

### Description

#### SCOPE

- ABT-B02-75021-094 is a 2:1 balun transformer in a SMT package.

#### APPLICATIONS

- Ideally suitable for CATV broadband applications.

#### FEATURES

- Surface mount
- Impedance ratio: 2:1
- Centre tap on secondary
- RoHS compliant and Pb free
- Available on tape and reel
- ideally suited for DOCSIS 3.1

### PART NUMBER

ABT - B02 - 75021 - 094  
 ①② - ③④ - ⑤ - ⑥

- ① Apps Electronics Limited
- ② Product series
- ③ Form Factor
- ④ Size Number
- ⑤ Impedance/Ratio
- ⑥ Design series Code

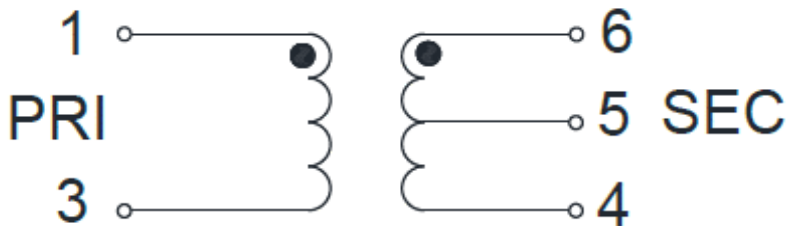
#### Form Factor

**B:** Bobbin/Pin Base  
**P:** PCB base  
**C:** Ceramic base or SMD core  
**F:** Ferrite SMD core  
 Other...

**02:** Form sequence code  
**75021:** 75 ohm, 2:1 Ratio  
**094:** Design series Code

Series	Function description
<b>BT/BL/WB</b>	<b>Balun Transformer</b>
PD/PS	Power Divider/Power Splitter
PC	Power Combiner
CP	Directional Coupler, branch line hybrid/coupler
CL	Coupler+LPF
TF	RF Transformer(non-Balun, SE/SE, BA/BA)
LP/HP/BP/DP/TP	Filter(Lowpass/Highpass/Bandpass/Diplexer/Triplexer)
PT/PM	Power Transformer/Power Module
CM	C.M. Choke
E	Lan Transformer/RJ45/Air Coil
	Other...

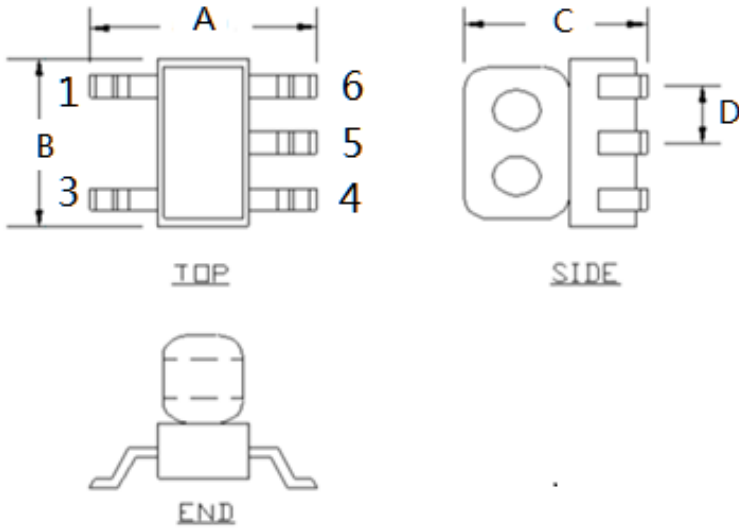
### FUNCTIONAL SCHEMATIC



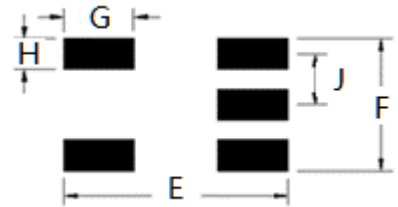
### Pin Configuration

Pin No.	Function
1	Primary Dot (input)
3	Primary (ground)
4	Secondary (Output1)
5	Center Tap (Ground)
6	Secondary Dot (Output2)

### DIMENSIONS



### LAND PATTERN



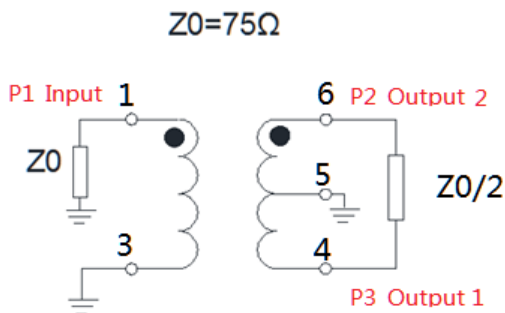
A	B	C
5.39	4.22	3.63
D		
1.50		

E	F	G
6.13	3.91	1.92
H	J	
0.91	1.50	

Unless otherwise stated dimensions are in mm

Tolerance: .xx ± 0.25, .xxx ± 0.05

### APPLICATION & TEST CIRCUIT



### ABSOLUTE MAXIMUM RATINGS

Parameter	Value
Input RF Power	500mW Max
DC Current	500mA Max
Operating Temperature Range	-40 to 85°C



# Apps Electronics Limited

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ABT-B02-75021-094

Balun Transformer(5-300MHz)

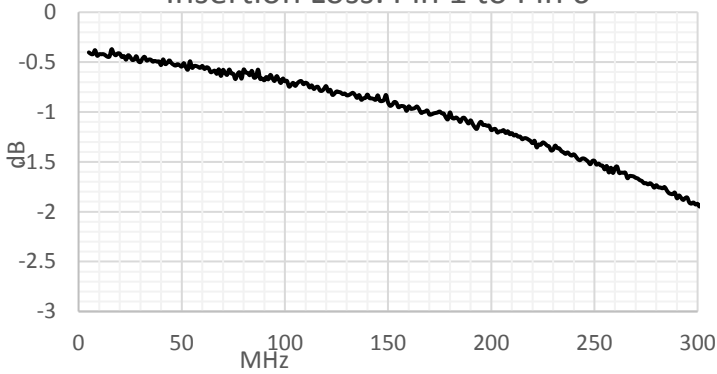
### ELECTRICAL SPECIFICATIONS@25°C:

Parameters (P#: ENA PORT)	frequency band	Min.	Typ.	Max.	Unit
Port Impedance, Z0 (P1 / P2 / P3)			75 / 18.75/ 18.75		Ohm
Insertion Loss	5-50MHz		0.4	0.6	dB
	50-85MHz		0.5	0.7	dB
	85-205MHz		0.8	1.5	dB
	205-300MHz		1.3	2.2	dB
Input Return Loss (Pin 1)	5-50MHz	20.0	25.0		dB
	50-85MHz	15.0	19.0		dB
	85-205MHz	8.0	13.0		dB
	205-300MHz	6.0	9.0		dB
Amplitude Balance	5-50MHz		0.02	0.2	dB
	50-85MHz		0.10	0.3	dB
	85-205MHz		0.20	0.5	dB
	205-300MHz		0.5	0.7	dB
Phase Balance (ref value 180 °)	5-50MHz		1.0	2.0	Deg
	50-85MHz		1.5	3.0	Deg
	85-205MHz		3.0	6.0	Deg
	205-300MHz		4.0	7.0	Deg

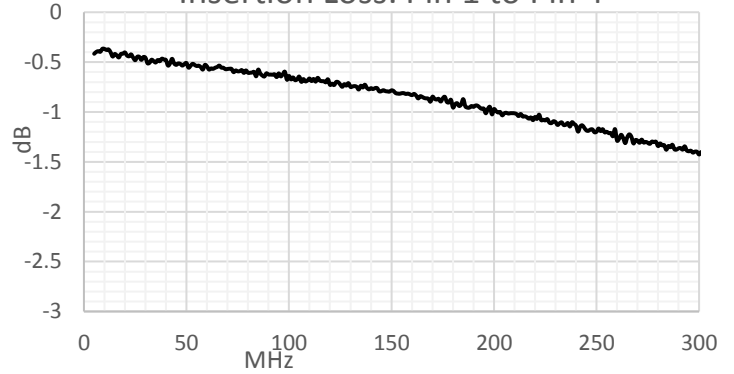


TEST CURVE

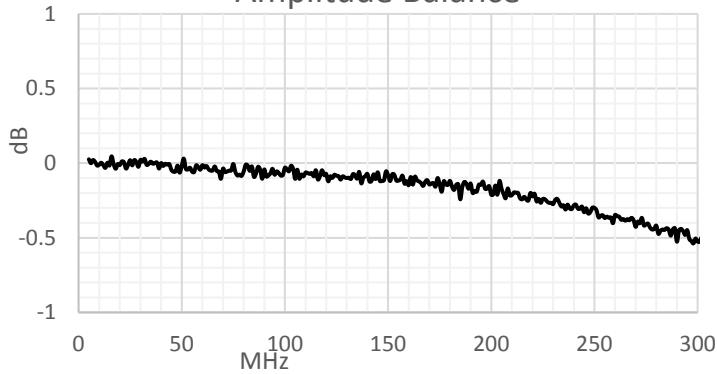
Insertion Loss: Pin 1 to Pin 6



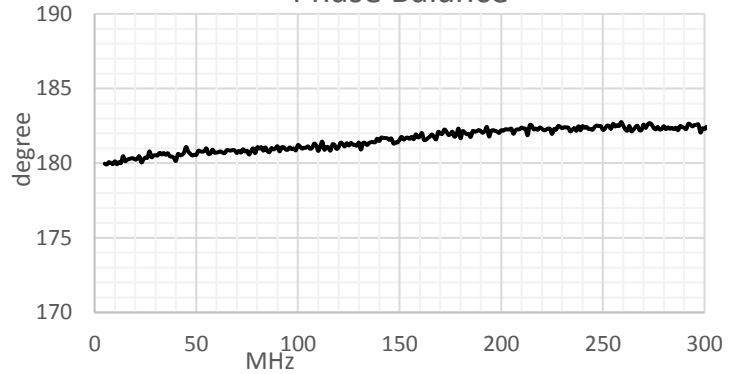
Insertion Loss: Pin 1 to Pin 4



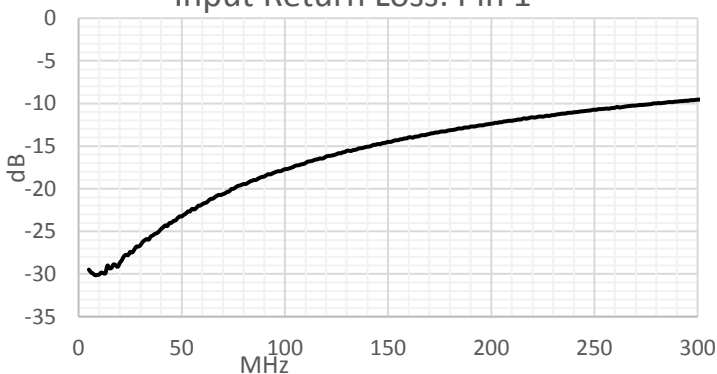
Amplitude Balance



Phase Balance

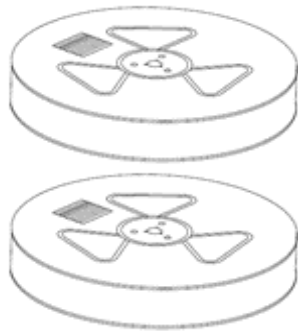
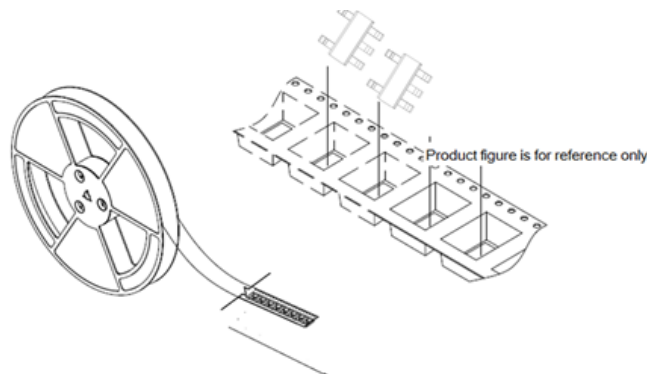
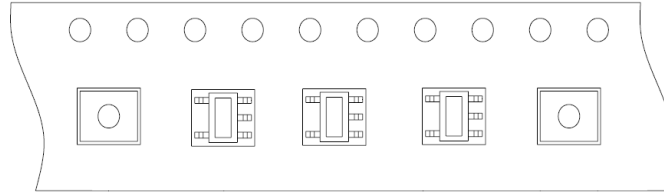


Input Return Loss: Pin 1

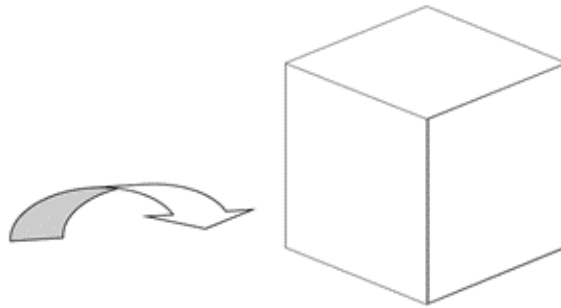


### PACKING

DIRECTION OF FEED



Ten Reel



Export Carton

Quantity per reel: 2000 pcs

Quantity per export carton: 20000 pcs

Rev.	Effective Date	Changed Contents	Change Reasons	Approved
A1	2018/6/16	New released		Owen Ho
A2	2018/6/26	Updated product name	Before: BFC-21-75-02B After: ABT-B02-75021-094	Owen Ho