

109N

MINIATURE EPOXY POTTED AUDIO TRANSFORMER

- Audio input, line matching and output transformers
- Epoxy potted in an attractive molded case, Pin type, P.C. board mount, (min. 0.187" length)
- Rugged epoxy potted construction produces a completely sealed unit withstanding severe environmental conditions.
- In some models where no center tap is present (on the secondary), pin 5 is omitted.
- Secondary may be used as primary and primary as secondary.
- Will withstand soldering for 10 sec. @ 260 degrees C. ambient temp. 85 degrees C max.

Power level: 2.0W @ 300 Hz. to 50 KHz.

-Freq. range @ +0 dbm is 300 Hz. to 50 KHz. +/- 1.5db

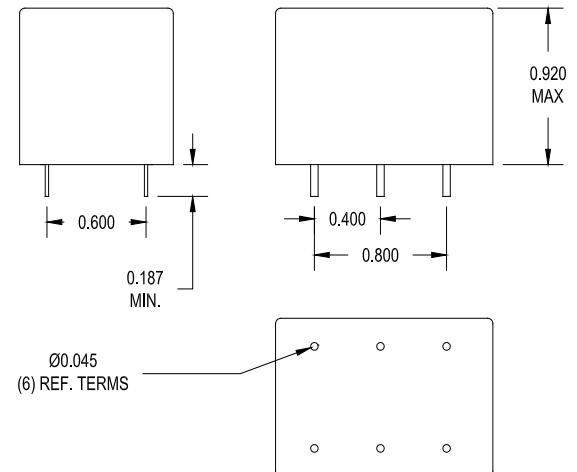
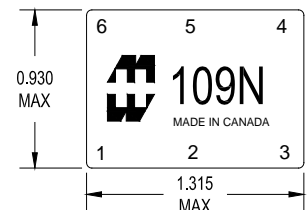
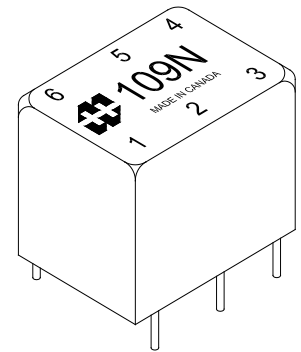
-Freq. range @ +10 dbm is 300 Hz. to 50 KHz. +/- 1.5db

-Freq. range @ +27 dbm is 300 Hz. to 50 KHz. +/- 1.5db

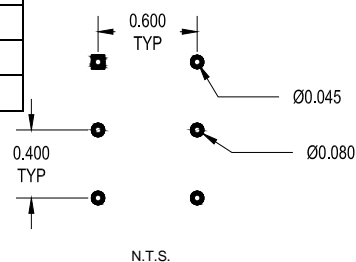
-Freq. measurements with no D.C. saturation.

ELECTRICAL SPECIFICATIONS

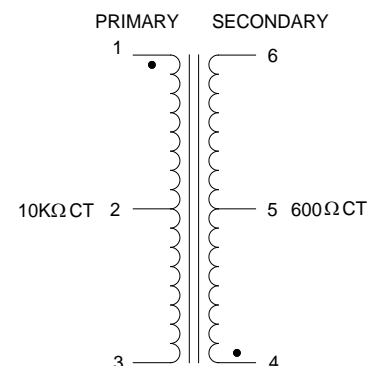
Characteristic	Typical
Input Impedance	10 K Ω CT
Output Impedance	600 Ω CT
Output Power	2 Watts
DCR	
Primary 1-3	660.0 Ω (330 Ω /330 Ω)
Secondary 4-6	54 Ω (27 Ω /27 Ω)
Inductance	@ 300 Hz, 1.0 V OC
Primary	20.6 H
Secondary	1.49 H
Leakage Inductance	60.00 mH
Impedance	@ 300 Hz, 1.0 V OC
Primary	41.00 K Ω
Secondary	3.04 K Ω
Frequency Response	± 1.5 db from 300Hz to 50KHz
Unbalanced DC	6mA Max.
Turns ratio	4.08:1
Dielectric Strength	100 Vrms
Temperature Range	-40 To 105°C**



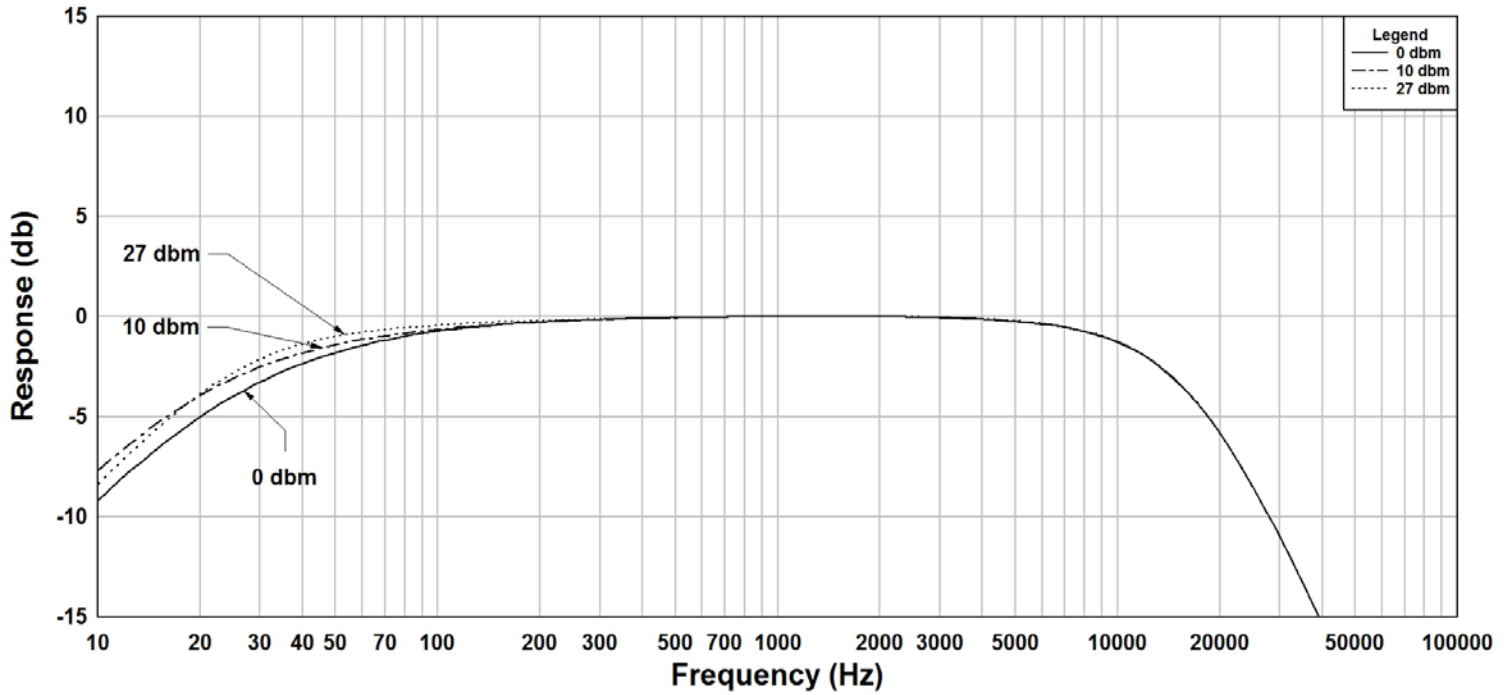
PCB LAYOUT



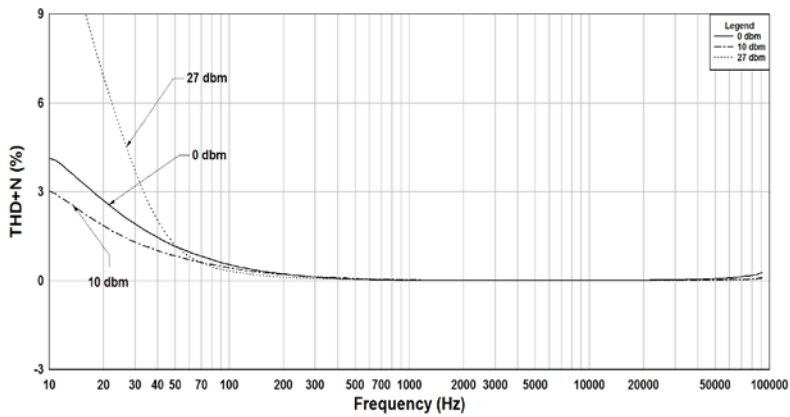
SCHEMATIC DIAGRAM



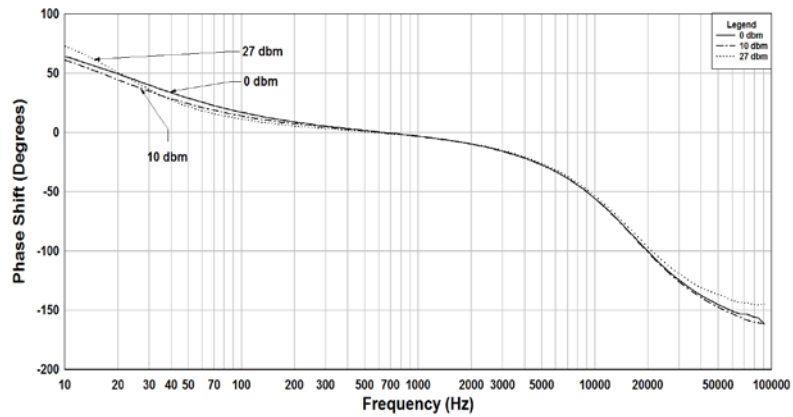
109N Rs=10K, RI=600 Frequency Response



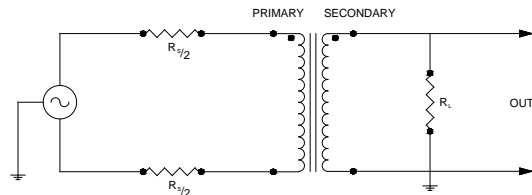
109N Rs=10K, RI=600 THD+N



109N Rs=10K, RI=600 Phase Shift



TYPICAL TEST CIRCUIT



Measurement instruments
 Hp4192a impedance analyzer
 Hp3456a DVM
 Keithley 2002 DVM

D scope series iii audio analyzer

**The epoxy that is used to cast these parts has a workable temperature range of -40°C to $+105^{\circ}\text{C}$

Under a normal rate of change, this does not include thermal shock.

Variations in the transformer materials and environmental conditions may reduce the workable temperature range.

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