

Wound Chip Baluns

ATB Series

Type: **ATB2012-50011 (2.0×1.2×1.2mm)**
 ATB2012-75011 (2.0×1.2×1.2mm)
 ATB2012E-50011M (2.0×1.2×1.0mm)
 ATB2012E-75011M (2.0×1.2×1.0mm)

Issue date: February 2013

- 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.
-

Wound Chip Baluns

Conformity to RoHS Directive

ATB Series ATB2012-50011

FEATURES

- ATB2012-50011 is chip BALUN transformer developed for 50Ω impedance system.
- Input impedance is 50Ω.
- Impedance ratio is 1:1.
- Frequency band width is 40MHz to 860MHz. (IL=1.0dB typ.)
- It is a product conforming to RoHS directive.

APPLICATIONS

Tuner for TV, mobile devices (e.g. DVB-T/H, ISDB-T)
Power divider for STB and tuner

PRODUCT IDENTIFICATION

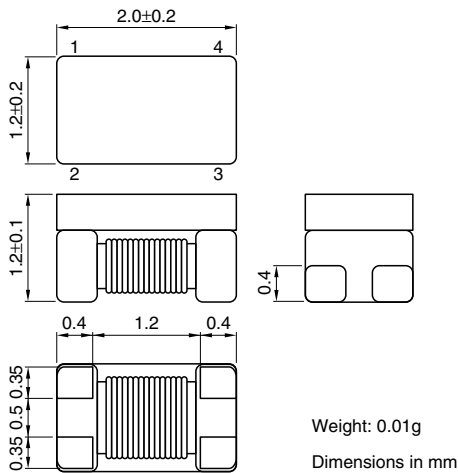
| | | | | | |
|-----|------|-------|-----|-----|-----|
| ATB | 2012 | - 500 | 11 | - T | □□□ |
| (1) | (2) | (3) | (4) | (5) | (6) |

- (1) Series name
 (2) Case size
 (3) Input impedance
 500: 50Ω
 (4) Impedance ratio
 11: 1:1
 (5) Packing style
 T: Taping ø180mm reel
 TL: Taping ø330mm reel
 (6) Control mark

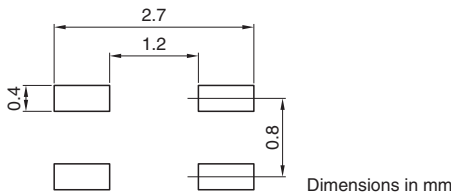
PACKAGING STYLE AND QUANTITIES

| Packaging style | Reel | Quantity |
|-----------------|--------|-------------------|
| Taping | ø180mm | 2000 pieces/reel |
| | ø330mm | 10000 pieces/reel |

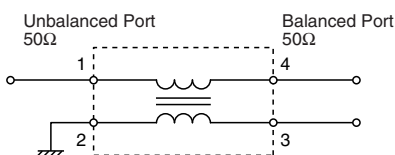
SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



CIRCUIT DIAGRAM

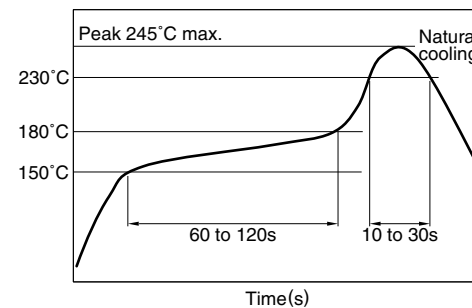


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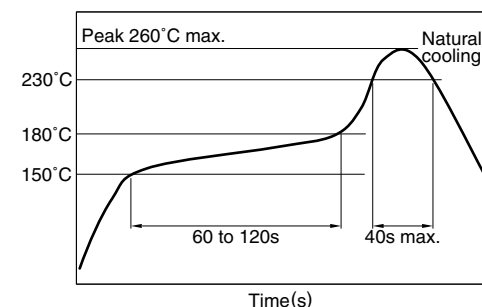
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RECOMMENDED SOLDERING CONDITIONS

RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



REFLOW PROFILE FOR SOLDER HEAT RESISTANCE

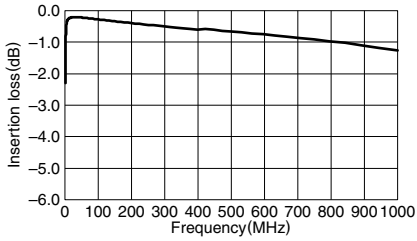


ELECTRICAL CHARACTERISTICS

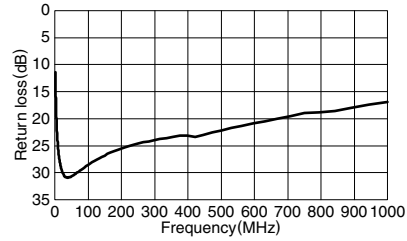
| Part No. | Frequency range (MHz) | UB/B Impedance (Ω) | Insertion loss (dB) | | CMRR min. | DC resistance (Ω)max. | Rated current (mA) | Rated voltage (V) | Insulation resistance (M Ω) | Withstanding voltage (V) |
|--------------------|-----------------------|-----------------------------|---------------------|------|-----------|--------------------------------|--------------------|-------------------|-------------------------------------|--------------------------|
| | | | typ. | max. | | | | | | |
| ATB2012-50011-T□□□ | 40 to 860 | 50/50 | 1.0 | 2.5 | 20 | 1.0 | 200 | 20 | 10 | 125 |

FREQUENCY CHARACTERISTICS

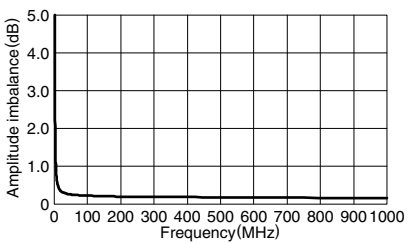
INSERTION LOSS



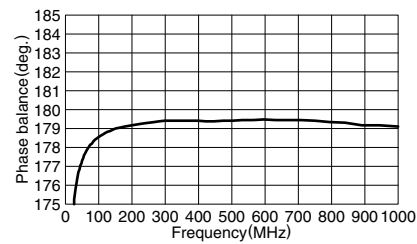
RETURN LOSS



AMPLITUDE IMBALANCE



PHASE BALANCE



• All specifications are subject to change without notice.

Wound Chip Baluns

Conformity to RoHS Directive

ATB Series ATB2012-75011

FEATURES

- ATB2012-75011 is chip BALUN transformer developed for 75Ω impedance system.
- Input impedance is 75Ω.
- Impedance ration is 1:1.
- Frequency band width is 50MHz to 1.2GHz. (IL=1.2dB typ.)
- It is a product conforming to RoHS directive.

APPLICATIONS

Tuner for TV, mobile devices (e.g. DVB-T/H, ISDB-T)
Power divider for STB and tuner

PRODUCT IDENTIFICATION

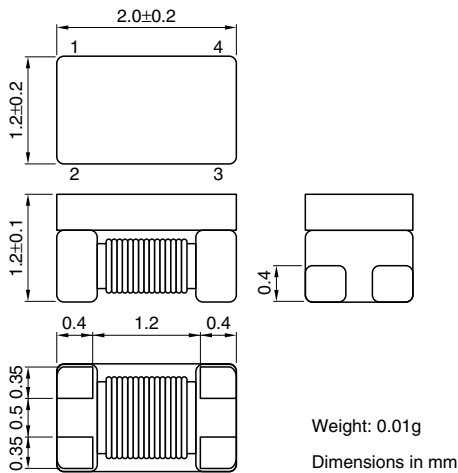
| | | | | | | | |
|-----|------|-----|-----|-----|-----|---|-----|
| ATB | 2012 | - | 750 | 11 | - | T | □□□ |
| (1) | (2) | (3) | (4) | (5) | (6) | | |

- (1) Series name
 (2) Case size
 (3) Input impedance
 750: 75Ω
 (4) Impedance ratio
 11: 1:1
 (5) Packing style
 T: Taping ø180mm reel
 TL: Taping ø330mm reel
 (6) Control mark

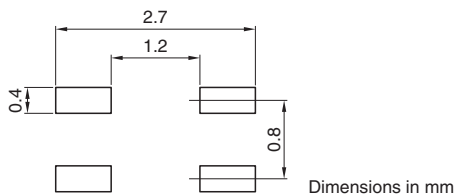
PACKAGING STYLE AND QUANTITIES

| Packaging style | Reel | Quantity |
|-----------------|--------|-------------------|
| Taping | ø180mm | 2000 pieces/reel |
| | ø330mm | 10000 pieces/reel |

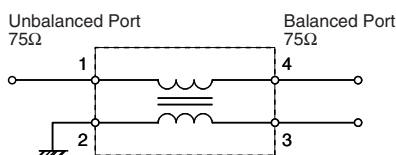
SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



CIRCUIT DIAGRAM

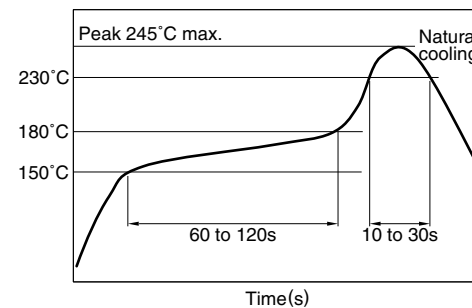


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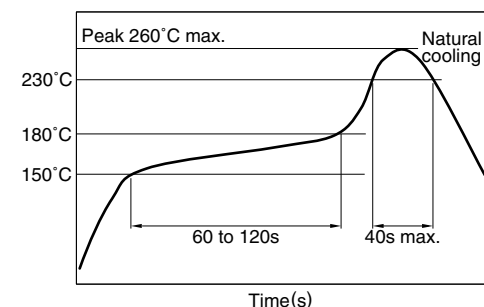
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RECOMMENDED SOLDERING CONDITIONS

RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



REFLOW PROFILE FOR SOLDER HEAT RESISTANCE

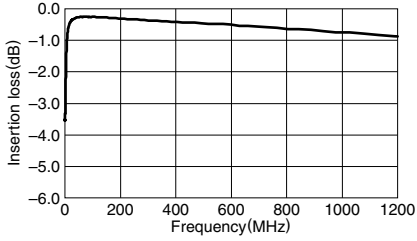


ELECTRICAL CHARACTERISTICS

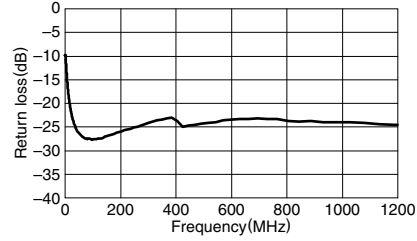
| Part No. | Frequency range (MHz) | UB/B Impedance (Ω) | Insertion loss (dB) max. | CMRR min. | DC resistance (Ω) | Rated current (mA) | Rated voltage (V) | Insulation resistance ($M\Omega$) | Withstanding voltage (V) |
|--------------------|-----------------------|-----------------------------|--------------------------|-----------|----------------------------|--------------------|-------------------|-------------------------------------|--------------------------|
| ATB2012-75011-T□□□ | 50 to 1200 | 75/75 | 1.2 | 20 | 0.7 | 280 | 20 | 10 | 125 |

FREQUENCY CHARACTERISTICS

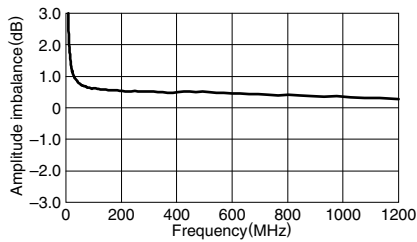
INSERTION LOSS



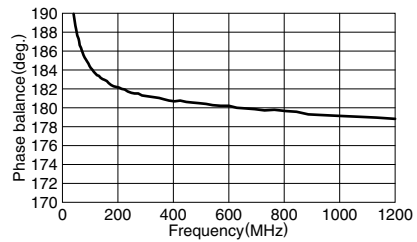
RETURN LOSS



AMPLITUDE IMBALANCE



PHASE BALANCE



Wound Chip Baluns

Conformity to RoHS Directive

ATB Series ATB2012E-50011M

FEATURES

- ATB2012E-50011M is chip BALUN transformer developed for 50Ω impedance system.
- Input impedance is 50Ω.
- Impedance ration is 1:1.
- Frequency band width is 400MHz to 1.8GHz. (IL=1.0dB typ.)
- It is a product conforming to RoHS directive.

APPLICATIONS

Tuner for TV, mobile devices (e.g. DVB-T/H, ISDB-T)
Power divider for STB and tuner

PRODUCT IDENTIFICATION

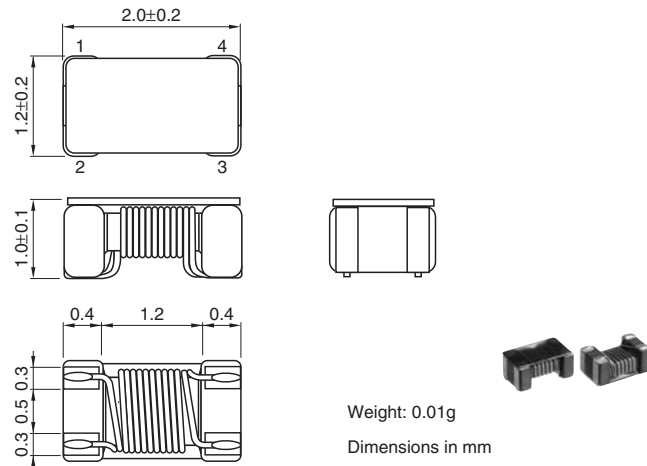
| | | | | | | |
|-----|-------|-------|-----|-----|-----|-----|
| ATB | 2012E | - 500 | 11 | M | - T | □□ |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |

- (1) Series name
 (2) Case size
 (3) Input impedance
 500: 50Ω
 (4) Impedance ratio
 11: 1:1
 (5) Product identification
 (6) Packaging style
 T: Taping ø180mm reel
 TL: Taping ø330mm reel
 (7) Control mark

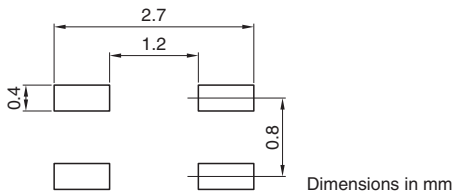
PACKAGING STYLE AND QUANTITIES

| Packaging style | Reel | Quantity |
|-----------------|--------|-------------------|
| Taping | ø180mm | 2000 pieces/reel |
| | ø330mm | 10000 pieces/reel |

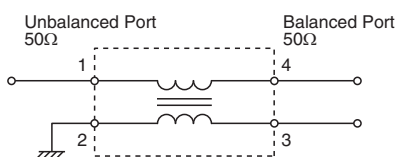
SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



CIRCUIT DIAGRAM

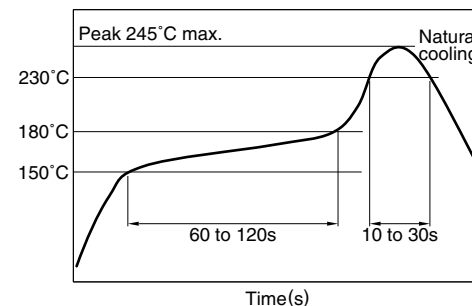


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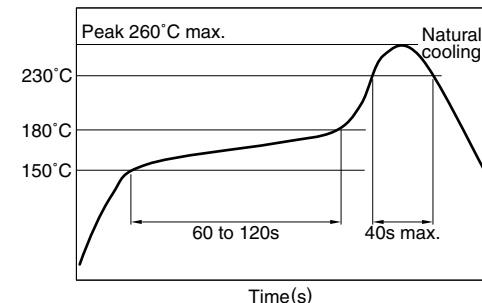
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RECOMMENDED SOLDERING CONDITIONS

RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



REFLOW PROFILE FOR SOLDER HEAT RESISTANCE

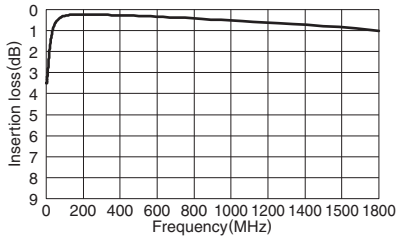


ELECTRICAL CHARACTERISTICS

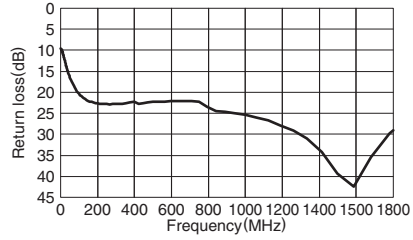
| Part No. | Frequency range (MHz) | UB/B Impedance (Ω) | Insertion loss [1.8GHz] (dB) | | CMRR min. | DC resistance (Ω)max. | Rated current (mA) | Rated voltage (V) | Insulation resistance (M Ω) | Withstanding voltage (V) |
|---------------------|-----------------------|-----------------------------|------------------------------|------|-----------|--------------------------------|--------------------|-------------------|-------------------------------------|--------------------------|
| | | | typ. | max. | | | | | | |
| ATB2012E-50011M-T□□ | 400 to 1800 | 50/50 | 1.0 | 2.2 | 15 | 0.5 | 150 | 20 | 10 | 125 |

FREQUENCY CHARACTERISTICS

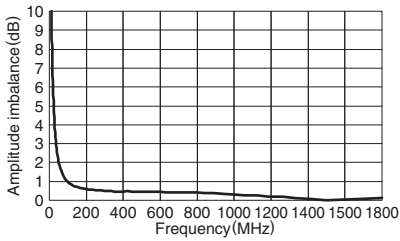
INSERTION LOSS



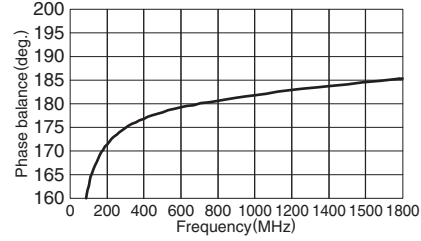
RETURN LOSS



AMPLITUDE IMBALANCE



PHASE BALANCE



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Wound Chip Baluns

Conformity to RoHS Directive

ATB Series ATB2012E-75011M

FEATURES

- ATB2012E-75011M is chip BALUN transformer developed for 75Ω impedance system.
- Input impedance is 75Ω.
- Impedance ration is 1:1.
- Frequency band width is 400MHz to 1.8GHz. (IL=1.0dB typ.)
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APPLICATIONS

Tuner for TV, mobile devices (e.g. DVB-T/H, ISDB-T)
Power divider for STB and tuner

PRODUCT IDENTIFICATION

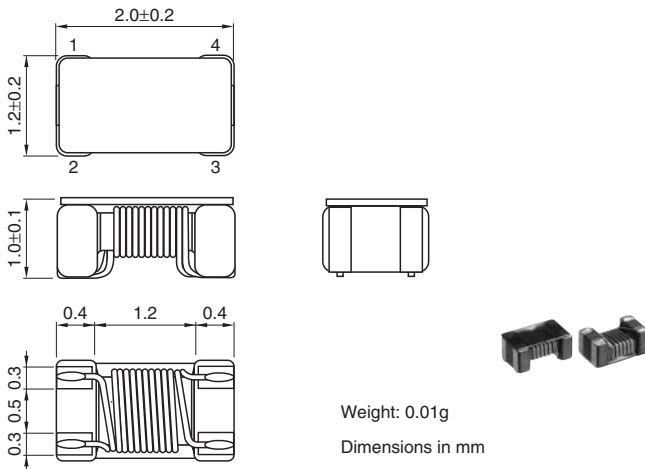
| | | | | |
|-----|-------------|-----|-------|-------------|
| ATB | 2012E - 750 | 11 | M - T | □□ |
| (1) | (2) | (3) | (4) | (5) (6) (7) |

- (1) Series name
 (2) Case size
 (3) Input impedance
 750: 75Ω
 (4) Impedance ratio
 11: 1:1
 (5) Product identification
 (6) Packaging style
 T: Taping ø180mm reel
 TL: Taping ø330mm reel
 (7) Control mark

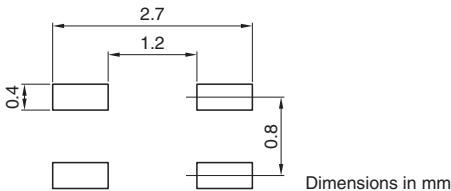
PACKAGING STYLE AND QUANTITIES

| Packaging style | Reel | Quantity |
|-----------------|--------|-------------------|
| Taping | ø180mm | 2000 pieces/reel |
| | ø330mm | 10000 pieces/reel |

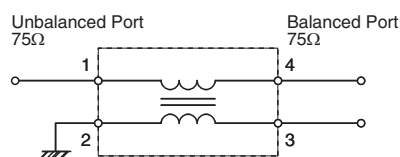
SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



CIRCUIT DIAGRAM

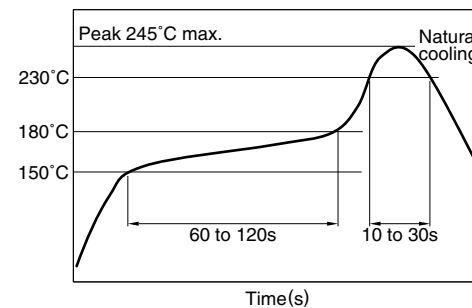


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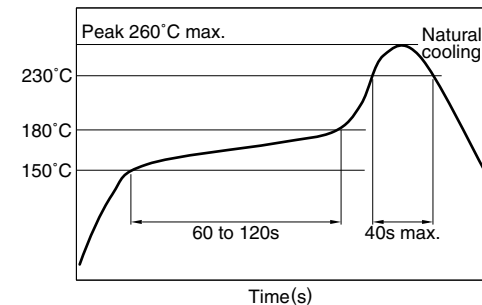
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RECOMMENDED SOLDERING CONDITIONS

RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



REFLOW PROFILE FOR SOLDER HEAT RESISTANCE

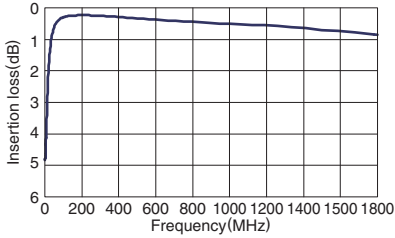


ELECTRICAL CHARACTERISTICS

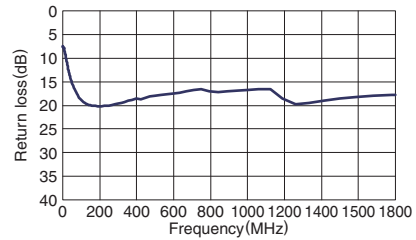
| Part No. | Frequency range (MHz) | UB/B impedance (Ω) | Insertion loss [1.8GHz] (dB) | | CMRR min. | DC resistance (Ω)max. | Rated current (mA) | Rated voltage (V) | Insulation resistance (M Ω) | Withstanding voltage (V) |
|---------------------|-----------------------|-----------------------------|------------------------------|------|-----------|--------------------------------|--------------------|-------------------|-------------------------------------|--------------------------|
| | | | typ. | max. | | | | | | |
| ATB2012E-75011M-T□□ | 400 to 1800 | 75/75 | 1.0 | 2 | 15 | 0.5 | 150 | 20 | 10 | 125 |

FREQUENCY CHARACTERISTICS

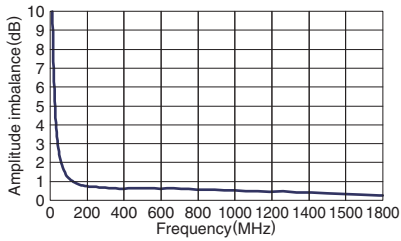
INSERTION LOSS



RETURN LOSS



AMPLITUDE IMBALANCE



PHASE BALANCE

