

TYPE 106 STANDARD INDUCTANCE



USES: The TYPE 106 Standard Inductance is an accurate standard of self-inductance for use in bridge and other measurements at audio frequencies.

DESCRIPTION: An astatic form of mounting is used wherein two D-shaped coils are mounted parallel to each other. The coils are form wound, bound with tape, and impregnated with wax before being mounted. A minimum of metal is used in the mounting, thus minimizing variations in inductance with frequency.

FEATURES: Low and nearly constant resistance at audio frequencies is insured by the use, wherever practicable, of stranded wire in which the separate strands are insulated from one another.

The inductance has been made independent of surroundings by using an astatic form of mounting in which the fields of the two coil sections neutralize each other in regions external to the case. Thus, interaction between external fields and the field of the inductor is reduced to a minimum.

SPECIFICATIONS

Type	Nominal D-C Resistance	Maximum Current	Maximum Q	Frequency for Maximum Q	Natural Frequency
106-L	0.18 Ω	3.5 a	210	300 kc	6000 kc
106-G	1.80 Ω	1.0 a	190	150 kc	2000 kc
106-J	12.2 Ω	0.5 a	170	60 kc	500 kc
106-K	85.3 Ω	250 ma	80	20 kc	150 kc
106-M	545 Ω	150 ma	40	7 kc	35 kc

Accuracy: All units are adjusted within $\pm 0.1\%$ at 1000 cycles.

Resistance: The resistance at 1000 cycles is the same as the d-c resistance. This resistance, together with the temperature, is entered on a certificate mounted on the bottom of the cabinet when the inductor is measured in the Standardizing Laboratory. The nominal values are given in the table above.

Temperature Coefficient: The temperature coefficient is less than $\pm 0.004\%$ per degree Centigrade.

Maximum Current: See table.

Losses: The maximum value of the storage factor $Q = \frac{X}{R}$, and the frequency for which it occurs for each size are given in the table.

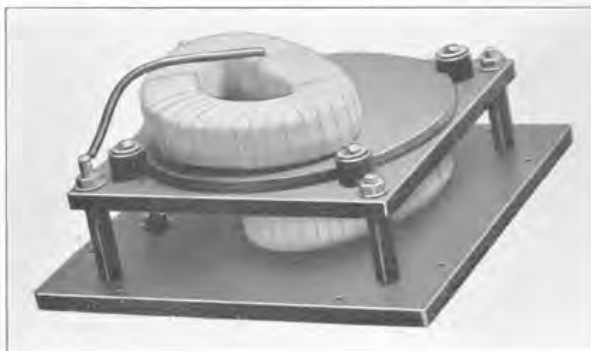
Frequency Error: Disregarding skin effect the fractional change in inductance with frequency is f^2/f_0^2 where f is operating frequency and f_0 the natural frequency. At one-tenth the natural frequency, therefore, the error is 1%.

Terminals: Binding posts are provided.

Mounting: All units are assembled in walnut cabinets with bakelite panels.

Dimensions: Panel, $5\frac{7}{8} \times 5\frac{7}{8}$ inches. Cabinet, (height) $3\frac{1}{2}$ inches, over-all, except TYPE 106-M which is $5\frac{5}{8}$ inches, over-all.

Net Weight: Approximately 2 $\frac{5}{8}$ pounds, except TYPE 106-M which is 5 pounds.



Type	Inductance	Code Word	Price
106-L	0.1 mh	INNER	\$25.00
106-G	1 mh	INERT	25.00
106-J	10 mh	IRATE	25.00
106-K	100 mh	ISLET	25.00
106-M	1 henry	ISSUE	30.00