

# 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.
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# 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 ration 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

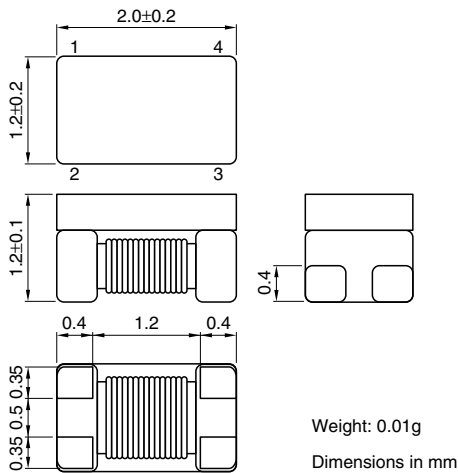
ATB	2012	- 500	11	- T	□□□
(1)	(2)	(3)	(4)	(5)	(6)

- (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

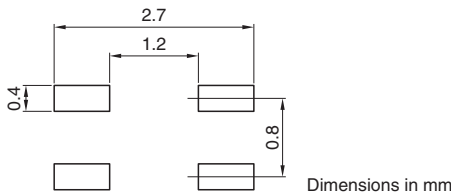
### PACKAGING STYLE AND QUANTITIES

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

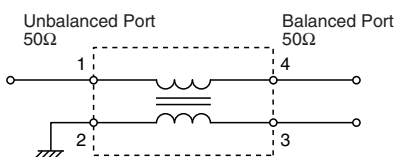
### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



### CIRCUIT DIAGRAM

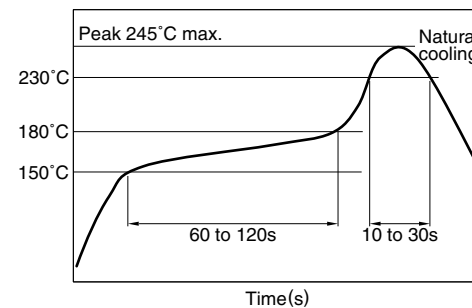


- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

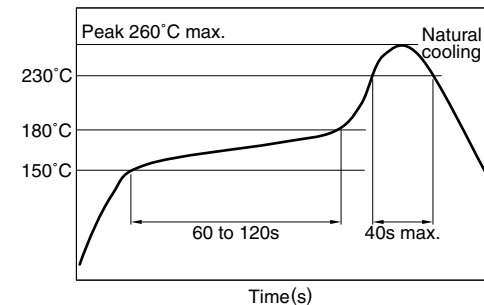
• All specifications are subject to change without notice.

### RECOMMENDED SOLDERING CONDITIONS

#### RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE

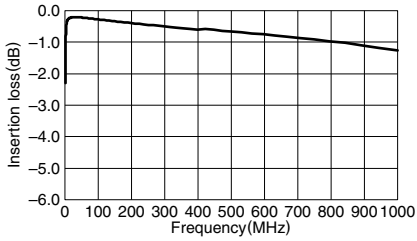


### ELECTRICAL CHARACTERISTICS

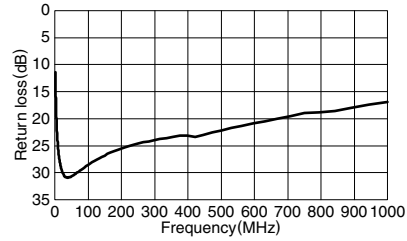
Part No.	Frequency range (MHz)	UB/B Impedance ( $\Omega$ )	Insertion loss (dB)		CMRR min.	DC resistance ( $\Omega$ )max.	Rated current (mA)	Rated voltage (V)	Insulation resistance (M $\Omega$ )	Withstanding voltage (V)
			typ.	max.						
ATB2012-50011-T□□□	40 to 860	50/50	1.0	2.5	20	1.0	200	20	10	125

### FREQUENCY CHARACTERISTICS

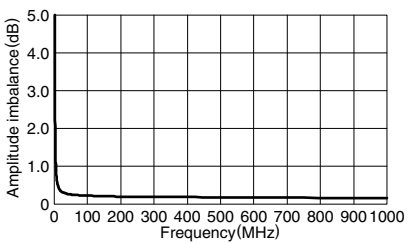
#### INSERTION LOSS



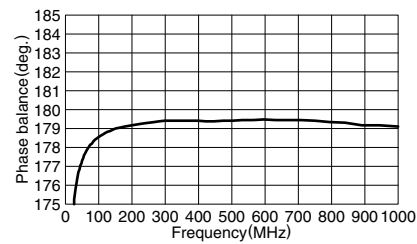
#### RETURN LOSS



#### AMPLITUDE IMBALANCE



#### PHASE BALANCE



# 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

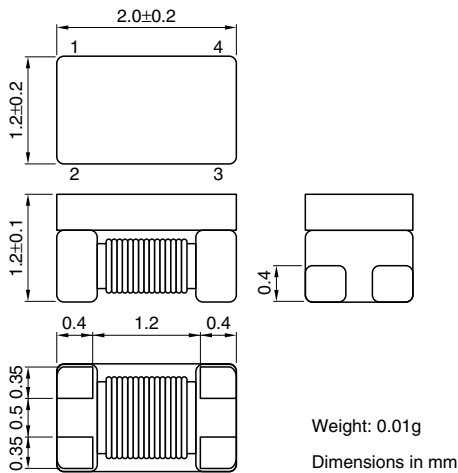
ATB	2012	-	750	11	-	T	□□□
(1)	(2)	(3)	(4)	(5)	(6)		

- (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

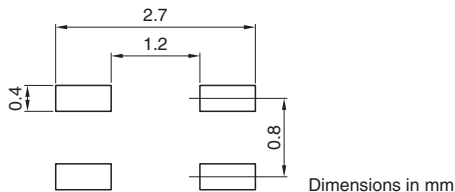
### PACKAGING STYLE AND QUANTITIES

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

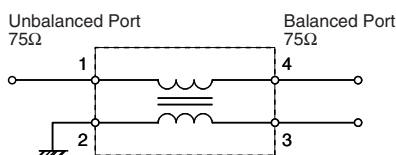
### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



### CIRCUIT DIAGRAM

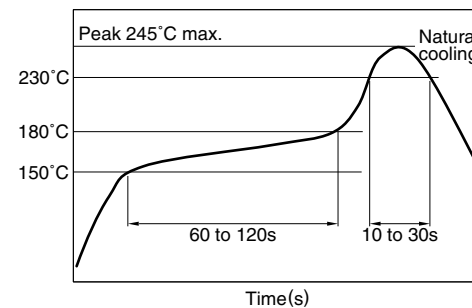


- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

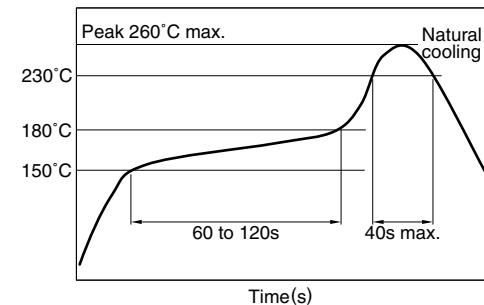
- All specifications are subject to change without notice.

### RECOMMENDED SOLDERING CONDITIONS

#### RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE

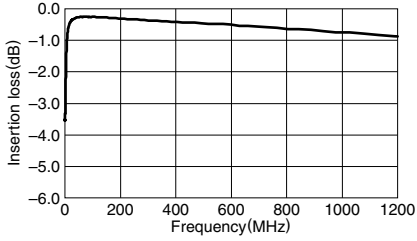


### ELECTRICAL CHARACTERISTICS

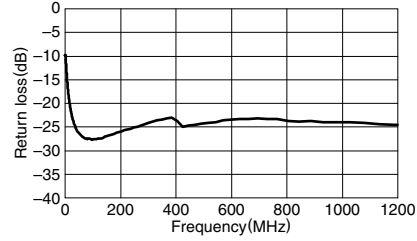
Part No.	Frequency range (MHz)	UB/B Impedance ( $\Omega$ )	Insertion loss (dB) max.	CMRR min.	DC resistance ( $\Omega$ )	Rated current (mA)	Rated voltage (V)	Insulation resistance ( $M\Omega$ )	Withstanding voltage (V)
ATB2012-75011-T□□□	50 to 1200	75/75	1.2	20	0.7	280	20	10	125

### FREQUENCY CHARACTERISTICS

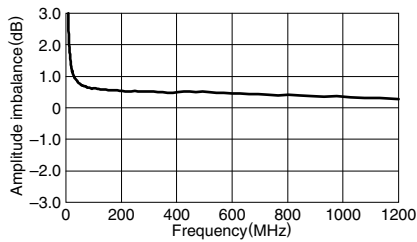
#### INSERTION LOSS



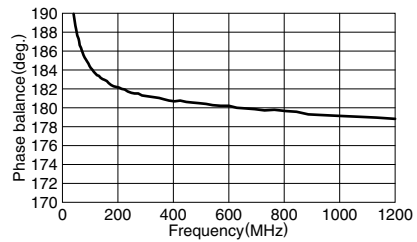
#### RETURN LOSS



#### 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

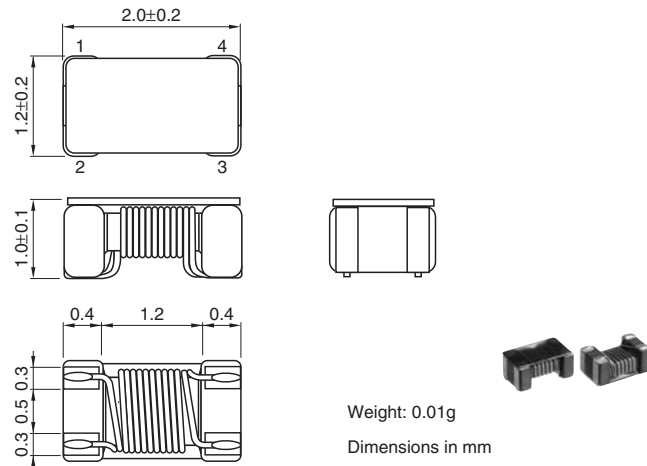
ATB	2012E	- 500	11	M	- T	□□
(1)	(2)	(3)	(4)	(5)	(6)	(7)

- (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

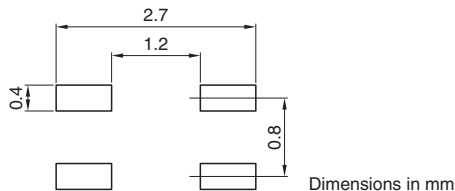
### PACKAGING STYLE AND QUANTITIES

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

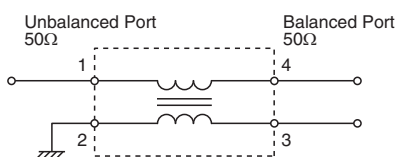
### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



### CIRCUIT DIAGRAM

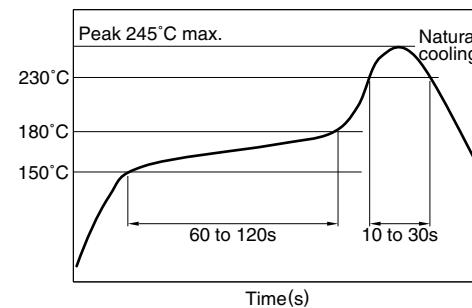


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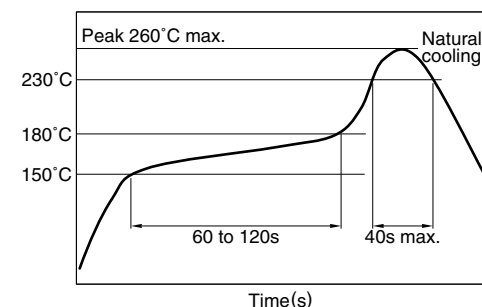
- All specifications are subject to change without notice.

### RECOMMENDED SOLDERING CONDITIONS

#### RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE

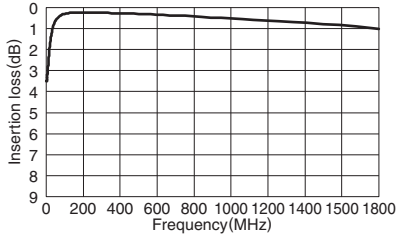


### ELECTRICAL CHARACTERISTICS

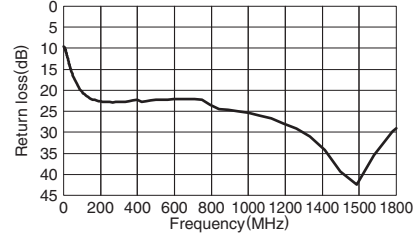
Part No.	Frequency range (MHz)	UB/B Impedance ( $\Omega$ )	Insertion loss [1.8GHz] (dB)		CMRR min.	DC resistance ( $\Omega$ )max.	Rated current (mA)	Rated voltage (V)	Insulation resistance (M $\Omega$ )	Withstanding voltage (V)
			typ.	max.						
ATB2012E-50011M-T□□	400 to 1800	50/50	1.0	2.2	15	0.5	150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

### FREQUENCY CHARACTERISTICS

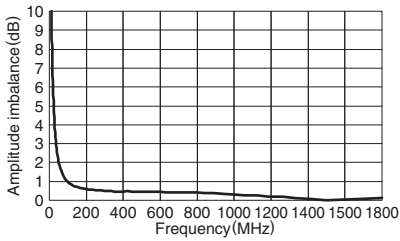
#### INSERTION LOSS



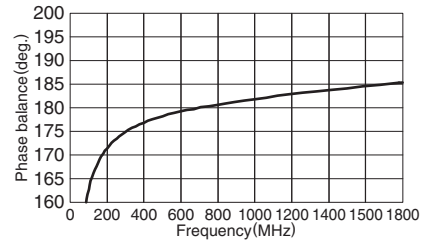
#### RETURN LOSS



#### AMPLITUDE IMBALANCE



#### PHASE BALANCE



# 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

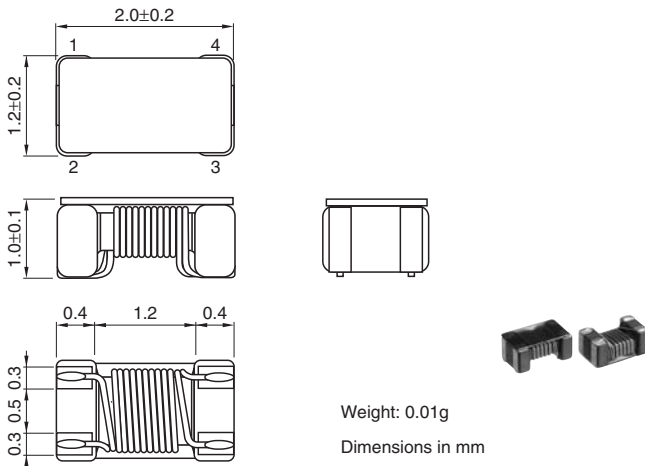
ATB	2012E - 750	11	M - T	□□
(1)	(2)	(3)	(4)	(5) (6) (7)

- (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

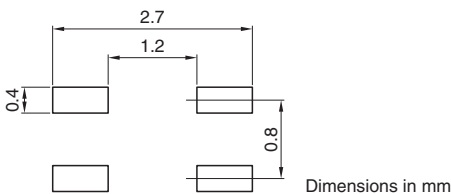
### PACKAGING STYLE AND QUANTITIES

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

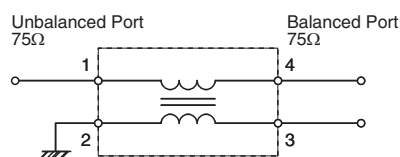
### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



### CIRCUIT DIAGRAM

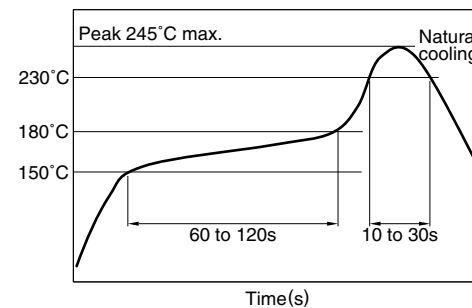


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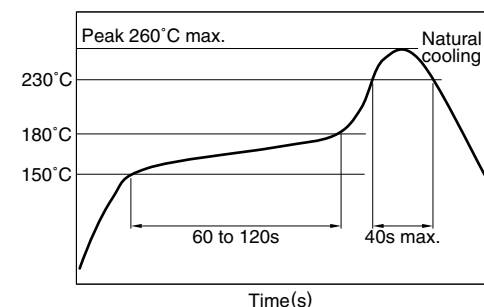
- All specifications are subject to change without notice.

### RECOMMENDED SOLDERING CONDITIONS

#### RECOMMENDED TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



#### REFLOW PROFILE FOR SOLDER HEAT RESISTANCE



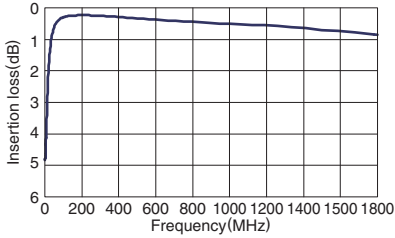


### ELECTRICAL CHARACTERISTICS

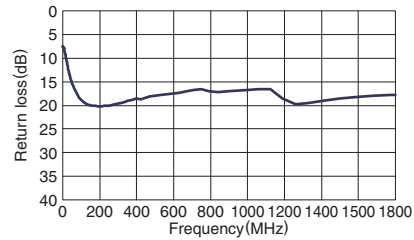
Part No.	Frequency range (MHz)	UB/B impedance ( $\Omega$ )	Insertion loss [1.8GHz] (dB)		CMRR min.	DC resistance ( $\Omega$ )max.	Rated current (mA)	Rated voltage (V)	Insulation resistance (M $\Omega$ )	Withstanding voltage (V)
			typ.	max.						
ATB2012E-75011M-T□□	400 to 1800	75/75	1.0	2	15	0.5	150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

### FREQUENCY CHARACTERISTICS

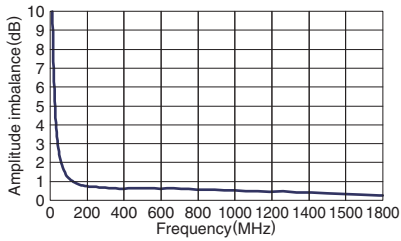
#### INSERTION LOSS



#### RETURN LOSS



#### AMPLITUDE IMBALANCE



#### PHASE BALANCE

