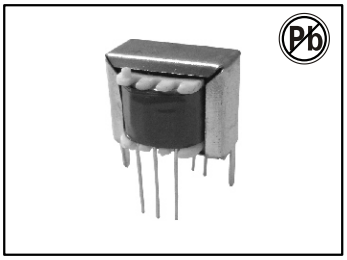


ECONOMY AUDIO DRY (NO DC) COUPLING TRANSFORMERS
AT SERIES

FEATURES:

- Metric size
- Low cost
- Dielectric strength–1000VAC (PRI–SEC–CORE)
- Resistances ± 20%
- All impedances ± 10% (at 1kHz)

OPTIONS:

- Bulk packaging is standard
- Custom design available

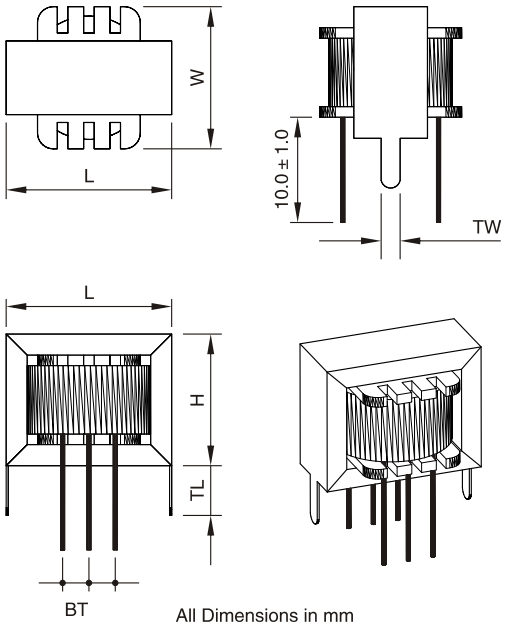
COMMON APPLICATIONS:

- Telephony
- Audio coupling / isolating
- Alarm system

ELECTRICAL CHARACTERISTICS

Part No.	Size	Description	Impedance(Ω)		DC Resistance	
			Pri.	Sec.	Pri.	Sec.
AT–201	1	Output	500 C.T.	8 C.T.	35	0.8
AT–130	1	Coupling	600 C.T.	600 C.T.	45	40
AT–202	1	Output	1K C.T.	8 C.T.	60	0.8
AT–203	1	Coupling	10K C.T.	600 C.T.	450	100
AT–204	1	Driver	10K C.T.	2K C.T.	500	200
AT–301	2	Output	500 C.T.	8 C.T.	22	0.8
AT–302	2	Interstage	500 C.T.	500 C.T.	30	28
AT–303	2	Output	1.2K C.T.	8 C.T.	80	0.8
AT–304	2	Output	48 C.T.	8 C.T.	2.5	0.5
AT–305	2	Output	200 C.T.	8 C.T.	12	0.8
AT–400	3	Output	200 C.T.	8 C.T.	12	0.8
AT–401	3	Output	500 C.T.	8 C.T.	26	0.8
AT–129	3	Coupling	600 C.T.	600 C.T.	65	55
AT–402	3	Output	800 C.T.	8 C.T.	40	0.8
AT–403	3	Output	1.2K C.T.	8 C.T.	80	0.8
AT–404	3	Interstage	1.5K C.T.	500 C.T.	120	50
AT–405	3	Coupling	10K C.T.	600 C.T.	600	100
AT–406	3	Driver	10K C.T.	2K C.T.	600	155
AT–500	4	Output	48 C.T.	8 C.T.	2.5	0.5
AT–501	4	Output	120 C.T.	8 C.T.	7	0.7
AT–502	4	Output	200 C.T.	8 C.T.	12	0.5
AT–503	4	Output	500 C.T.	8 C.T.	18	0.7
AT–504	4	Interstage	500 C.T.	500 C.T.	35	28
AT–505	4	Driver	10K C.T.	2K C.T.	600	155
AT–506	4	Output	1.2K C.T.	8 C.T.	75	0.8
AT–507	4	Coupling	600 C.T.	600 C.T.	65	55

PHYSICAL CHARACTERISTICS

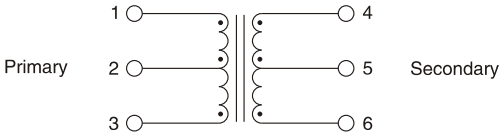


All Dimensions in mm

Dimensions(mm)

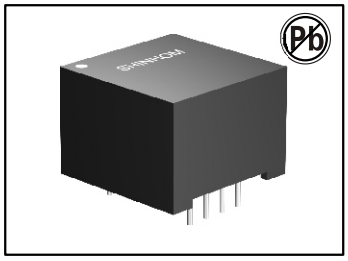
Part No.	size 1	size 2	size 3	size 4
	EI–14	EI–16	EI–19	EI–24
L	15.2	17.7	20.3	25.3
H	11.0	14.0	16.2	19.0
W	12.0	16.0	14.5	16.9
TW	2.0	2.2	2.2	2.6
TL	3.8	4.0	4.2	4.8
BT	2.5	2.8	3.0	4.5

TECHNICAL INFORMATION



Schematic

Size 1: EI–14 series 0.75watts max. / TCW leads 0.4mm DIA.(0.0159)#26 AWG
Size 2: EI–16 series 0.1watts max. / TCW leads 0.43mm DIA.(0.0179)#25 AWG
Size 3: EI–19 series 0.2watts max. / TCW leads 0.4mm DIA.(0.0159)#25 AWG
Size 4: EI–24 series 0.46watts max. / TCW leads 0.48mm DIA.(0.02)#24 AWG



SURFACE MOUNT LINE MATCHING TRANSFORMERS
AT 16XX SERIES

FEATURES:

- Fully encapsulated
- Low profile
- High dielectric strength
- Ten models available
- Ex stock
- Competitively priced
- Lead free
- RoHS compliant *

OPTIONS:

- Tape and reel is standard (400 pcs. per reel)
- Bulk packaging available for Smaller quantities
- Custom design available
- Tolerance: 5% is standard, Tighter tolerance available

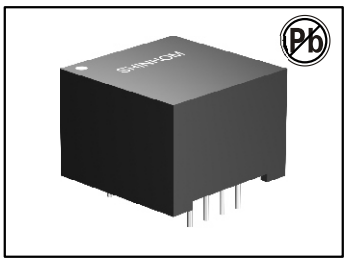
COMMON APPLICATIONS:

- Line matching
- Modems
- Fax modems
- Laptop Computer
- Telecommunications
- Instrumentation
- PCMCIA

ELECTRICAL CHARACTERISTICS

Parameters		Unit	Part Number									
			AT1601	AT1602	AT1603	AT1604	AT1605	AT1601A	AT1602A	AT1603A	AT1604A	AT1605A
Ref. Temperature Data		℃	25	25	25	25	25	25	25	25	25	25
Impedance (min./at 1.0kHz)	Primary	Ω	600	600	600	600 (150,150)	600 (150+150)	600	600	600	600 (150,150)	600 (150+150)
	Secondary	Ω	600	600 (150,150)	600 (150+150)	600 (150,150)	600 (150+150)	600	600 (150,150)	600 (150+150)	600 (150,150)	600 (150+150)
Inductance (min./at 0.2 kHz)	Primary	H	2.8	2.8	2.8	2.8 (0.7,0.7)	2.8 (0.7+0.7)	2.8	2.8	2.8	2.8 (0.7,0.7)	2.8 (0.7+0.7)
	Secondary	H	2.8	2.8 (0.7,0.7)	2.8 (0.7+0.7)	2.8 (0.7,0.7)	2.8 (0.7+0.7)	2.8	2.8 (0.7,0.7)	2.8 (0.7+0.7)	2.8 (0.7,0.7)	2.8 (0.7+0.7)
DC–Resistance (Typical/ ± 10%)	Primary	Ω	66	66	66	66 (33,33)	66 (33+33)	90	90	90	90 (45,45)	90 (45+45)
	Secondary	Ω	66	66 (33,33)	66 (33+33)	66 (33,33)	66 (33+33)	90	90 (45,45)	90 (45+45)	90 (45,45)	90 (45+45)
Turns Ratio(≤ ± 2%)		–	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1
Winding Configurations		–	–	one winding centre tapped	one winding split	both windings centre tapped	both windings split	–	one winding centre tapped	one winding split	both windings centre tapped	both windings split
Insertion Loss (at 2.0kHz)		dB	≤1.5					≤2.0				
Return Loss	Transformer (0.2–4.0kHz)	dB	≥10.0					≥8.0				
	In Networks		≥21.0					≥20.0				
Shunt Loss (Typical)		kΩ	9.0					9.0				
Frequency Response (Typ./0.2–3.5kHz)		dB	–0.3					–0.5				
Wide Band Response(0.2–10kHz)		dB	–2.5					–4.5				
Power Level		dBm	–45.0~+3.0					–43.0~+3.0				
Longitudinal Balance(0.3–4.0kHz)		dB	–80.0					–70.0				
Distortion(0 dB/at 1.0kHz)		%	≤0.1					≤0.25				
Leakage Induction(Typical)		mH	14.0					14.0				
Dielectric Strength(P/S)		kVDC	6.5					6.5				
Temperature Range	Operation	℃	–10~+60					–10~+60				
	Storage	℃	–20~+70					–20~+70				
Specifications Met			BS 6240: Construction and flammability (UL 94 VO) BS 6310: Isolation BS 6305: Return loss (1982/paragraph 4.3.2.2/b)					CCITT: Rec. T/CD 1–1 (Sept. 1982)				

SURFACE MOUNT LINE MATCHING TRANSFORMERS
AT 16XX SERIES



FEATURES:

- Fully encapsulated
- Low profile
- High dielectric strength
- Ten models available
- Ex stock
- Competitively priced
- Lead free
- RoHS compliant *

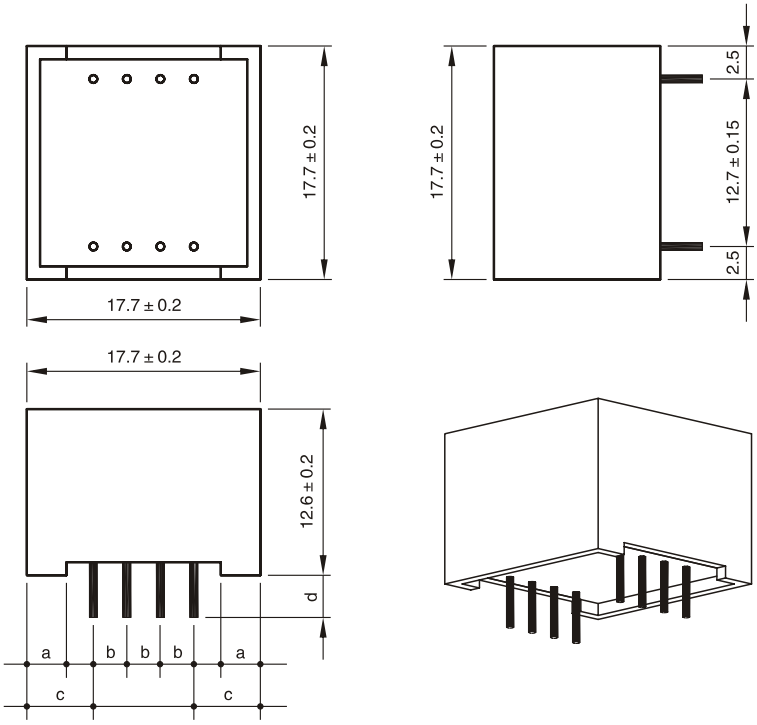
OPTIONS:

- Tape and reel is standard (400 pcs. per reel)
- Bulk packaging available for Smaller quantities
- Custom design available
- Tolerance: 5% is standard, Tighter tolerance available

COMMON APPLICATIONS:

- Line matching
- Modems
- Fax modems
- Laptop Computer
- Telecommunications
- Instrumentation
- PCMCIA

PHYSICAL CHARACTERISTICS



Note:
The AT1600 Series Line Matching Transformers meet the return loss specifications of BS 6305.

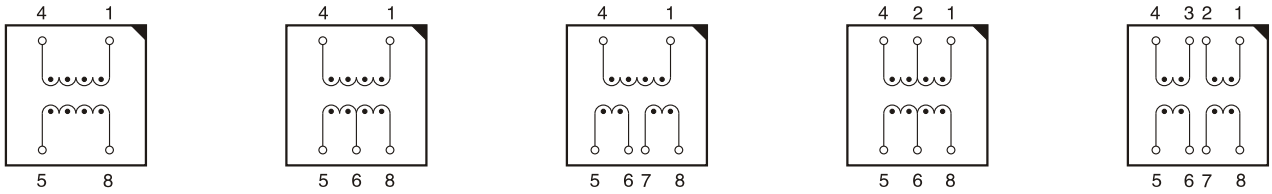
It is important, however, to use the circuit recommended by BS 6305 for return loss measurements.

The AT1600 Series meet EN41003.

a=3.0
b=2.54
c=5.04
d=3.2 ± 0.8

Note: All Dimensions in mm

TECHNICAL INFORMATION



one–winding centre–tapped

one–winding split

both–windings centre–tapped

both–windings split

Due to the unique design and the most advanced manufacturing techniques the 2 coils are fully identical, meaning there is no real primary nor secondary winding. Depending on the application, the transformers can be used either way.

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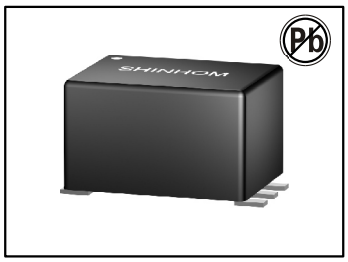


SURFACE MOUNT LINE MATCHING TRANSFORMERS
AT801 SERIES

FEATURES:

- Subminiature in SMT
- 7.36mm seated height
- Tested at 4600 Vrms, 1minute
- Distortion of only 0.015%
- Vacuum encapsulated
- UL60950 certified
- RoHS compliant＊

OPTIONS:

- Tape and reel is standard (400 pcs. per reel)
- Bulk packaging available for Smaller quantities
- Custom design available
- Tolerance: 5% is standard, Tighter tolerance available

COMMON APPLICATIONS:

- Modems(V32)
- Laptop Computer
- Telecommunications
- Instrumentation
- PCMCIA

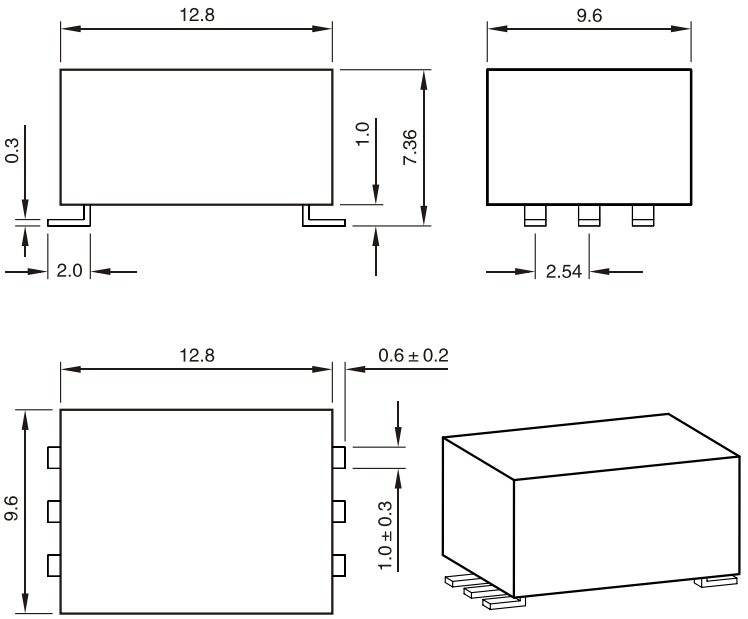
ELECTRICAL CHARACTERISTICS

Nominal Impedance:	600Ω
Turns Ratio:	1:1
Insertion Loss:	2.0dB max. at 2kHz
Frequency Response:	±0.25dB max. 200–4kHz
Return Loss:	24dB min. 200–4kHz＊
Balance:	80dB min.
Distortion:	–76dB max. @600Hz, –10dBm
Dielectric Strength:	4600 Vrms for 1 min.
Insulation Resistance:	100MΩ@500V
DC Resistance＊＊	
Primary:	115Ω ±15%
Secondary:	115Ω ±15%
Shunt Inductance:	3.8H min.
Shunt:	7500Ω min.
Leakage Inductance:	6mH typ. @1kHz
Power Level:	10dBm
Operating Temperature:	–20℃~+85℃
Storage Temperature:	–40℃~+85℃
Terminal Plating Material:	AgSn

＊For use with recommended circuit (BS6305 impedance Class A non–speech or Class B speech)

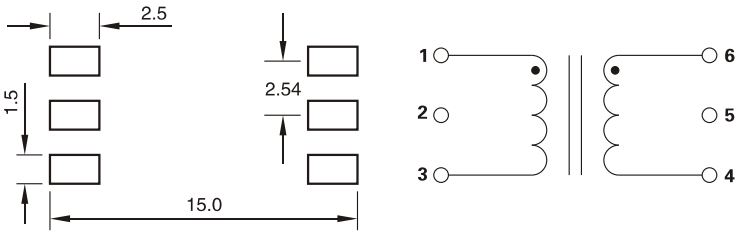
＊AT801 is symetrical, meaning there is no real primary nor secondary winding.

PHYSICAL CHARACTERISTICS



Note: All Dimensions in mm

TECHNICAL INFORMATION

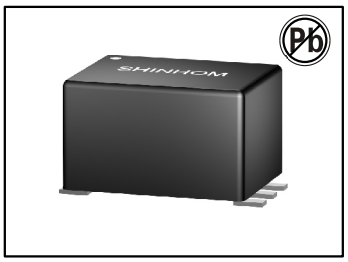


Suggested PCB Layout **Schematic**

Note: All Dimensions in mm

SURFACE MOUNT LINE MATCHING TRANSFORMERS

AT802 SERIES



FEATURES:

- Subminiature in SMT
- 7.36mm seated height
- Tested at 4600 Vrms, 1minute
- Distortion of only 0.015%
- Vacuum encapsulated
- UL60950 certified
- RoHS compliant＊

OPTIONS:

- Tape and reel is standard (400 pcs. per reel)
- Bulk packaging available for Smaller quantities
- Custom design available
- Tolerance: 5% is standard, Tighter tolerance available

COMMON APPLICATIONS:

- Modems(V32)
- Laptop Computer
- Telecommunications
- Instrumentation
- PCMCIA

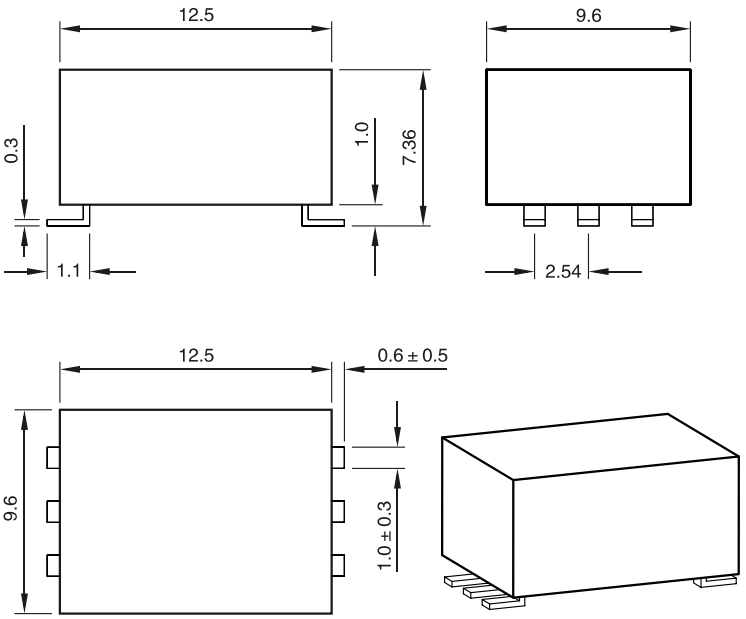
ELECTRICAL CHARACTERISTICS

Nominal Impedance:	600Ω
Turns Ratio:	1:1
Insertion Loss:	2.0dB max. at 2kHz
Frequency Response:	±0.25dB max. 200–4kHz
Return Loss:	24dB min. 200–4kHz＊
Balance:	80dB min.
Distortion:	–85dB max. @600Hz, –10dBm
Dielectric Strength:	4600 Vrms for 1 min.
Insulation Resistance:	100MΩ @500V
DC Resistance＊＊	
Primary:	136Ω ± 12%
Secondary:	136Ω ± 12%
Shunt Inductance:	3.8H min.
Shunt:	7500Ω min.
Leakage Inductance:	6–7mH typ. @1kHz
Power Level:	10dBm
Operating Temperature:	–20℃~+85℃
Storage Temperature:	–40℃~+85℃
Terminal Plating Material:	AgSn

＊For use with recommended circuit (BS6305 impedance Class A non–speech or Class B speech)

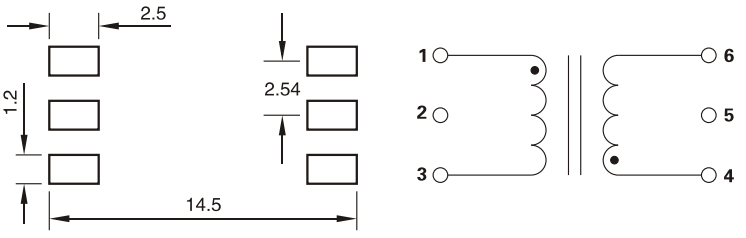
＊AT802 is symetrical, meaning there is no real primary nor secondary winding.

PHYSICAL CHARACTERISTICS



Note: All Dimensions in mm

TECHNICAL INFORMATION



Suggested PCB Layout **Schematic**

Note: All Dimensions in mm

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