

# 107G

#### 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.

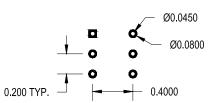


- -Freq. range @ +0 dbm is 150 Hz. to 80 Khz. +/- 1.5db
- -Freq. range @ +10 dbm is 150 Hz. to 80 Khz. +/- 1.5db
- -Freq. range @ +20 dbm is 150 Hz. to 80 Khz. +/- 1.5db
- -Freq. measurements with no D.C. saturation.

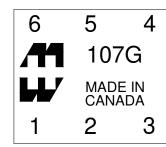
# **ELECTRICAL SPECIFICATIONS**

CharacteristicTypicalInput Impedance600 ΩCTOutput Impedance250 ΩCTOutput Power0.150 WattsDCRPrimary 1-360 Ω (30Ω/30Ω)Secondary 4-640 Ω (20Ω/20Ω)Inductance@ 1.0 kHz, 1.0 V OCPrimary0.95 HySecondary0.44 HyLeakage Inductance300 mHImpedance@ 1.0 kHz, 1.0 V OCPrimary4.7 KΩSecondary2.1 KΩFrequency Response±1.5db from 300Hz to 50KHzTurns ratio1.52:1Dielectric Strength100 VrmsTemperature Range-40 To 105°C**		
Output Impedance         250 ΩCT           Output Power         0.150 Watts           DCR         97 (30Ω/30Ω)           Primary 1-3         60 Ω (30Ω/30Ω)           Secondary 4-6         40 Ω (20Ω/20Ω)           Inductance         @ 1.0 kHz, 1.0 V OC           Primary         0.95 Hy           Secondary         0.44 Hy           Leakage Inductance         300 mH           Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms	Characteristic	<u>Typical</u>
$\begin{array}{c cccc} \text{Output Power} & 0.150 \text{ Watts} \\ \hline DCR \\ \hline Primary 1-3 & 60 \Omega (30\Omega/30\Omega) \\ \text{Secondary 4-6} & 40 \Omega (20\Omega/20\Omega) \\ \hline Inductance & @ 1.0 \text{ kHz}, 1.0 \text{ V} \text{ OC} \\ \hline Primary & 0.95 \text{ Hy} \\ \hline Secondary & 0.44 \text{ Hy} \\ \hline \\ Leakage Inductance & 300 \text{ mH} \\ \hline \\ Impedance & @ 1.0 \text{ kHz}, 1.0 \text{ V} \text{ OC} \\ \hline Primary & 4.7 \text{ K}\Omega \\ \hline Secondary & 2.1 \text{ K}\Omega \\ \hline \\ Frequency Response & \pm 1.5 \text{db from } 300 \text{Hz to } 50 \text{KHz} \\ \hline Turns ratio & 1.52:1 \\ \hline \\ Dielectric Strength & 100 \text{ Vrms} \\ \hline \end{array}$	Input Impedance	600 ΩCT
DCRPrimary 1-3 $60 \Omega (30\Omega/30\Omega)$ Secondary 4-6 $40 \Omega (20\Omega/20\Omega)$ Inductance@ 1.0 kHz, 1.0 V OCPrimary $0.95 \text{ Hy}$ Secondary $0.44 \text{ Hy}$ Leakage Inductance $300 \text{ mH}$ Impedance@ $1.0 \text{ kHz}$ , $1.0 \text{ V OC}$ Primary $4.7 \text{ K}\Omega$ Secondary $2.1 \text{ K}\Omega$ Frequency Response $\pm 1.5 \text{db from } 300 \text{Hz to } 50 \text{KHz}$ Turns ratio $1.52:1$ Dielectric Strength $100 \text{ Vrms}$	Output Impedance	250 ΩCT
Primary 1-3         60 Ω (30Ω/30Ω)           Secondary 4-6         40 Ω (20Ω/20Ω)           Inductance         @ 1.0 kHz, 1.0 V OC           Primary         0.95 Hy           Secondary         0.44 Hy           Leakage Inductance         300 mH           Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms	Output Power	0.150 Watts
Secondary 4-6         40 Ω (20Ω/20Ω)           Inductance         @ 1.0 kHz, 1.0 V OC           Primary         0.95 Hy           Secondary         0.44 Hy           Leakage Inductance         300 mH           Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms	DCR	
Inductance         @ 1.0 kHz, 1.0 V OC           Primary         0.95 Hy           Secondary         0.44 Hy           Leakage Inductance         300 mH           Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms	Primary 1-3	$60~\Omega~(30\Omega/30\Omega)$
Primary         0.95 Hy           Secondary         0.44 Hy           Leakage Inductance         300 mH           Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms	Secondary 4-6	40 $\Omega$ (20 $\Omega$ /20 $\Omega$ )
Secondary         0.44 Hy           Leakage Inductance         300 mH           Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms	Inductance	@ 1.0 kHz, 1.0 V OC
Leakage Inductance         300 mH           Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms	Primary	0.95 Hy
Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms	Secondary	0.44 Hy
Impedance         @ 1.0 kHz, 1.0 V OC           Primary         4.7 KΩ           Secondary         2.1 KΩ           Frequency Response         ±1.5db from 300Hz to 50KHz           Turns ratio         1.52:1           Dielectric Strength         100 Vrms		
Primary $4.7 \text{ K}\Omega$ Secondary $2.1 \text{ K}\Omega$ Frequency Response $\pm 1.5 \text{db}$ from 300Hz to 50KHz       Turns ratio $1.52:1$ Dielectric Strength $100 \text{ Vrms}$	Leakage Inductance	300 mH
Primary $4.7 \text{ K}\Omega$ Secondary $2.1 \text{ K}\Omega$ Frequency Response $\pm 1.5 \text{db}$ from 300Hz to 50KHz       Turns ratio $1.52:1$ Dielectric Strength $100 \text{ Vrms}$		
Secondary         2.1 KΩ           Frequency Response Turns ratio         ±1.5db from 300Hz to 50KHz           ±1.52:1         1.52:1           Dielectric Strength         100 Vrms	Impedance	@ 1.0 kHz, 1.0 V OC
Frequency Response ±1.5db from 300Hz to 50KHz Turns ratio 1.52:1  Dielectric Strength 100 Vrms	Primary	4.7 ΚΩ
Turns ratio 1.52:1  Dielectric Strength 100 Vrms	Secondary	2.1 ΚΩ
Turns ratio 1.52:1  Dielectric Strength 100 Vrms		
Dielectric Strength 100 Vrms	Frequency Response	$\pm 1.5$ db from 300Hz to 50KHz
	Turns ratio	1.52:1
Temperature Range -40 To 105°C**	Dielectric Strength	100 Vrms
	Temperature Range	-40 To 105°C**

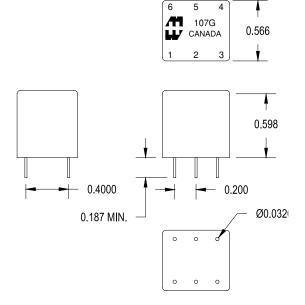
### **PCB LAYOUT**



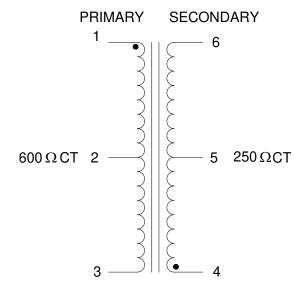




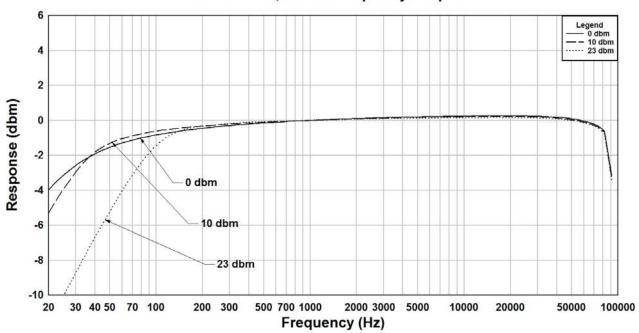
0.630

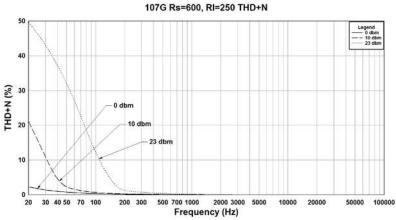


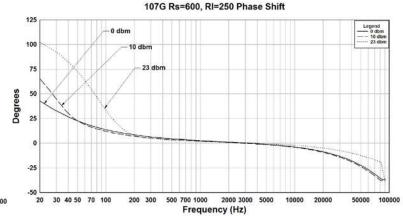
# SCHEMATIC DIAGRAM



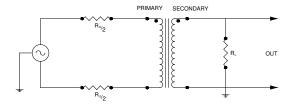
# 107G Rs=600, RI=250 Frequency Response







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°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.

This drawing and the information in it is the property of Hammond Manufacturing. It may not be reproduced, transmitted or used in any manner whatsoever without the written permission of Hammond Manufacturing. Data subject to change without notice.