

# 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

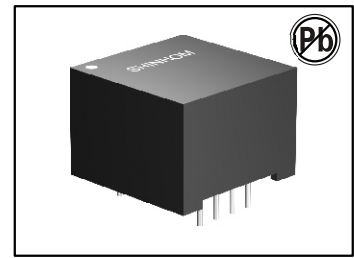
## COMMON APPLICATIONS:

- 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		
<b>Ref. Temperature Data</b>		°C	25	25	25	25	25	25	25	25	25	25	25	25
<b>Impedance (min./at 1.0kHz)</b>	<b>Primary</b>	Ω	600	600	600	600 (150,150)	600 (150+150)	600	600	600	600 (150,150)	600 (150+150)		
	<b>Secondary</b>	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)		
<b>Inductance (min./at 0.2 kHz)</b>	<b>Primary</b>	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)		
	<b>Secondary</b>	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)		
<b>DC-Resistance (Typical/ ± 10%)</b>	<b>Primary</b>	Ω	66	66	66	66 (33,33)	66 (33+33)	90	90	90	90 (45,45)	90 (45+45)		
	<b>Secondary</b>	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)		
<b>Turns Ratio(≤ ± 2%)</b>		-	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1		
<b>Winding Configurations</b>		-	-	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		
<b>Insertion Loss (at 2.0kHz)</b>		dB	≤ 1.5					≤ 2.0						
<b>Return Loss</b>	<b>Transformer (0.2-4.0kHz)</b>	dB	≥ 10.0					≥ 8.0						
	<b>In Networks</b>	dB	≥ 21.0					≥ 20.0						
<b>Shunt Loss (Typical)</b>		kΩ	9.0					9.0						
<b>Frequency Response (Typ./0.2-3.5kHz)</b>		dB	-0.3					-0.5						
<b>Wide Band Response(0.2-10kHz)</b>		dB	-2.5					-4.5						
<b>Power Level</b>		dBm	-45.0~+3.0					-43.0~+3.0						
<b>Longitudinal Balance(0.3-4.0kHz)</b>		dB	-80.0					-70.0						
<b>Distortion(0 dB/at 1.0kHz)</b>		%	≤ 0.1					≤ 0.25						
<b>Leakage Induction(Typical)</b>		mH	14.0					14.0						
<b>Dielectric Strength(P/S)</b>		kVDC	6.5					6.5						
<b>Temperature Range</b>	<b>Operation</b>	°C	-10~+60					-10~+60						
	<b>Storage</b>	°C	-20~+70					-20~+70						
<b>Specifications Met</b>			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)						

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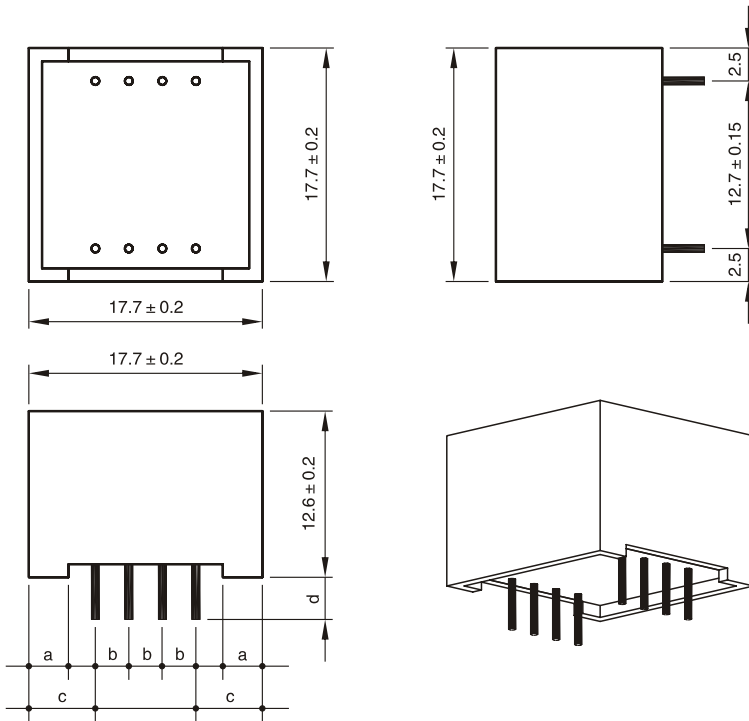
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## PHYSICAL CHARACTERISTICS



Note:

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

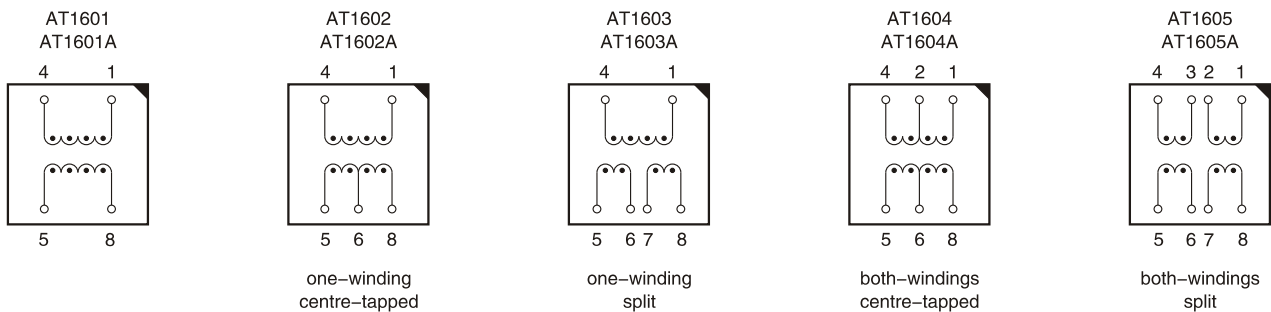
It is important, however, to use the circuit recommended by BS 6305 for return loss measurements.

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



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.