Multilayer Balun Transformers

For DCS/PCS Tx & Rx

HHM Series

Type: **HHM1516 (2.0×1.25×0.95mm)**
HHM1518A3 (2.0×1.25×0.95mm)
HHM1525 (2.0×1.25×0.95mm)
HHM1526 (2.0×1.25×0.95mm)

Issue date: December 2010

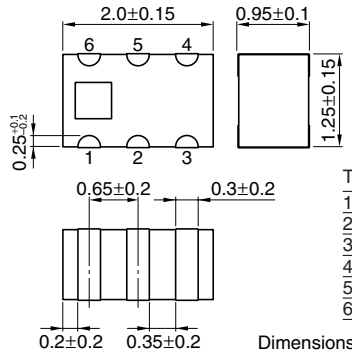
- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Multilayer Chip Baluns For DCS-PCS/Tx & Rx

Conformity to RoHS Directive

HHM Series HHM1516

SHAPES AND DIMENSIONS

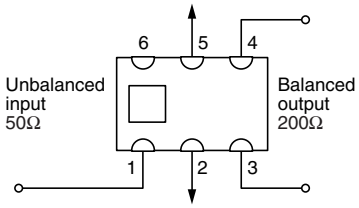


Terminal functions

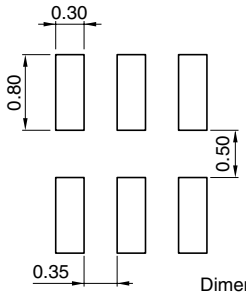
1	Unbalanced port
2	GND or DC feed+ RF GND
3	Balanced port
4	Balanced port
5	GND
6	N.C.

Dimensions in mm

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

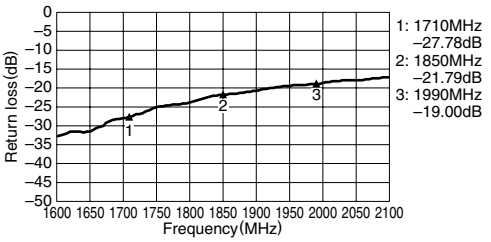
Unbalanced impedance		50Ω
Balanced impedance		200Ω
Frequency range		1710 to 1990MHz
Unbalanced port return loss		10dB min.
Phase imbalance at balanced port		180±10deg.
Amplitude imbalance at balanced port		0±1.0dB
Insertion loss		1.0dB max.
Temperature range	Operating	–40 to +85°C
	Storage	–40 to +85°C
Packaging style and quantities		2000pieces/reel

- 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.

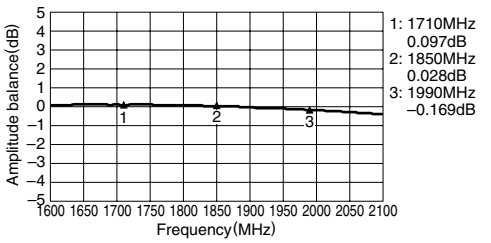
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 200Ω

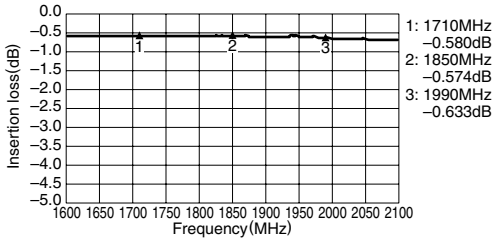
RETURN LOSS



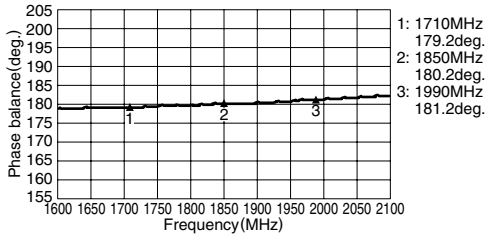
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE

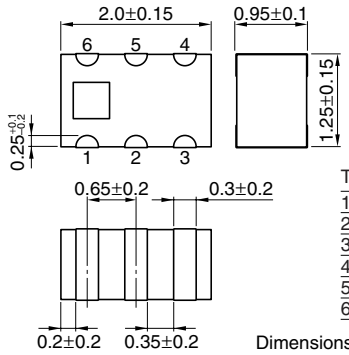


Multilayer Chip Baluns For DCS-PCS/Tx & Rx

Conformity to RoHS Directive

HHM Series HHM1518A3

SHAPES AND DIMENSIONS

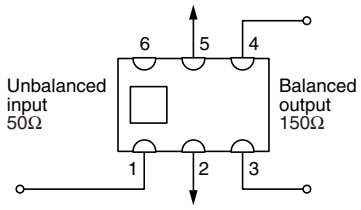


Terminal functions

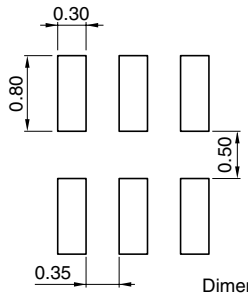
1	Unbalanced port
2	GND or DC feed+ RF GND
3	Balanced port
4	Balanced port
5	GND
6	N.C.

Dimensions in mm

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

Unbalanced impedance		50Ω
Balanced impedance		150Ω
Frequency range		1710 to 1990MHz
Unbalanced port return loss		10dB min.
Phase imbalance at balanced port		180±10deg.
Amplitude imbalance at balanced port		0±1.0dB
Insertion loss		1.0dB max.
Temperature range	Operating	–40 to +85°C
	Storage	–40 to +85°C
Packaging style and quantities		2000pieces/reel

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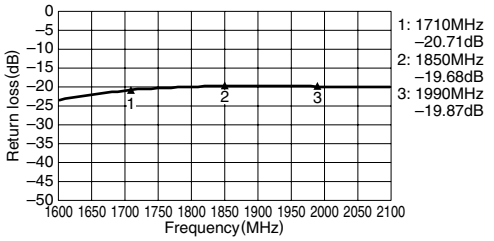
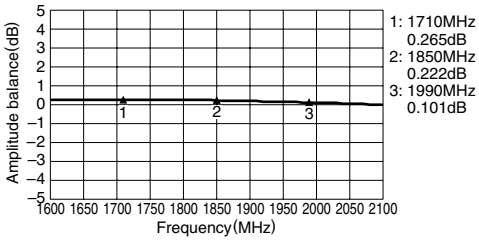
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 150Ω

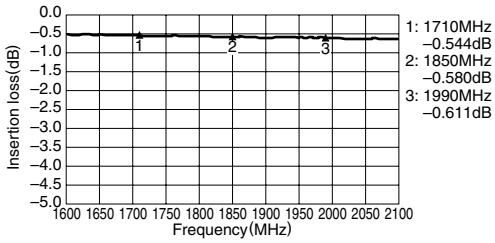
RETURN LOSS



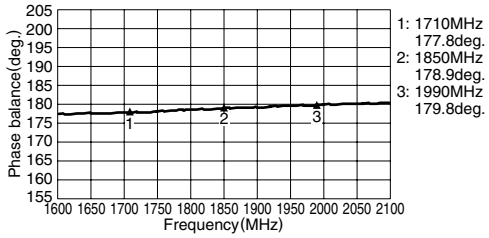
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE

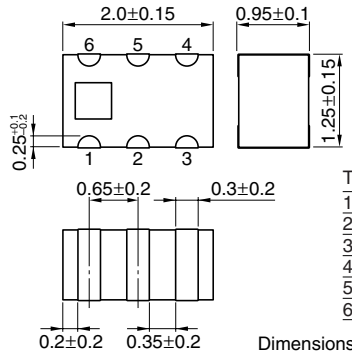


Multilayer Chip Baluns For DCS-PCS/Tx & Rx

Conformity to RoHS Directive

HHM Series HHM1525

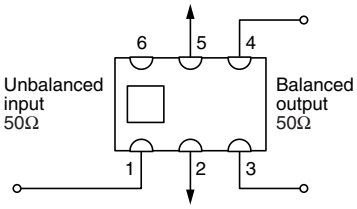
SHAPES AND DIMENSIONS



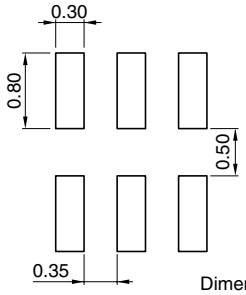
Terminal functions	
1	Unbalanced port
2	GND or DC feed+ RF GND
3	Balanced port
4	Balanced port
5	GND
6	N.C.

Dimensions in mm

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

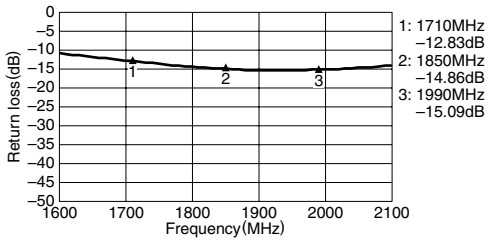
Unbalanced impedance		50Ω
Balanced impedance		50Ω
Frequency range		1710 to 1990MHz
Unbalanced port return loss		10dB min.
Phase imbalance at balanced port		180±10deg.
Amplitude imbalance at balanced port		0±1.0dB
Insertion loss		1.0dB max.
Temperature range	Operating	–40 to +85°C
	Storage	–40 to +85°C
Packaging style and quantities		2000pieces/reel

- 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.

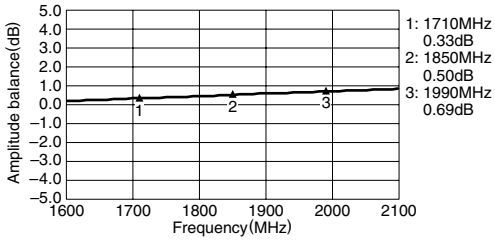
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 50Ω

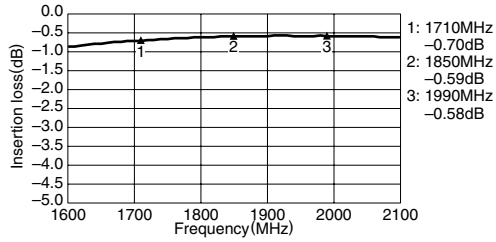
RETURN LOSS



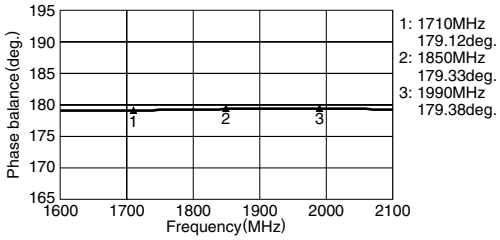
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE

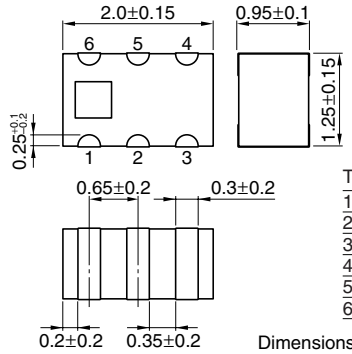


Multilayer Chip Baluns For DCS-PCS/Tx & Rx

Conformity to RoHS Directive

HHM Series HHM1526

SHAPES AND DIMENSIONS

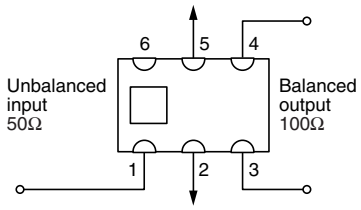


Terminal functions

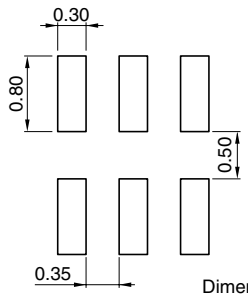
1	Unbalanced port
2	GND or DC feed+ RF GND
3	Balanced port
4	Balanced port
5	GND
6	N.C.

Dimensions in mm

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

Unbalanced impedance		50Ω
Balanced impedance		100Ω
Frequency range		1710 to 1990MHz
Unbalanced port return loss		10dB min.
Phase imbalance at balanced port		180±9deg.
Amplitude imbalance at balanced port		0±1.0dB
Insertion loss		0.8dB max.
Temperature range	Operating	–40 to +85°C
	Storage	–40 to +85°C
Packaging style and quantities		2000pieces/reel

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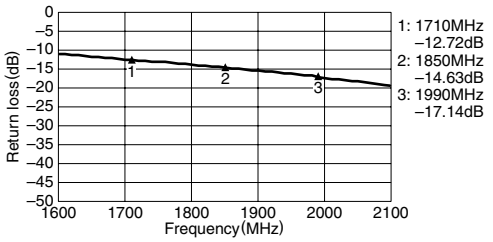
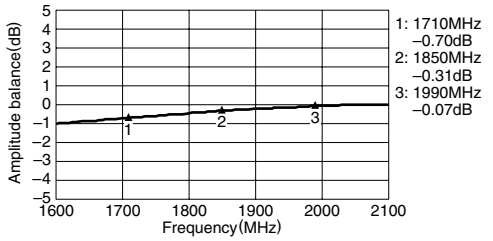
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 100Ω

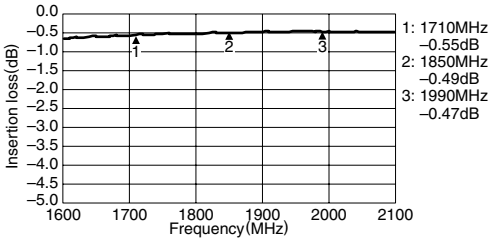
RETURN LOSS



AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE