

Thin Film Balun Transformers

For DVB-H/T, ISDB-T

TTB Series

Type: TTB12G51 (1.25×1.0×0.6mm)

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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Thin Film Chip Baluns For DVB-H/T and ISDB-T

Conformity to RoHS Directive

TTB Series TTB12G51

FEATURES

- This is an optimal, thin film chip balun transformer for 50 to 50Ω with low loss at DVB-H/T and ISDB-T frequency bands(174 to 860MHz).
- Does not contain lead and is compatible with lead-free soldering.
- It is a product conforming to RoHS directive.

APPLICATIONS

Balanced/unbalanced conversion for DVB-H/T and ISDB-T radio frequency inputs

PRODUCT IDENTIFICATION

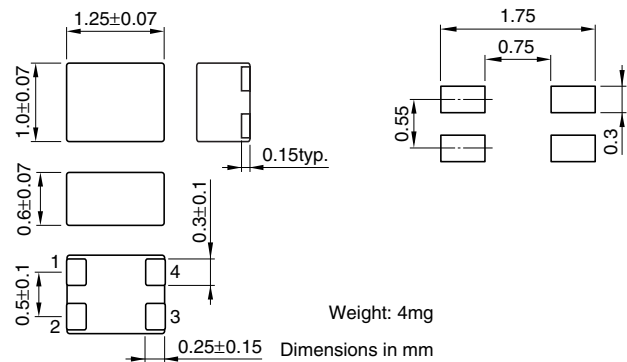
TTB	12	G51	-	900	-	2P	-	T	20
(1)	(2)	(3)	(4)	(5)	(6)	(7)			

- (1) Series name
 (2) Case size
 (3) Product identification number
 G51: $Z_0=50\Omega$
 (4) Common mode impedance
 900: 90Ω [at 100MHz]
 (5) Number of line
 2P: 2-line
 (6) Packaging style
 T: $\varnothing 180\text{mm}$ reel taping
 (7) TDK internal code

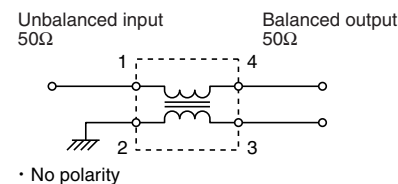
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	4000 pieces/reel

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



CIRCUIT DIAGRAM



ELECTRICAL CHARACTERISTICS

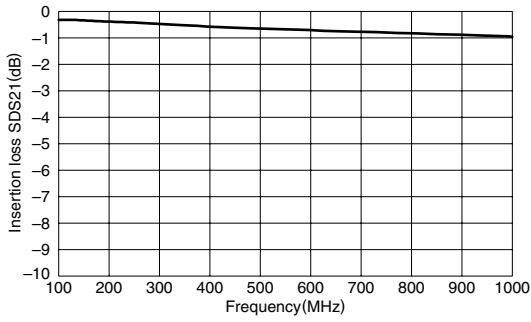
Part No.		TTB12G51-900-2P
Characteristics impedance		50Ω typ.
DC resistance	[1 line]	1.7Ω max.
Rated current I_{dc}		0.1A max.
Rated voltage E_{dc}		10V max.
Insulation resistance		$10\text{M}\Omega$ min.
Amplitude balance at balanced port	[174 to 860MHz]	$0\pm 1.5\text{dB}$
Phase balance at balanced port	[174 to 860MHz]	$180\pm 15\text{deg.}$
Insertion loss	[174MHz]	0.5dB typ.
	[860MHz]	0.7dB typ.
Operating temperature ranges		-25 to $+85^\circ\text{C}$

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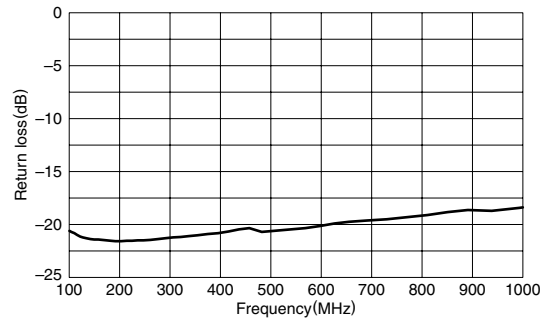
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FREQUENCY CHARACTERISTICS

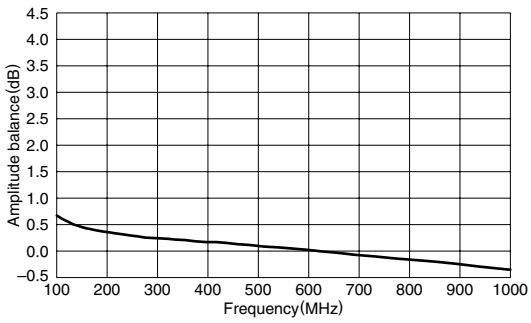
INSERTION LOSS



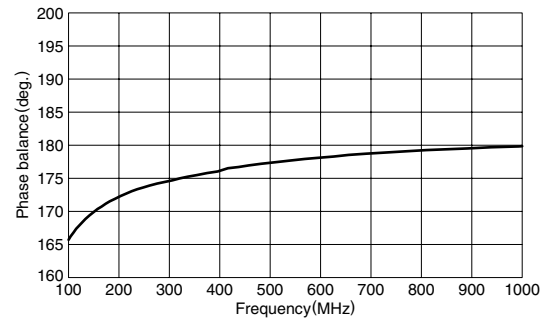
RETURN LOSS



AMPLITUDE BALANCE at BALANCED PORT



PHASE BALANCE at BALANCED PORT



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