



# PENTAGRID CONVERTER

## DESCRIPTION

The GL-5750 is a miniature pentagrid converter designed for reliable life under conditions of intermittent operation.

## TECHNICAL INFORMATION

### GENERAL

#### Electrical Data

Cathode—indirectly heated	
Heater voltage (A-C or D-C).....	6.3 Volts
Heater current.....	0.300 Amperes
Direct interelectrode capacitances (without external shield)	
Mixer grid to plate, maximum.....	0.30 uuf
Mixer grid to oscillator grid, maximum.....	0.15 uuf
R-f input.....	7.1 uuf
Oscillator input.....	5.5 uuf
Mixer output.....	7.6 uuf
Oscillator grid to cathode.....	3.0 uuf
Oscillator output.....	15.0 uuf

#### Mechanical Data

Mounting position—any  
Envelope—T-5½ glass

**GENERAL  ELECTRIC**

Supersedes ETX-262 dated 6-50

  
*Electronic*  
TUBE

**TECHNICAL INFORMATION (CONT'D)**

**MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS**

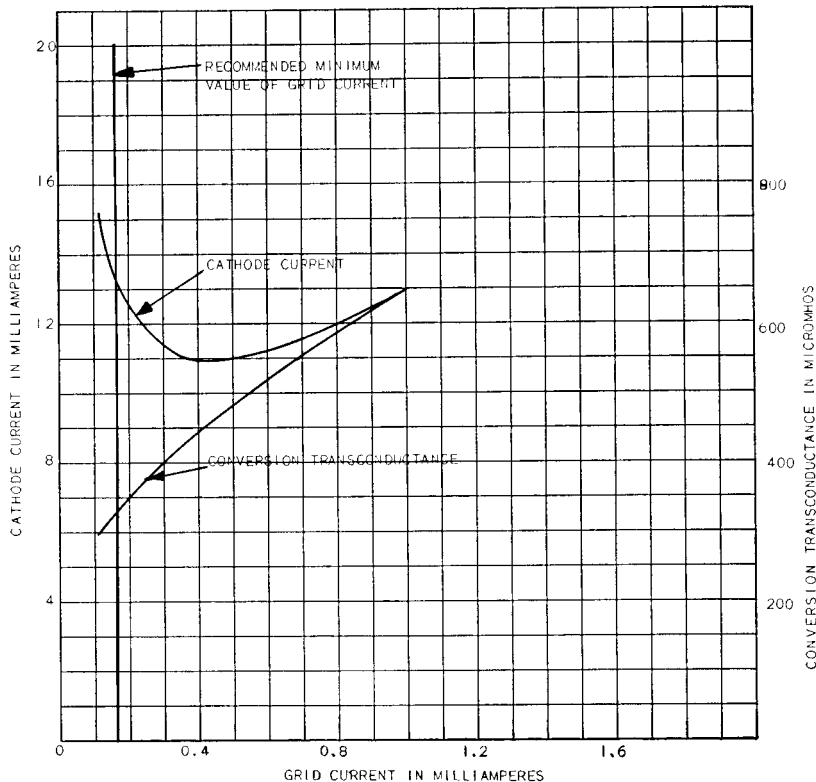
Maximum ratings, design center		
Plate voltage.....	300	volts
Screen voltage.....	100	volts
Screen supply voltage.....	300	volts
Positive grid No. 3 bias voltage.....	0	volts
Negative grid No. 3 bias voltage.....	50	volts
Plate dissipation.....	1.0	watts
Grid No. 2 dissipation.....	1.0	watts
Total cathode current.....	14	milliamperes
Heater-cathode voltage.....	90	volts
Typical operation		
Converter service—separate excitation*		
Plate voltage.....	100	250 volts
Grid No. 3 voltage.....	-1.5	-1.5 volts
Screen voltage.....	100	100 volts
Oscillator grid voltage, rms.....	10	10 volts
Oscillator grid resistance.....	20,000	20,000 ohms
Plate resistance, approximate.....	0.4	1.0 megohms
Oscillator grid current.....	0.5	0.5 milliamperes
Conversion transconductance.....	455	475 micromhos
Plate current.....	2.6	2.6 milliamperes
Screen current.....	7.5	7.5 milliamperes
Total cathode current.....	10.6	10.6 milliamperes
Grid No. 3 voltage, $G_c = 10$ umhos.....	-30	-30 volts
Grid No. 3 voltage, $G_c = 100$ umhos.....	-6	-6 volts
Oscillator transconductance§.....	7800	7800 micromhos
Oscillator plate current§.....	25	25 milliamperes
Oscillator amplification factor§.....	20	20

\*The characteristics shown with separate excitation correspond very closely to those obtained in a self-excited oscillator circuit operating with zero bias.

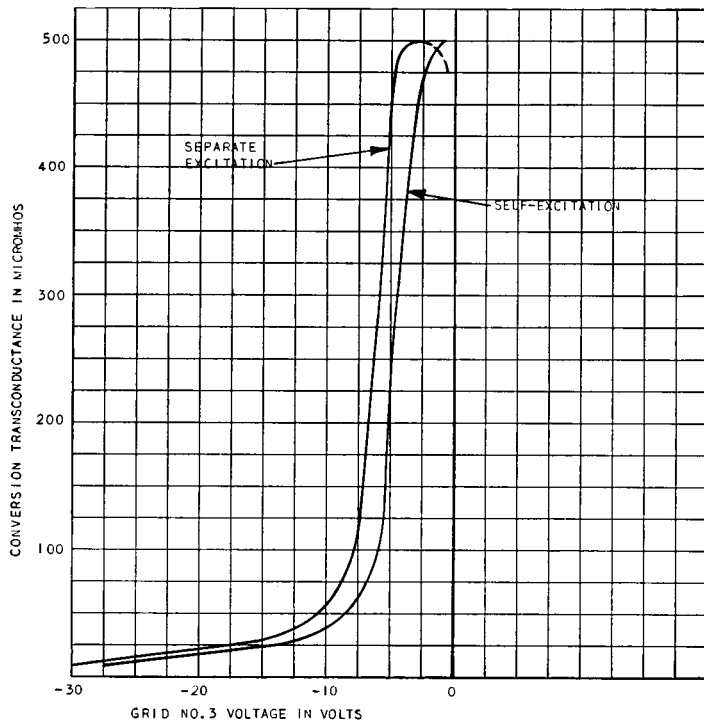
§Approximate values with grids number 1 and number 3 at zero volts and with grids number 2 and number 4 connected to plate and operated at 100 volts.

**GL-5750  
OPERATION CHARACTERISTICS**

$E_f = 6.3$  VOLTS,  $E_b = 250$  VOLTS  
 $E_{c2}$  AND  $E_{c4} = 100$  VOLTS  
 $E_{c3} = -1.5$  VOLTS,  $R_x = 20,000$  OHMS



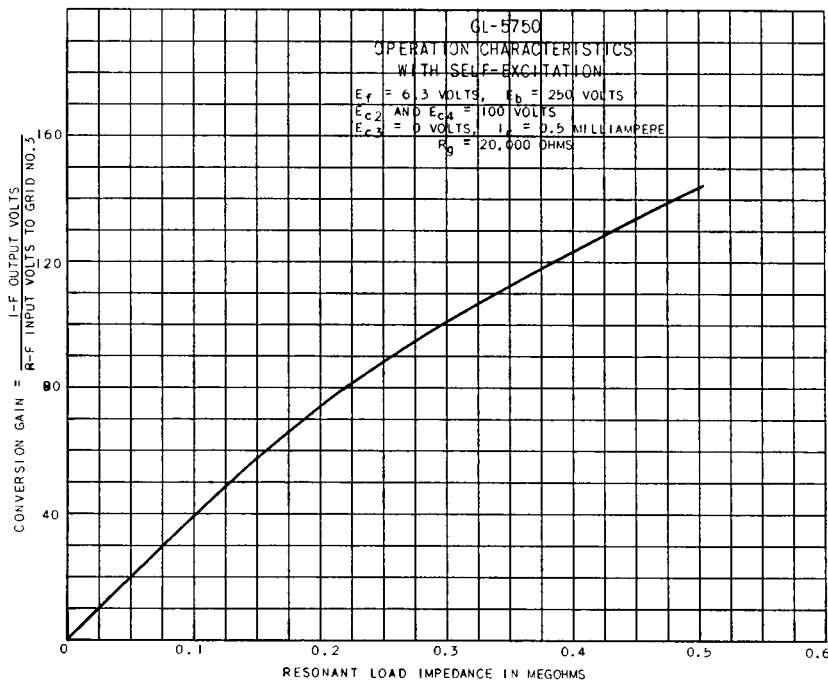
5750  
**OPERATION CHARACTERISTICS**  
 $E_f = 6.3$  VOLTS,  $E_b = 250$  VOLTS  
 $E_{c2}$  AND  $E_{c4} = 100$  VOLTS  
 $I_c = 0.5$  MILLIAMPERE,  $R_g = 20,000$  OHMS



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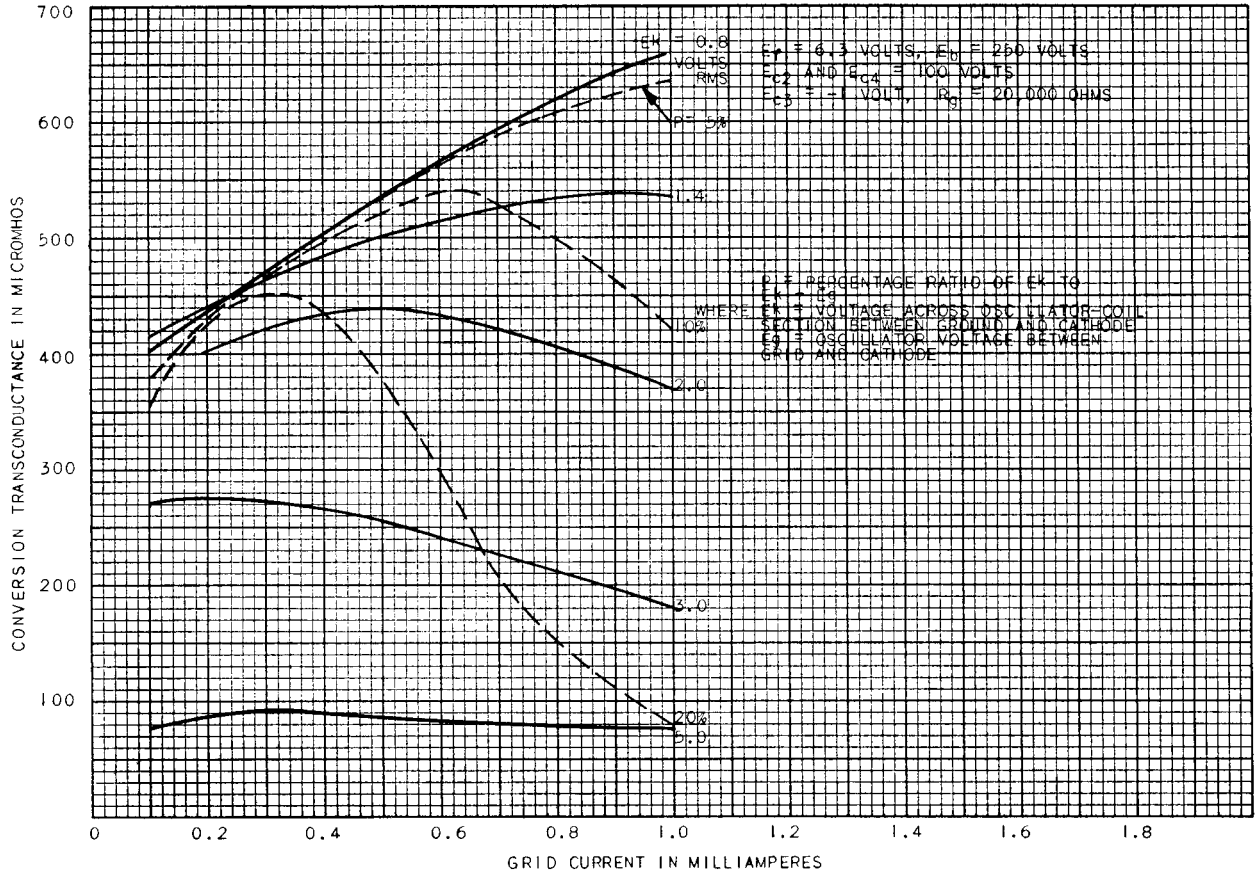
5750  
**OPERATION CHARACTERISTICS  
 WITH SELF-EXCITATION**  
 $E_f = 6.3$  VOLTS,  $E_b = 250$  VOLTS  
 $E_{c2}$  AND  $E_{c4} = 100$  VOLTS  
 $E_{c3} = 0$  VOLTS,  $I_c = 0.5$  MILLIAMPERE  
 $R_g = 20,000$  OHMS



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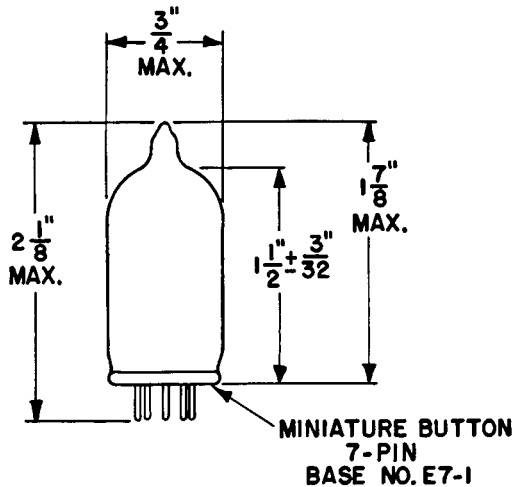
5750  
 OPERATION CHARACTERISTICS  
 WITH SELF-EXCITATION



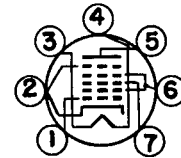
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OUTLINE  
 GL-5750



BASING DIAGRAM



7CH

- PIN 1: GRID NO. 1 (OSCILLATOR GRID)
- PIN 2: CATHODE AND GRID NO. 5
- PIN 3: HEATER
- PIN 4: HEATER
- PIN 5: PLATE
- PIN 6: GRID NO. 2 AND GRID NO. 4 (SCREEN)
- PIN 7: GRID NO. 3

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