

## 107X

### 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.

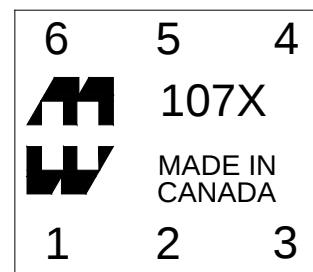
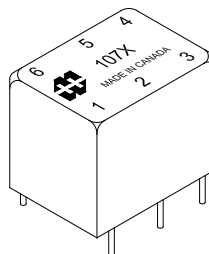
Power level: 150mw @ 150 Hz. to 50 KHz.

-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

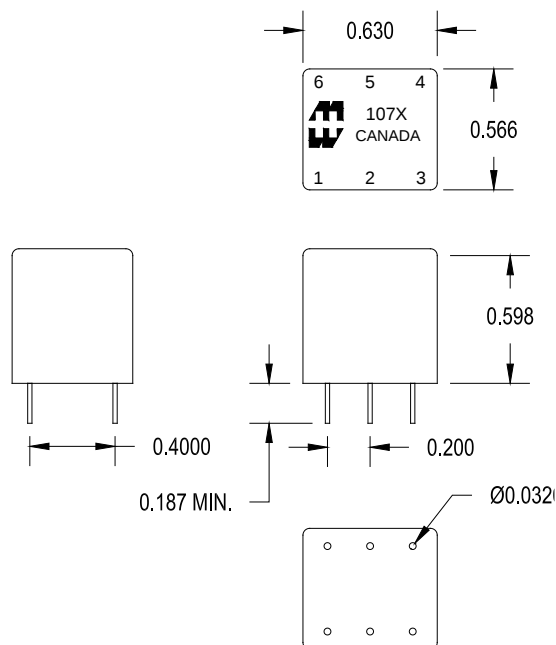
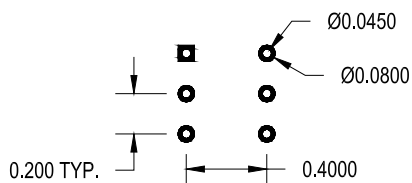
-Freq. measurements with no D.C. saturation.



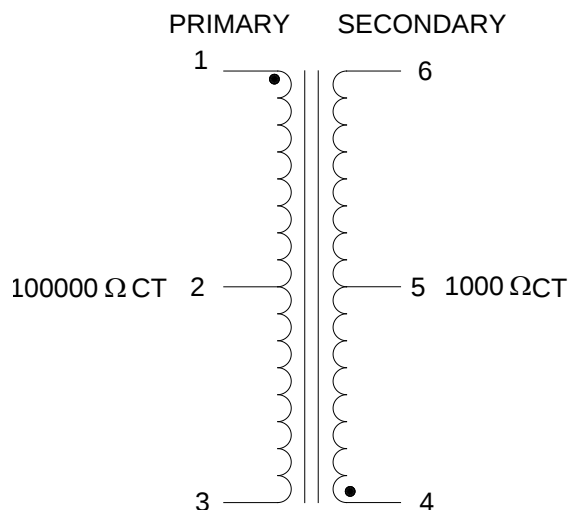
### ELECTRICAL SPECIFICATIONS

| Characteristic      | Typical                                          |
|---------------------|--------------------------------------------------|
| Input Impedance     | 100000 $\Omega$ CT                               |
| Output Impedance    | 1000 $\Omega$ CT                                 |
| Output Power        | 0.150 Watts                                      |
| DCR                 |                                                  |
| Primary 1-3         | 3.66K $\Omega$ (2.15K $\Omega$ /1.51K $\Omega$ ) |
| Secondary 4-6       | 75 $\Omega$ (37.5 $\Omega$ /37.5 $\Omega$ )      |
| Inductance          | @ 1.0 kHz, 1.0 V OC                              |
| Primary             | 56.7 Hy                                          |
| Secondary           | 0.83 Hy                                          |
|                     |                                                  |
|                     |                                                  |
|                     |                                                  |
| Impedance           | @ 1.0 kHz, 1.0 V OC                              |
| Primary             | 300 K $\Omega$                                   |
| Secondary           | 3.90 K $\Omega$                                  |
|                     |                                                  |
| Frequency Response  | $\pm 1.5$ db from 300Hz to 50KHz                 |
| Turns ratio         | 10:1                                             |
|                     |                                                  |
| Dielectric Strength | 500 Vrms                                         |
| Temperature Range   | -40 To 105°C**                                   |
|                     |                                                  |

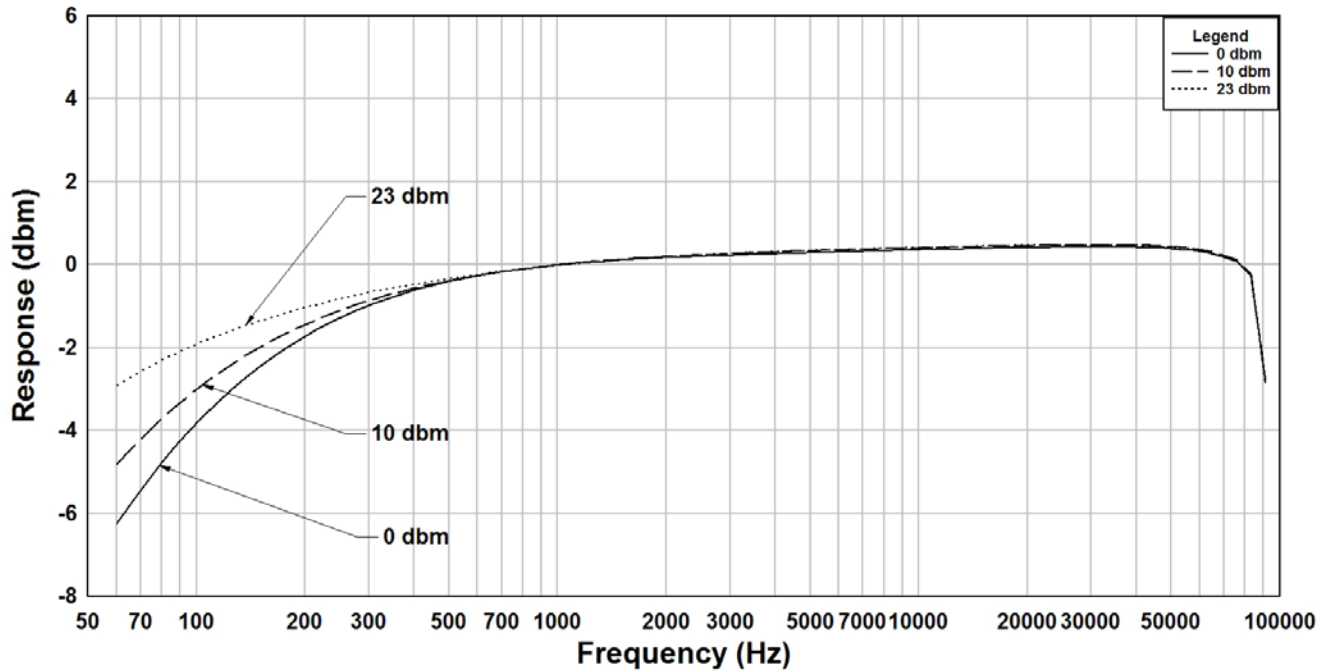
### PCB LAYOUT



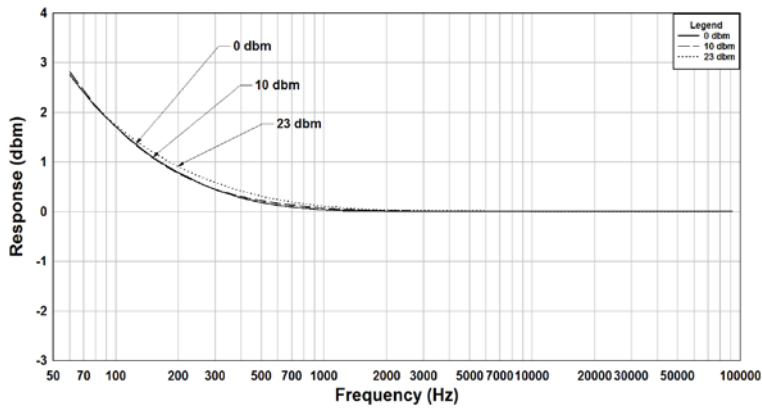
### SCHEMATIC DIAGRAM



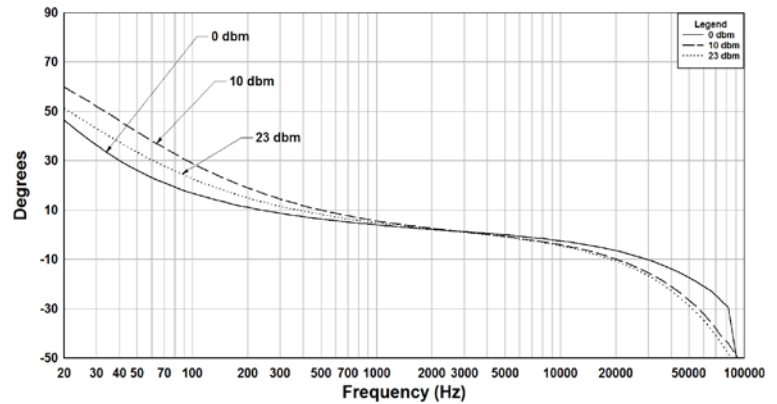
## 107X Rs=100K, RI=1K Frequency Response



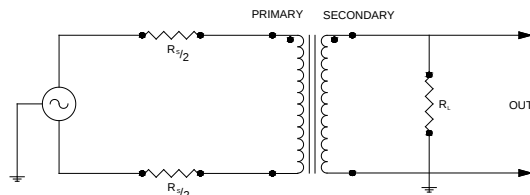
## 107X Rs=100K, RI=1K THD+N



## 107X Rs=100K, RI=1K 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  $-40^{\circ}\text{C}$  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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