

Multilayer Balun Transformers

For W-CDMA Tx & Rx

HHM Series

Type: **HHM1506 (2.0×1.25×0.95mm)**
 HHM1533 (2.0×1.25×0.95mm)
 HHM1534 (2.0×1.25×0.95mm)
 HHM1537 (2.0×1.25×0.95mm)

Issue date: December 2010

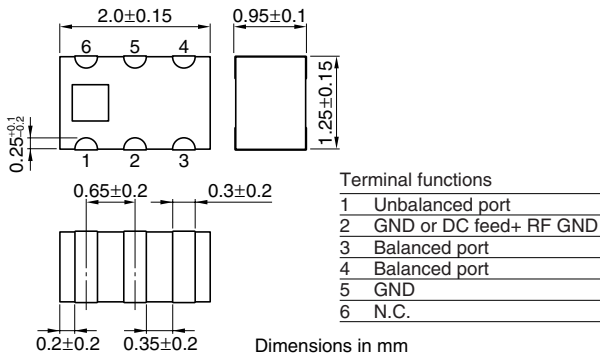
- All specifications are subject to change without notice.
 - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.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

Multilayer Chip Baluns For W-CDMA/Tx & Rx

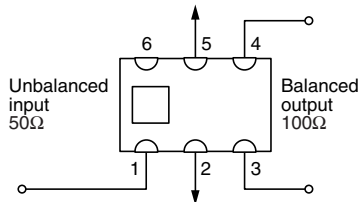
Conformity to RoHS Directive

HHM Series HHM1506

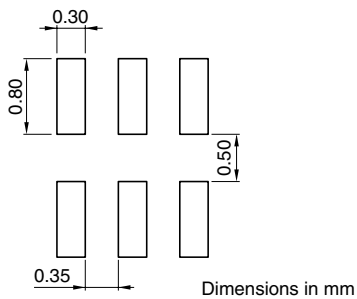
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	100Ω
Frequency range	1920 to 1980, 2110 to 2170MHz
Unbalanced port return loss	10dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±2.0dB
Insertion loss	1.0dB max.
Temperature range	Operating -40 to +85°C Storage -40 to +85°C
Packaging style and quantities	2000pieces/reel

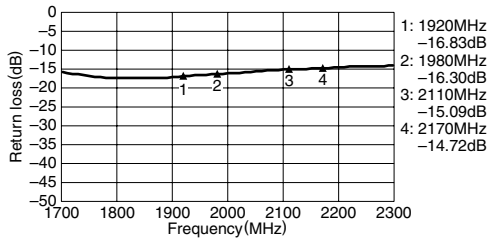
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

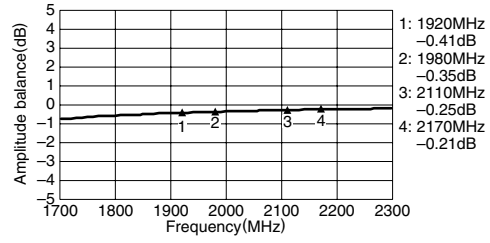
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 100Ω

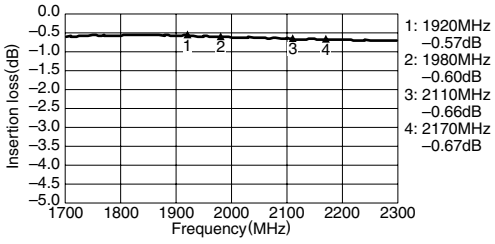
RETURN LOSS



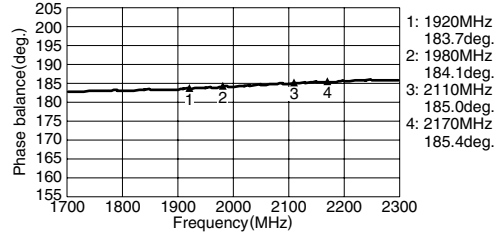
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



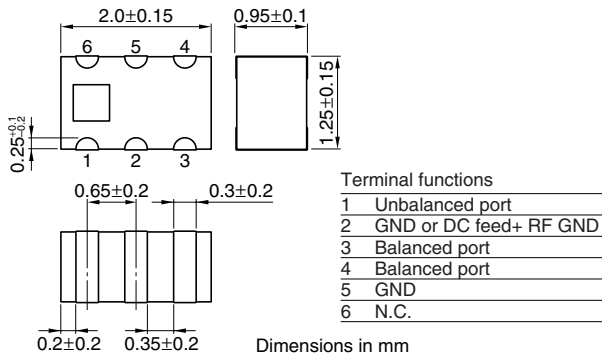
• All specifications are subject to change without notice.

Multilayer Chip Baluns For W-CDMA/Tx & Rx

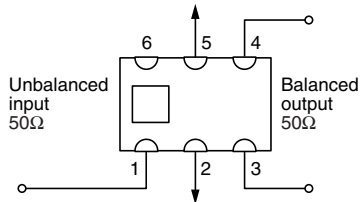
Conformity to RoHS Directive

HHM Series HHM1533

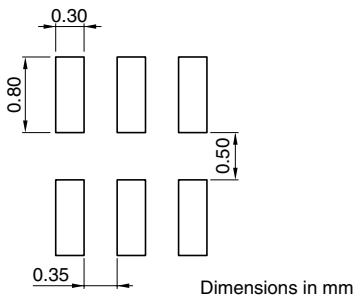
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	50Ω
Frequency range	1920 to 1980, 2110 to 2170MHz
Unbalanced port return loss	10dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±2.0dB
Insertion loss	1.0dB max.
Temperature range	Operating -40 to +85°C Storage -40 to +85°C
Packaging style and quantities	2000pieces/reel

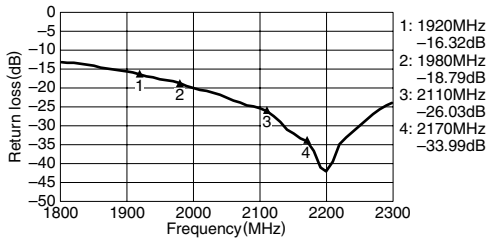
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

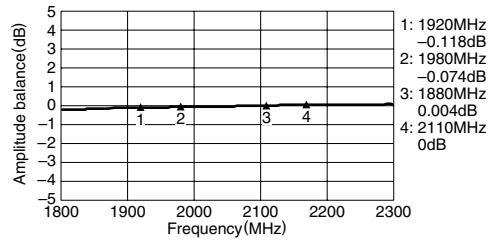
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 50Ω

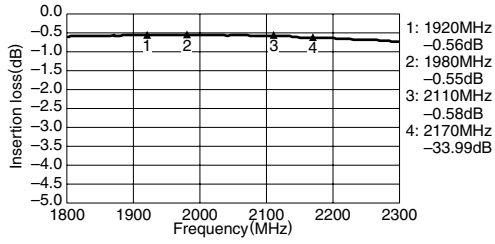
RETURN LOSS



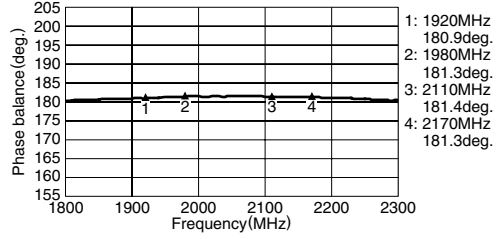
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE

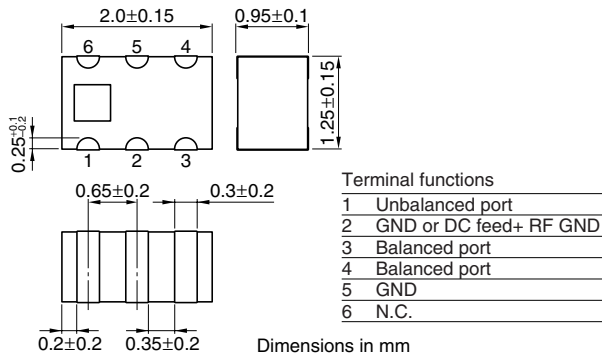


Multilayer Chip Baluns For W-CDMA/Tx & Rx

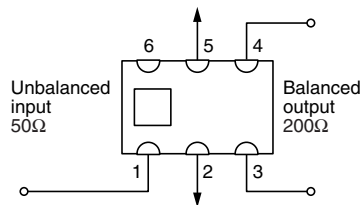
Conformity to RoHS Directive

HHM Series HHM1534

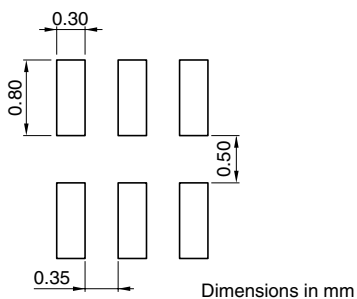
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	200Ω
Frequency range	1920 to 1980, 2110 to 2170MHz
Unbalanced port return loss	10dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±2.0dB
Insertion loss	1.0dB max.
Temperature range	Operating -40 to +85°C Storage -40 to +85°C
Packaging style and quantities	2000pieces/reel

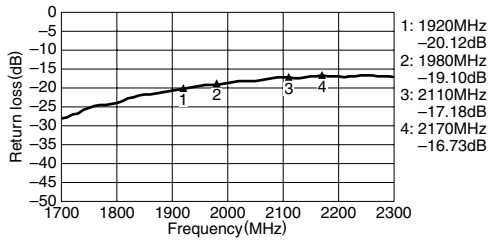
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

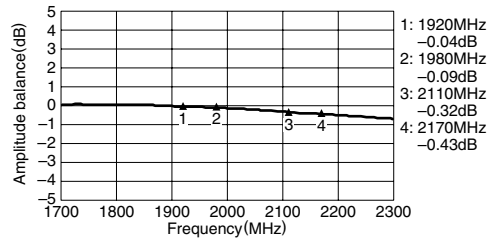
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 200Ω

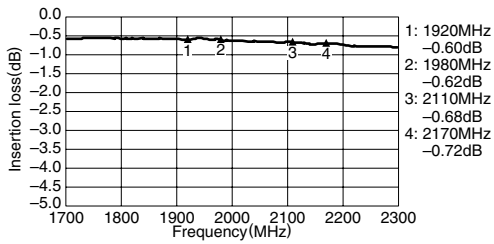
RETURN LOSS



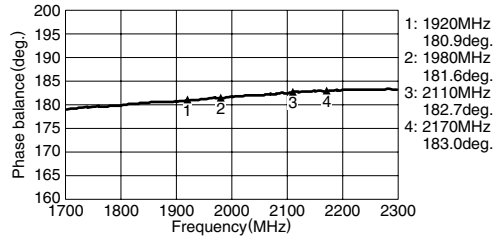
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



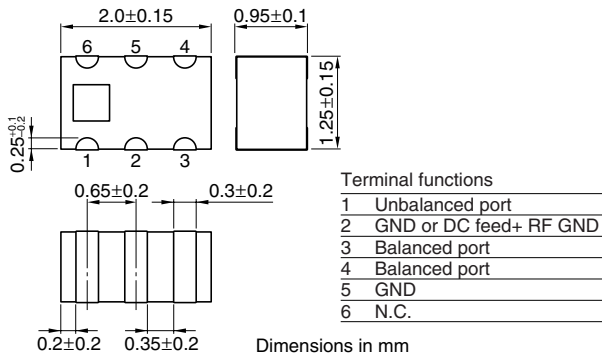
• All specifications are subject to change without notice.

Multilayer Chip Baluns For W-CDMA/Tx & Rx

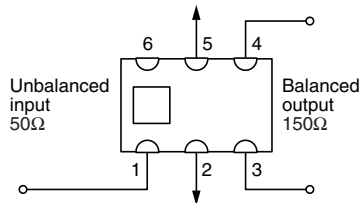
Conformity to RoHS Directive

HHM Series HHM1537

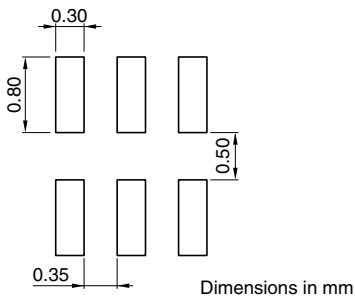
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	150Ω
Frequency range	1920 to 1980, 2110 to 2170MHz
Unbalanced port return loss	10dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±2.0dB
Insertion loss	1.0dB max.
Temperature range	Operating -40 to +85°C Storage -40 to +85°C
Packaging style and quantities	2000pieces/reel

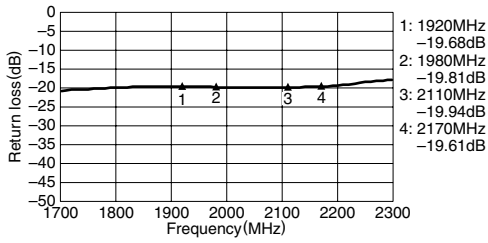
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

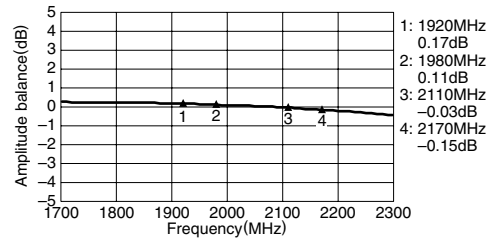
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 150Ω

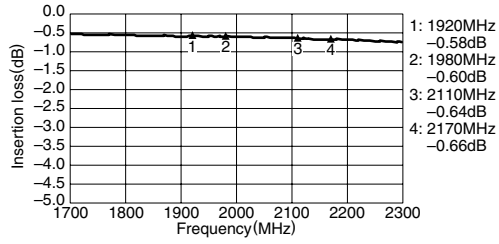
RETURN LOSS



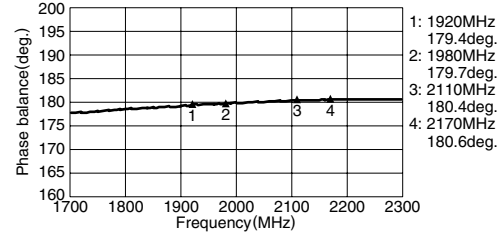
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



• All specifications are subject to change without notice.