

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*

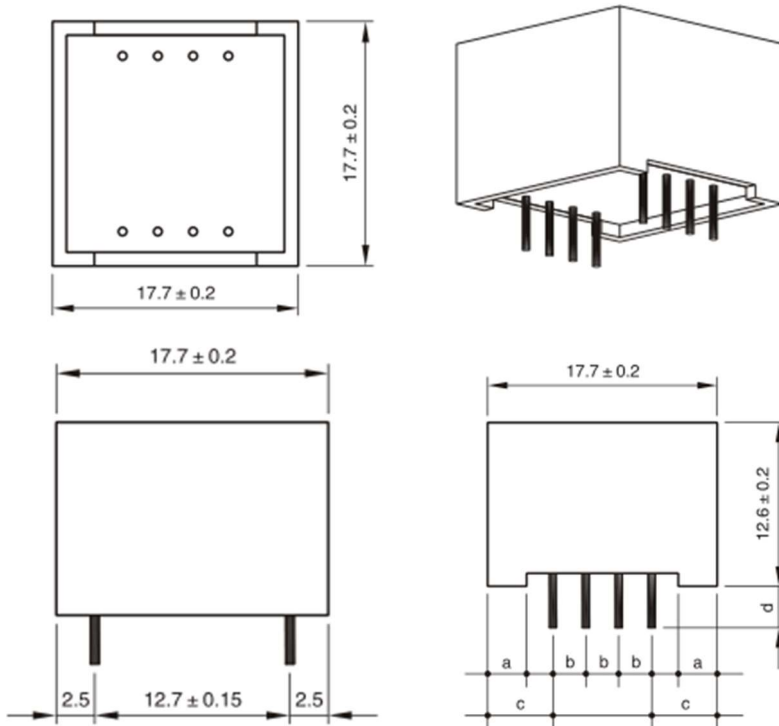
COMMON APPLICATIONS:

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

ELECTRICAL CHARACTERISTICS:

Parameters		Unit	Part Number											
			AT1601	AT1602	AT1603	AT1604	AT1605	AT1601A	AT1602A	AT1603A	AT1604A	AT1605A		
Ref. Temperature Data		°C	25	25	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)	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)	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)	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)	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)	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)	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	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	Both windings split	
Insertion Loss (at 2.0kHz)		dB	≤1.5					≤2.0						
Return Loss Transformer (0.2-4.0kHz) In Networks		dB	≥10.0 ≥21.0					≥8.0 ≥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	°C	-10 ~ +60					-10 ~ +60						
	Storage	°C	-20 ~ +70					-20 ~ +70						

TECHNICAL INFORMATION:



Note:

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

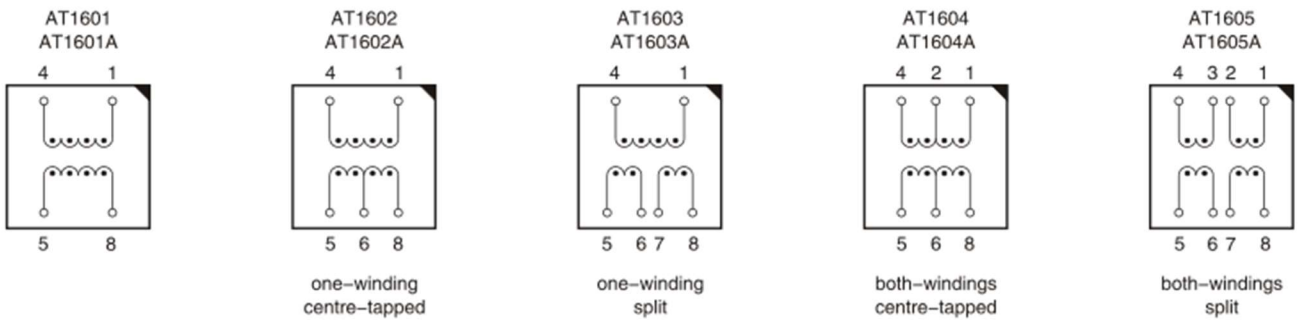
It is important, however, to use the circuit recommended by BS 6305 for return loss measurements.

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 & PHYSICAL CHARACTERISTICS:



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.

SURFACE MOUNT LINE MATCHING TRANSFORMERS

AT801 SERIES



FEATURES:

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

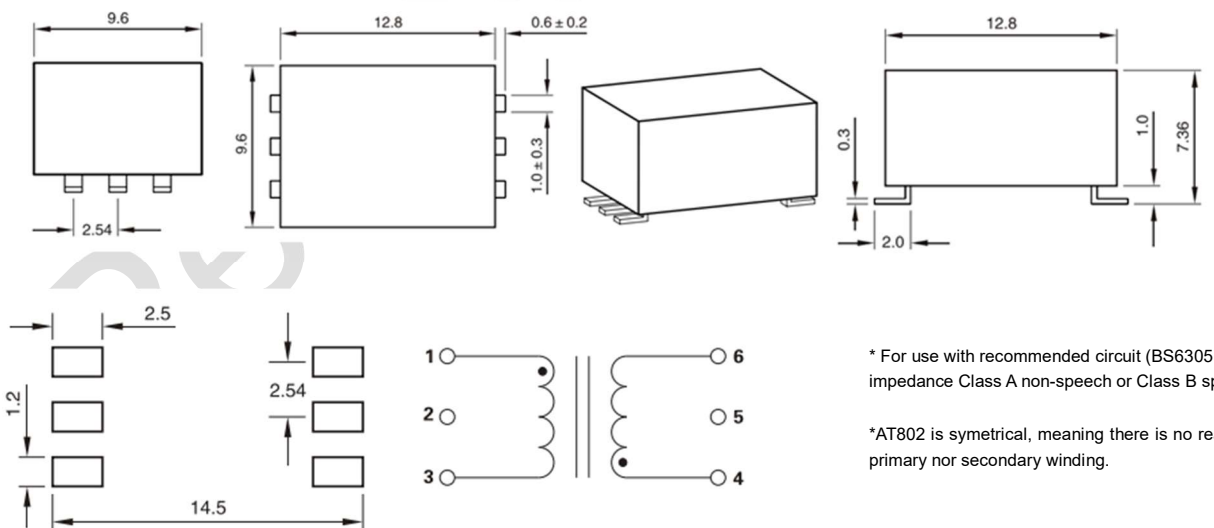
COMMON APPLICATIONS:

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

ELECTRICAL CHARACTERISTICS:

Nominal Impedance:	600 Ω	Primary:	115 Ω ±15%	Distortion:	-76dB max. @600Hz, -10dBm
Turns Ratio:	1:1	Secondary:	115 Ω ±15%	Dielectric Strength:	4600 Vrms for 1 min.
Insertion Loss:	2.0dB max. at 2kHz	Shunt Inductance:	3.8H min.	Insulation Resistance:	100M Ω @500V
Frequency Response:	± 0.25dB max. 200-4kHz	Shunt:	75000 min.	Operating Temperature:	-20°C~+85°C
Return Loss:	24dB min. 200-4kHz*	Leakage Inductance:	6mH typ. @1kHz	Storage Temperature:	-40°C~+85°C
Balance:	80dB min.	Power Level:	10dBm	Terminal Plating Material:	AgSn
DC Resistance **					

TECHNICAL INFORMATION & PHYSICAL CHARACTERISTICS:



Suggested PCB Layout

Schematic

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

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

Note: All Dimensions in mm