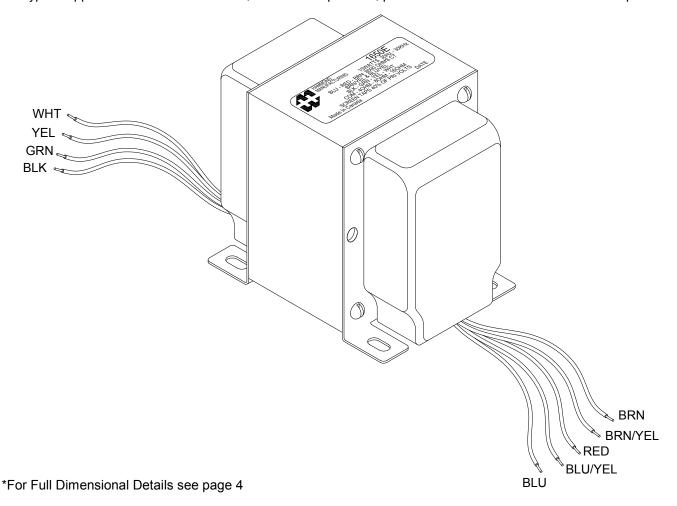


# 1650E

#### HI-FI AUDIO OUTPUT MULTIPLE SECONDARY TRANSFORMER

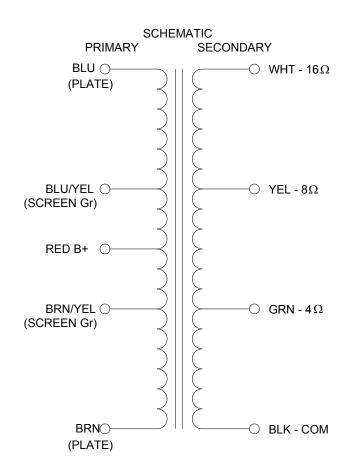
- NEW & improved version of our 1608-1650 Series multiple secondary output transformers (Re-designed secondaries for easy hook-up of secondary loads).
- · Designed for push-pull tube output circuits.
- Units are designed to provide ample "headroom" at bass frequencies (Note the weight of each transformer).
- All models have a secondary tapped for 4, 8 or 16 ohm outputs.
- Enclosed (shielded), 4 slot, above chassis Type "X" mounting.
- Manufactured with plastic coil forms for coil support and insulation.
- Frequency response 30Hz. to 30Khz. at full rated power (+/- 1db max. ref. 1Khz) minimum.
- Insulated flexible leads 8" min.
- Included 40% screen taps for Ultra-Linear operation (if desired).
- Typical applications Push-Pull: triode, Ultra-Linear pentode, pentode and tetrode connected audio output.

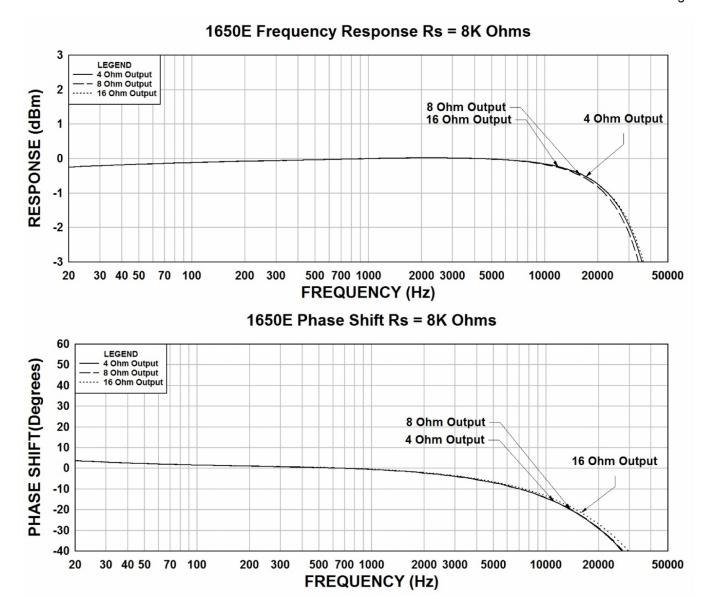


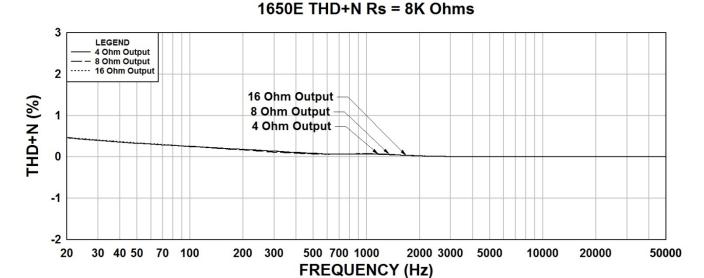
### **1650E ELECTRICAL SPECIFICATIONS**\*\*

## **Schematic and Hook Up Data**

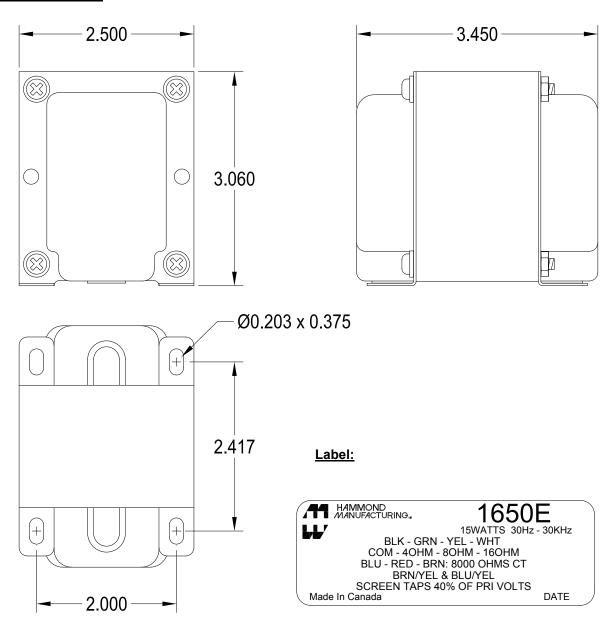
<u>Characteristic</u>	<u>Typical</u>
Input Impedance	20008
Output Impedance	$4\Omega/8\Omega/16\Omega$
Output Power	15Watts
Primary - DCR	
Blue – Brown	212.3Ω
Secondary DCR	
Black – Green	306m $Ω$
Black – Yellow	153m $Ω$
Black – White	218m $Ω$
Leakage Inductance	@ 1.0kHz, 1.0V SC
Primary – Blue – Brown	337.5mH
Inductance	@ 1.0kHz, 1.0V OC
Primary – Blue – Brown	53.3.2Hy
Impedance	@ 1.0kHz, 1.0V OC
Primary – Blue – Brown	413.9KΩ
Black – Green	111.8Ω
Black – Yellow	238.2Ω
Black – White	494.2Ω
	See graphs for specific
	response, Typ. ±1.0db from
Frequency Response	30Hz to 30KHz
Dielectric Strength	2000Vrms
Temperature Range	-40 To 105°C







#### **Dimensional Details:**



TYPICAL TEST CIRCUIT

Measurement instruments Hp4192a impedance analyzer Hp3456a DVM Keithley 2002 DVM D scope series iii audio analyzer Wayne Kerr 3255B with a 3265B

PRIMARY SECONDARY Ř<sub>s/2</sub> OUT  $\dot{R}_{s/2}$ 

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<sup>\*</sup> All graphs input level 20dbu.
\*\* The results are typical and are subject to normal manufacturing and electrical tolerances