

RETMA RS-175

RETMA STANDARD

Audio Inductors

RS-175
(Revision of TR-122)



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Engineering Department

RADIO-ELECTRONICS-TELEVISION MANUFACTURERS ASSOCIATION

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AUDIO INDUCTORS

(From Standards Proposal No. 513 formulated under the cognizance of RETMA Engineering Committee SQ-4 on Transformers and Reactors)

1. SCOPE

This standard covers iron core inductors for use in electronic equipment in which long life, reliability, and continuity of operation are essential and which are employed for frequency discrimination elements or for filters other than power supply application. It also covers those characteristics of transformers which are otherwise covered by the RETMA Audio Transformer Specification, but wherein one or more windings are employed as tuned elements.

It is not intended that the frequency be limited to the region of audio frequencies.

2. DEFINITIONS

2.1 Electrical terms used in this specification shall be in accordance with those given in "American Standard Definitions of Electrical Terms," ASA, C42, 1941, except as noted.

2.2 The RMS working voltage between any winding and any other winding or ground, shall be defined as 0.707 times the sum of the maximum dc voltage and the peak ac voltage which may appear between that winding and the other winding or ground under normal conditions of continuous operation.

2.3 Q is the ratio of the reactance to the effective resistance.

3. PURCHASE SPECIFICATIONS

The purchaser will specify:

3.1 Electrical Requirements

3.1.1 The rated value of inductance with tolerances at approximately 25°C. temperature.

(a) This value should be specified with the following additional values representing mean or normal use:

AC voltage or current . . . frequency . . . dc voltage and current superimposed, if any.

(b) Permissible variation of inductance over the temperature range requirements of the application (to be specified).

(c) The permissible variation of inductance over the frequency and voltage range of the application (to be specified).

(d) Taps and tap tolerances if required.

3.1.2 The Q of the coil under conditions of 3.1.1.

3.1.3 If the coil is employed in a resonant circuit: Whether the circuit is in series or parallel connection, and the resonance characteristics desired, if this information is available.

3.1.4 The limits of distributed capacity if of consequence in the application.

3.1.5 The inductive pickup in volts at a specified low frequency, and maximum field strength, measured as specified in 5.1.2.

3.1.6 Any significant operating requirement not treated above, such as unusual surge voltages, non-sinusoidal wave shape, operating voltage to ground and permissible harmonic content under varying operating conditions.

3.2 Construction

3.2.1 General Assembly. For example: exposed core and coil, end bell, sheet metal encased, hermetically sealed, dry or liquid-filled.

NOTE: In specifying construction, cognizance should be taken of requirements imposed by 3.3.4 and 5, and 4.1.