

Multilayer Balun Transformers

For DVB-H/ISDB-T

HHM Series

Type: **HHM1591A1 (2.0×1.25×0.95mm)**
 HHM1591A2 (2.0×1.25×0.95mm)
 HHM1589B1 (2.0×1.25×0.95mm)
 HHM1589D1 (2.0×1.25×0.95mm)
 HHM1591D1 (2.0×1.25×0.95mm)
 HHM1589E1 (2.0×1.25×0.95mm)

Issue date: December 2010

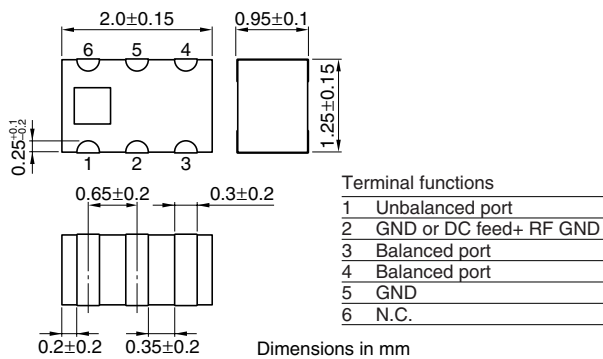
- All specifications are subject to change without notice.
 - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.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

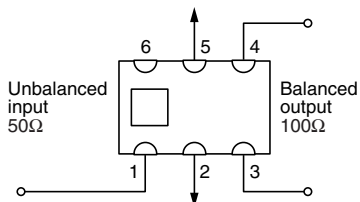
Conformity to RoHS Directive

HHM Series HHM1591A1

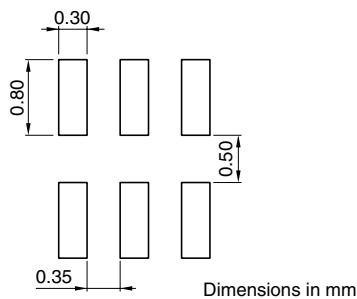
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	100Ω
Frequency range	470 to 710MHz
Unbalanced port return loss	9.0dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±1.5dB
Insertion loss	1.4dB max.
Temperature range	Operating -40 to +85°C
	Storage -40 to +85°C
Packaging style and quantities	2000pieces/reel

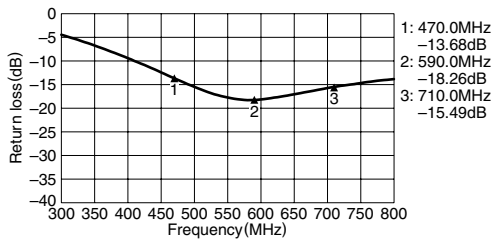
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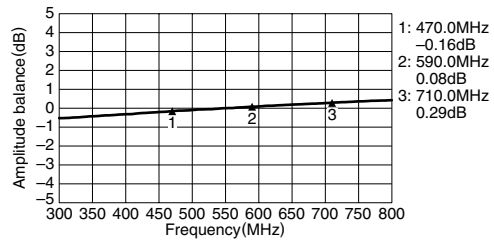
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 100Ω

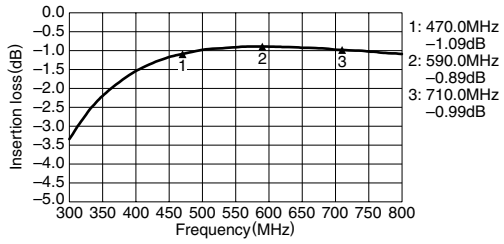
RETURN LOSS



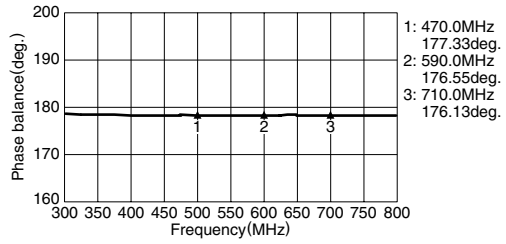
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



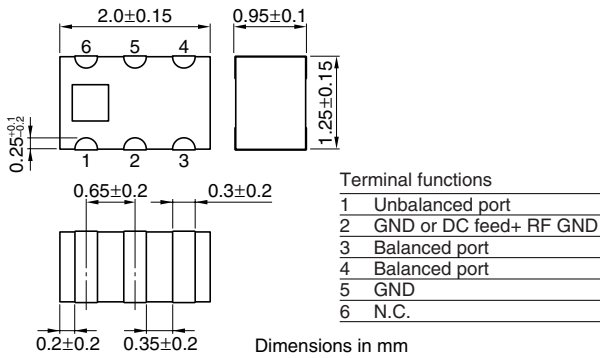
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Multilayer Chip Baluns For DVB-H/ISDB-T

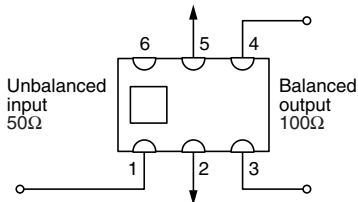
Conformity to RoHS Directive

HHM Series HHM1591A2

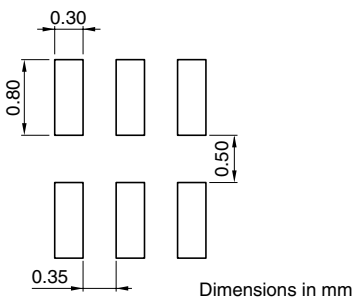
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance		50Ω
Balanced impedance		100Ω
Frequency range		350 to 950MHz
Unbalanced port return loss		4.5dB min.
Phase imbalance at balanced port		180±20deg.
Amplitude imbalance at balanced port		0±2.0dB
Insertion loss		2.8dB max.
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C
Packaging style and quantities		2000pieces/reel

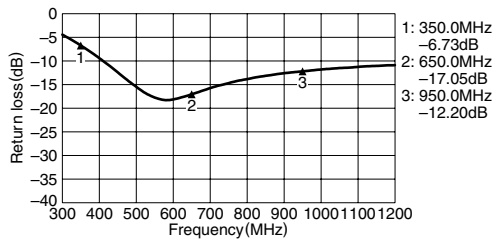
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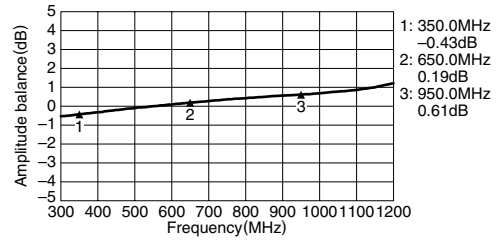
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 100Ω

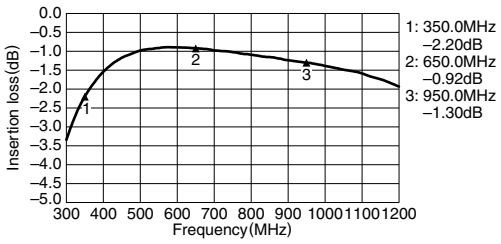
RETURN LOSS



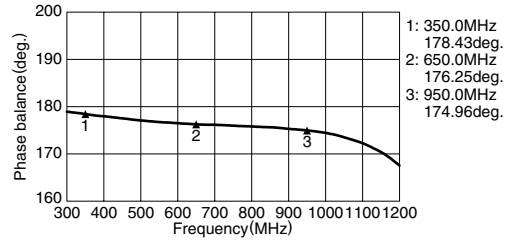
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



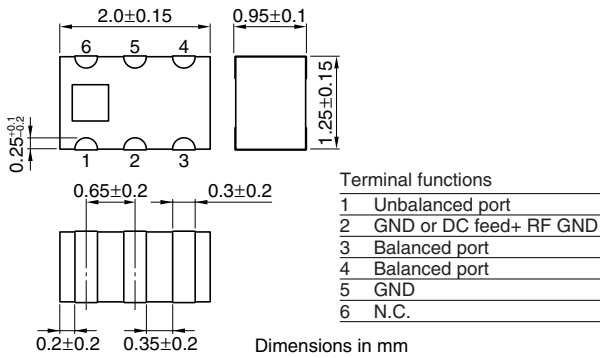
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Multilayer Chip Baluns For DVB-H/ISDB-T

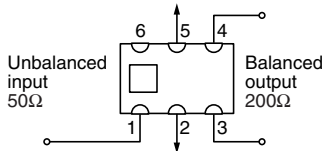
Conformity to RoHS Directive

HHM Series HHM1589B1

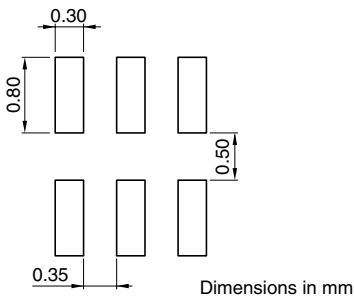
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω	
Balanced impedance	200Ω	
Frequency range	470 to 710MHz	
Unbalanced port return loss	9.5dB min.	
Phase imbalance at balanced port	180±10deg.	
Amplitude imbalance at balanced port	0±1.5dB	
Insertion loss	1.4dB max.	
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C
Packaging style and quantities	2000pieces/reel	

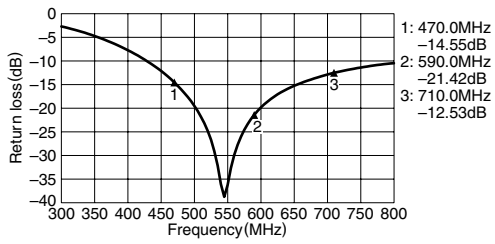
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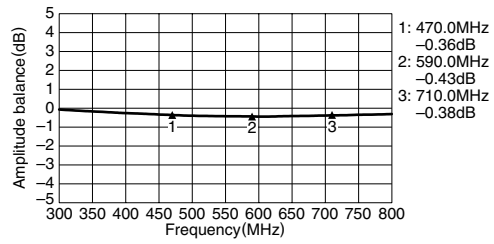
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 200Ω

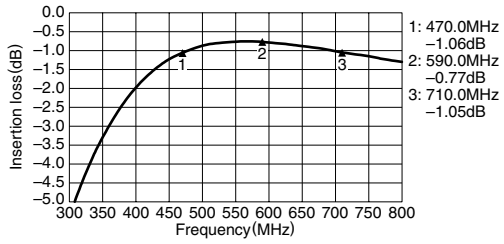
RETURN LOSS



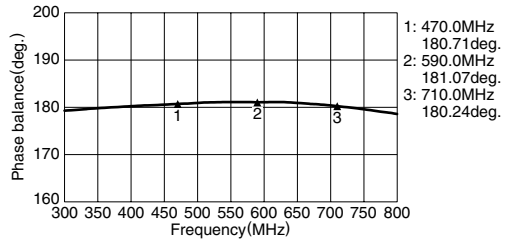
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



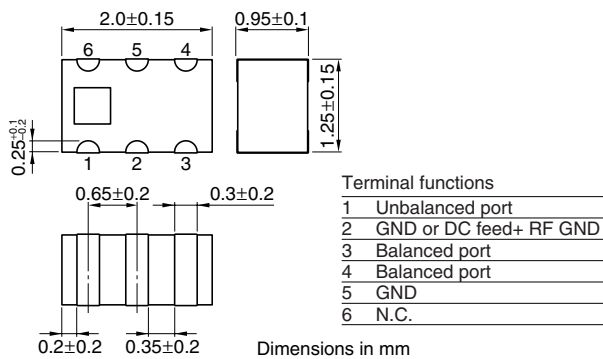
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Multilayer Chip Baluns For DVB-H/ISDB-T

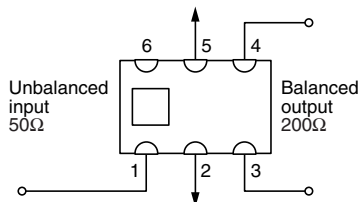
Conformity to RoHS Directive

HHM Series HHM1589D1

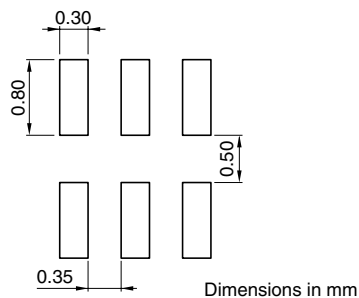
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	200Ω
Frequency range	350 to 950MHz
Unbalanced port return loss	5dB min.
Phase imbalance at balanced port	180±20deg.
Amplitude imbalance at balanced port	0±2.0dB
Insertion loss	2.6dB max.
Temperature range	Operating -40 to +85°C
	Storage -40 to +85°C
Packaging style and quantities	2000pieces/reel

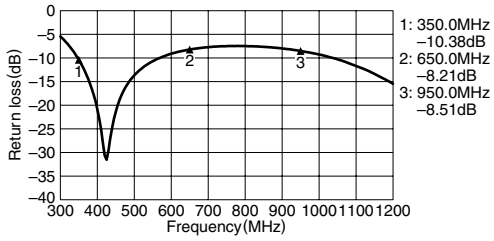
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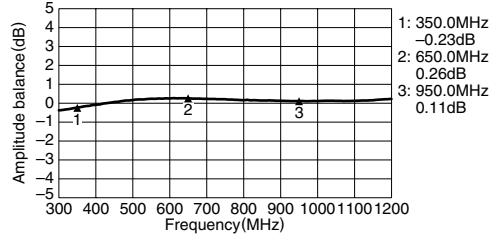
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 200Ω

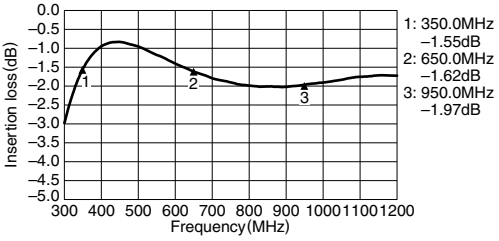
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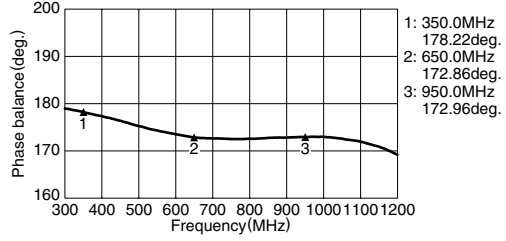
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



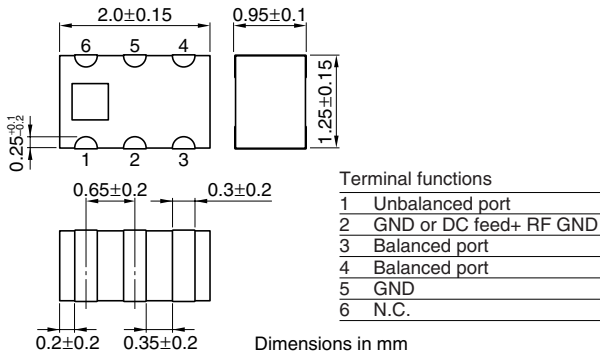
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Multilayer Chip Baluns For DVB-H/ISDB-T

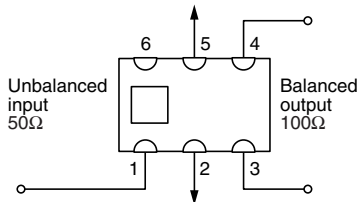
Conformity to RoHS Directive

HHM Series HHM1591D1

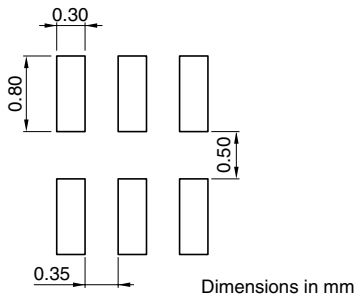
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω	
Balanced impedance	100Ω	
Frequency range	350 to 470MHz	
Unbalanced port return loss	8.5dB min.	
Phase imbalance at balanced port	180±10deg.	
Amplitude imbalance at balanced port	0±1.0dB	
Insertion loss	1.5dB max.	
Temperature range	Operating	-40 to +85°C
	Storage	-40 to +85°C
Packaging style and quantities	2000pieces/reel	

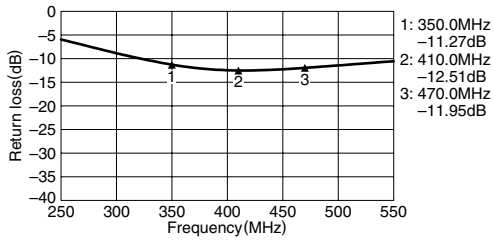
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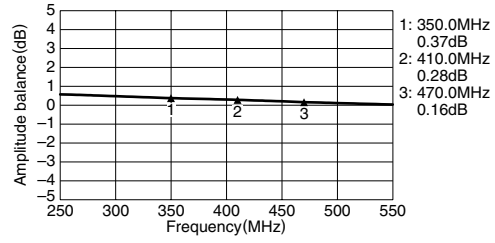
FREQUENCY CHARACTERISTICS

Unbalance 50Ω/Balance 200Ω

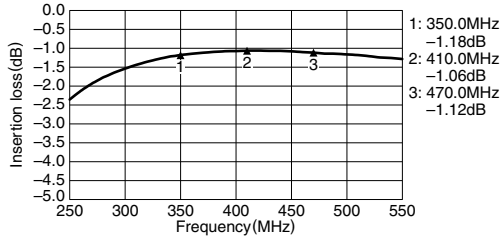
RETURN LOSS



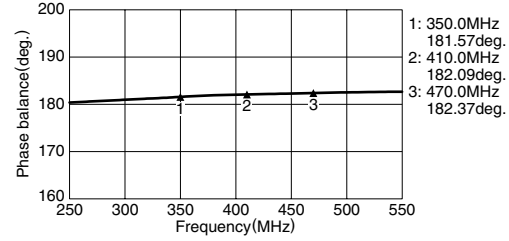
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE



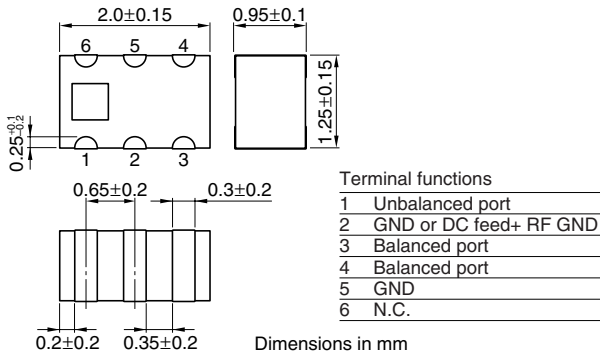
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Multilayer Chip Baluns For DVB-H/ISDB-T

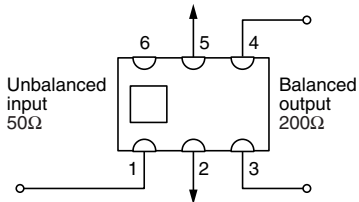
Conformity to RoHS Directive

HHM Series HHM1589E1

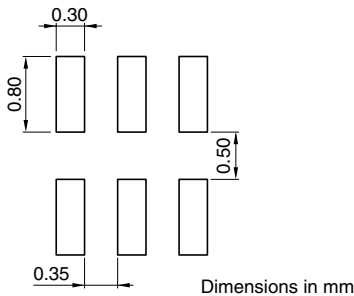
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

Unbalanced impedance	50Ω
Balanced impedance	200Ω
Frequency range	350 to 470MHz
Unbalanced port return loss	9.54dB min.
Phase imbalance at balanced port	180±10deg.
Amplitude imbalance at balanced port	0±1.0dB
Insertion loss	1.5dB max.
Temperature range	Operating -40 to +85°C
	Storage -40 to +85°C
Packaging style and quantities	2000pieces/reel

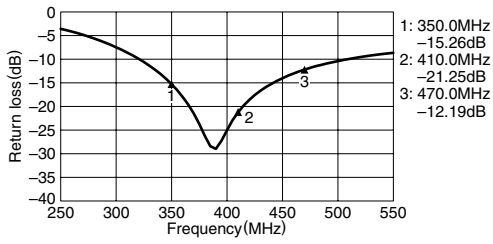
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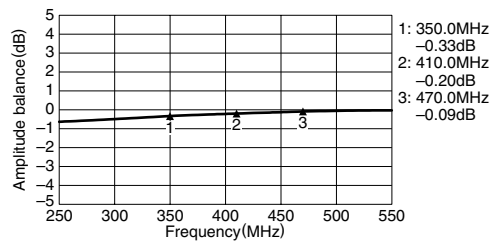
FREQUENCY CHARACTERISTICS

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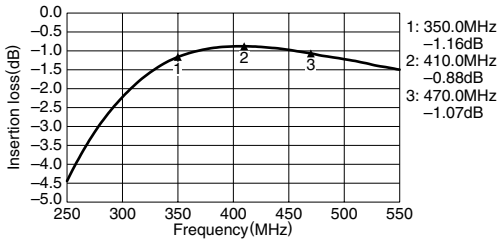
RETURN LOSS



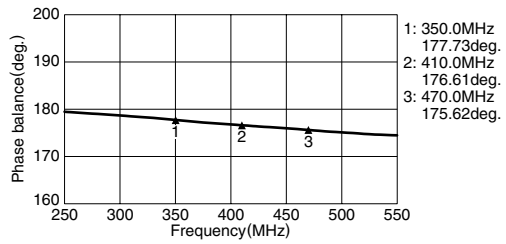
AMPLITUDE BALANCE



INSERTION LOSS



PHASE BALANCE





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.