



TECHNICAL DATA

Electronic Tubes

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7763

SHEET-BEAM TUBE

Five-Star Tube

★ ★ ★ ★ ★

FOR INTERMEDIATE-FREQUENCY AMPLIFIER AND LIMITER APPLICATIONS

The 7763 is a miniature double-plate sheet-beam tube which incorporates a pair of balanced deflectors to direct the electron beam to either of the two plates. It is especially suited for service as an intermediate-frequency amplifier and limiter in systems that require constant phase-shift over a wide range of input signal amplitudes.

The 7763 is a special-quality tube intended for use in critical industrial and military applications in which operational dependability is of primary importance. Features of the tube include a high degree of mechanical strength and a heater-cathode construction capable of withstanding many-thousand cycles of intermittent operation.

GENERAL

Electrical

Cathode - Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC*	6.3±0.6	Volts
Heater Current†	0.3	Amperes

Direct Interelectrode Capacitances, approximate

	With Shield‡	Without Shield	
Deflector-Number 1 to All	2.8	2.6	pf
Deflector-Number 2 to All	2.8	2.6	pf
Deflector-Number 1 to Plate Number 1	0.008	0.01	pf
Deflector-Number 2 to Plate Number 2	0.008	0.01	pf
Plate-Number 1 to All	2.4	2.2	pf
Plate-Number 2 to All	2.4	2.2	pf
Focus Electrode to All	4.0	4.0	pf
Accelerator and Screen to All	6.5	6.5	pf
→ Plate-Number 1 to Plate-Number 2	0.055	0.055	pf
→ Deflector-Number 1 to Deflector- Number 2	0.8	0.8	pf

The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or elements. In the absence of an express written agreement to the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.

ETR-2186

ELECTRONIC COMPONENTS
DIVISION

GENERAL  ELECTRIC

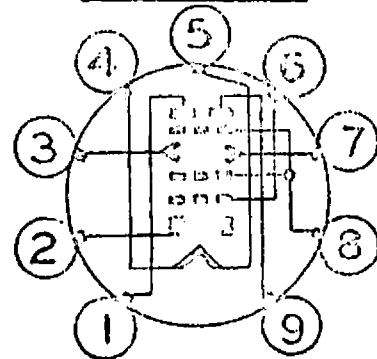
OWENSBORO
KENTUCKY

Mechanical

Mounting Position - Any
 Envelope - T-6 1/2, Glass
 Base - E9-1, Small Button 9-Pin
 Outline Drawing - EIA 6-3
 Maximum Diameter 7/8 Inches
 Maximum Over-all Length 2 5/8 Inches
 Maximum Seated Height 2 3/8 Inches

TERMINAL CONNECTIONS

Pin 1 - Plate Number 2
 Pin 2 - Cathode and Internal Shield
 Pin 3 - Deflector Number 2
 Pin 4 - Heater
 Pin 5 - Heater
 Pin 6 - Focus Electrode
 Pin 7 - Deflector Number 1
 Pin 8 - Accelerator and Screen
 Pin 9 - Plate Number 1

BASING DIAGRAM

EIA 9NF

MAXIMUM RATINGS**Absolute-Maximum Values**

Plate Voltage, Each Plate	330	Volts
Accelerator and Screen Voltage	330	Volts
→ Peak Positive Deflector Voltage, Each Deflector	250	Volts
Plate Dissipation, Each Plate	0.75	Watts
Accelerator and Screen Dissipation	1.5	Watts
Peak Negative Focus-Electrode Voltage	30	Volts
DC Cathode Current	12	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode	100	Volts
Heater Negative with Respect to Cathode	100	Volts
Deflector Circuit Resistance	39000	Ohms

Absolute-maximum ratings are limiting values of operating and environmental conditions applicable to any tube of a specified type as defined by its published data, which should not be exceeded under the worst probable conditions. The tube manufacturer chooses these values to provide acceptable serviceability of the tube, taking no responsibility for equipment variations, environmental variations, and the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration and of all other tubes in the equipment.

The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variations, signal variation, environmental conditions, and variations in characteristics of the tube under consideration and of all other tubes in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

Average Characteristics

→	Plate-Number 1 Voltage	135	Volts
→	Plate-Number 2 Voltage	135	Volts
→	Accelerator and Screen Voltage	300	Volts
→	Deflector-Number 1 Voltage	135	Volts
→	Deflector-Number 2 Voltage	135	Volts
	Focus-Electrode Voltage	0	Volts
	Deflector-Number 1 to Plate-Number 1 Transconductance	1000	Micromhos
	Deflector-Number 2 to Plate-Number 2 Transconductance	1000	Micromhos
→	Plate Resistance, Each Plate	0.85	Megohms

Dynamic Characteristics

→	Plate-Number 1 Voltage	135	Volts
→	Plate-Number 2 Voltage	135	Volts
→	Accelerator and Screen Voltage	300	Volts
→	Deflector-Number 1 Voltage	135	Volts
→	Deflector-Number 2 Voltage	135	Volts
	AC Deflector-to-Deflector Voltage, RMS	10	Volts
	Focus-Electrode Voltage	0	Volts
	Total Plate Current	4.2	Milliamperes
→	Accelerator and Screen Current	4.0	Milliamperes

* The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

+ Heater current of a bogey tube at $E_f = 6.3$ volts.

‡ With external shield (EIA 315) connected to pin 2.

1/29/62 (F)
Supersedes 4/19/61 (F)