


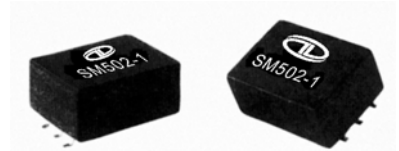


## SURFACE MOUNT TELECOM TRANSFORMER SM502-1

### FEATURES

- Subminiature
- Vacuum encapsulated
- UL1459 File No. E173817 Insulation System 
- EN60950 Recognized File E173817
- Operating Temperature -20°C to +85°C

- 7.36mm seated Height
- Tested at 4600 Vrms
- Weight ≈ 2 gram
- BABT Approval No. CRC 0047
- Storage Temperature -20°C to +85°C



### APPLICATIONS

- MODEMS
- LAPTOP COMPUTERS
- TELECOMMUNICATIONS
- INSTRUMENTATION

### ELECTRICAL SPECIFICATIONS AT 25°C

|                                      |           |          |                                     |           |
|--------------------------------------|-----------|----------|-------------------------------------|-----------|
| IMPEDANCE                            | PRIMARY   | 600 Ω    | SHUNT INDUCTANCE (MIN)              | 3.8 H     |
|                                      | SECONDARY | 600 Ω    | SHUNT LOSS (MIN)                    | 7500 Ω    |
| URNS RATIO                           |           | 1 : 1    | LEAKAGE INDUCTANCE @1KHz (TYP)      | 7 mH      |
| INSERTION LOSS @2KHz (MAX)           |           | 3.0 dB   | UNBALANCE D.C. CURRENT              | 0 mA      |
| FREQUENCY RESPONSE @200-4000Hz (MAX) |           | ±0.25 dB | DC RESISTANCE* PRIMARY (± 15%)      | 150 Ω     |
| RETURN LOSS @200-4000Hz (MIN)        |           | 24 dB    | SECONDARY(± 15%)                    | 150 Ω     |
| LONGITUDINAL BALANCE (MIN)           |           | 80 dB    | INSULATION RESISTANCE @500VDC (MIN) | 100 MΩ    |
| DISTORTION (TYP)                     |           | -85 dB   | DIELECTRIC STRENGTH for 1 minute    | 4600 Vrms |
| POWER LEVEL                          |           | 10 dBm   |                                     |           |

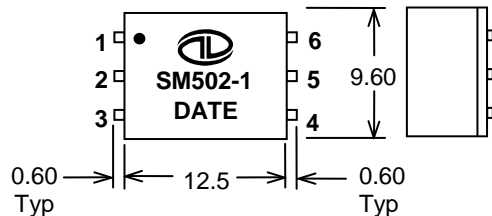
Note : for use with recommended circuit (BS6305 impedance Class A non-speech or Class B speech)

\* SM502-1 is symmetrical meaning there is no real primary or secondary winding.

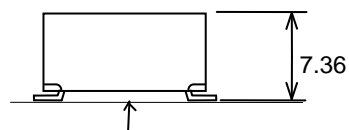
\*\*SM502-1 is identical to SM-LP5002. SM-LP5002 is European version.

Terminal finish is compliant to RoHS requirements. Solder in accordance with J-STD-020D

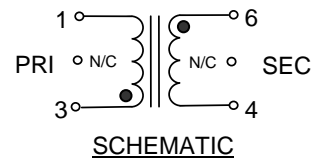
### OUTLINE DIMENSIONS



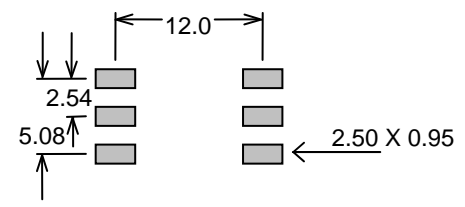
ALL DIMENSIONS IN MILLIMETERS  
TOLERANCE : .XX =+/-0.25MM



Leads Coplanarity = 0.15mm Maximum



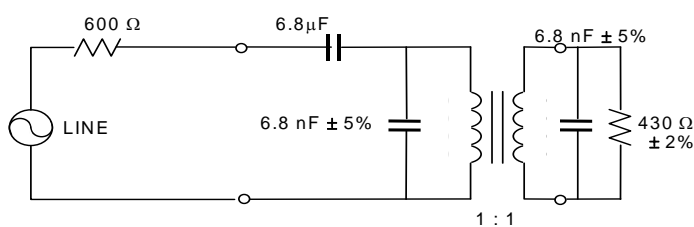
SCHEMATIC



Suggested PCB Layout

### RECOMMENDED CIRCUITS

#### 600 Ohm Matching (speech)



#### BS6305 Class (A) Matching (non-speech)

