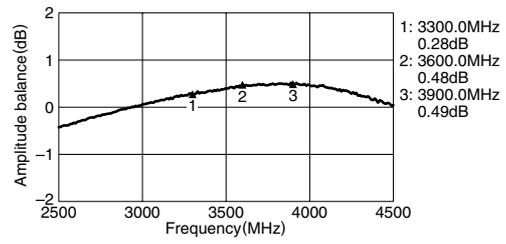
FREQUENCY CHARACTERISTICS

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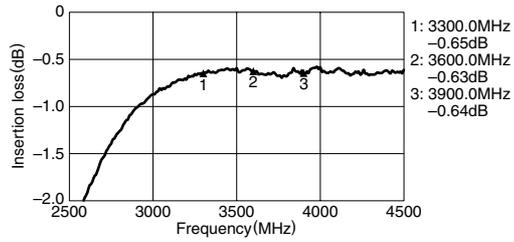
RETURN LOSS



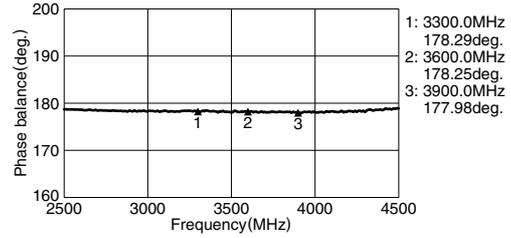
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



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Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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