

# JOINT ELECTRON DEVICE ENGINEERING COUNCILS

JEDEC Electron Tube Council

JEDEC Solid State Products Council



2001 Eye Street, NW  
Washington, DC 20006

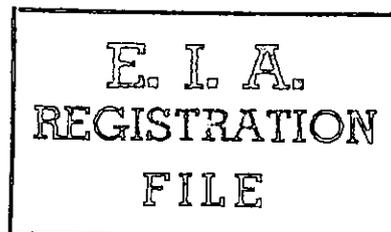
Announcement

of

Electron Device Type Registration

Release No. 1456B

October 2, 1973



The Joint Electron Device Engineering Council announces the registration of the following electron device designation

5R4GA

on the application of the

JT-16 Committee on Government  
Specifications and Standards

Type 5R4GA is similar to type 5R4GYA as registered in Release No. 1456, dated May 2, 1955, except that a low loss base is not specified.

NOTE: The JT-16 Committee recommends that this type be used to replace the 5R4GYA, which is the same except for base material.



CORRECTION NOTICE

of

Electron Device Type Reregistration

Release No. 1456A

April 27, 1959

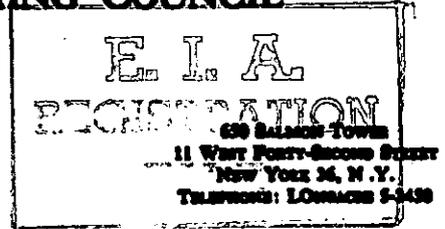
The Joint Electron Device Engineering Council announced the proposed reregistration of the following electron device designation

5R4GYA

on April 6, 1959.

The proposed base was indicated as B8-221. This should be amended to Base B5-222.

# JOINT ELECTRON DEVICE ENGINEERING COUNCIL



Announcement

of

Electron Device Type Reregistration

Release No. 1456A (Tentative)\*

April 6, 1959

The Joint Electron Device Engineering Council announced the registration of the following electron device designation

5R4GYA

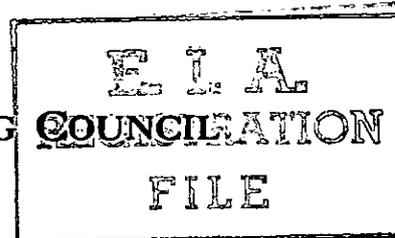
on May 2, 1955, in Release No. 1456, under the sponsorship of the General Electric Company, Schenectady 5, New York.

The sponsor now proposes reregistration on the basis of the following modification:

<u>ITEM</u>	<u>AS REGISTERED</u>	<u>AS PROPOSED</u>
Base	B5-15	B8-221

\*Unless valid objection to this reregistration is lodged with the EIA Engineering Office prior to May 6, 1959, this reregistration will be made and this information will be considered "FINAL" WITHOUT FURTHER NOTICE!

JOINT ELECTRON TUBE ENGINEERING COUNCIL



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TELEPHONE: LONGACRE 5-3430

Announcement  
of  
Electron Device Type Registration

Release No. 1456

May 2, 1955

The Joint Electron Tube Engineering Council announces the registration of the following tube type designation

5R4GYA

according to the ratings and characteristics found on the attached data sheets on the application of

General Electric Company  
Schenectady 5, New York

5R4-GYA

TWIN DIODE

For Full-Wave Power Rectifier Applications

DESCRIPTION AND RATING

The 5R4-GYA is a full-wave high-vacuum rectifier designed for use in power supplies of high current requirements. The tube incorporates a low-loss base and is capable of withstanding high peak inverse plate voltages. Electrically, the 5R4-GYA is a replacement for the 5R4-GY; it differs primarily from the 5R4-GY by employing a straight-sided T-12 construction.

GENERAL

ELECTRICAL

Cathode - Coated Filament  
 Filament Voltage, AC or DC \* . . . . . 5.0 Volts  
 Filament Current . . . . . 2.0 Amperes

MECHANICAL

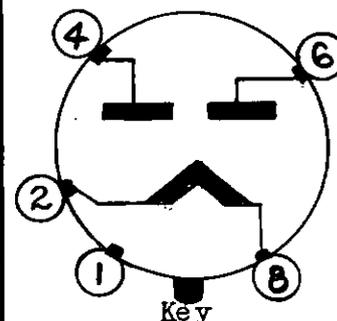
Mounting Position - Vertical  $\neq$   
 Envelope - T-12, Glass  
 Base - B5-15, Medium Shell Octal 5-Pin with External Barriers  
 Outline Drawing  
 Maximum Diameter . . . . . 1 9/16 Inches  
 Maximum Over-all Length. . . . . 4 15/16 Inches  
 Maximum Seated Height. . . . . 4 3/8 Inches

MAXIMUM RATINGS

RECTIFIER SERVICE - DESIGN-CENTER VALUES

Peak Inverse Plate Voltage			
No-Load Condition $\neq$ . . . . .	2100	2400	2800 Volts
Steady-State Peak Plate Current per Plate .650	650	650	650 Milliamperes
DC Output Current			
With Capacitor-Input Filter. . . . .	250	175	150 Milliamperes
With Choke-Input Filter . . . . .	250	250 <sup>S</sup>	175 <sup>W</sup> Milliamperes
Bulb Temperature at Hottest Point. . . . .	210	210	210 C

BASING DIAGRAM



RETMA 5T

TERMINAL CONNECTIONS

Pin 1 - No Connection  
 Pin 2 - Filament  
 Pin 4 - Plate No. 2  
 Pin 6 - Plate No. 1  
 Pin 8 - Filament

CHARACTERISTICS AND TYPICAL OPERATION

FULL-WAVE RECTIFIER WITH CAPACITOR-INPUT FILTER

AC Plate-Supply Voltage per Plate, RMS				
Full Load . . . . .	700	750	900	Volts
No Load . . . . .	750	850	1000	Volts
Filter Input Capacitor. . . . .	4	4	4	Microfarads
Total Effective Plate-Supply Impedance per Plate. . . . .	.125	500	575	Ohms
DC Output Current . . . . .	.250	150	150	Milliamperes
DC Output Voltage at Filter Input				
For DC Output Current of 75 Milliamperes. . . . .	---	900	1060	Volts
For DC Output Current of 125 Milliamperes . . . . .	.790	---	---	Volts
For DC Output Current of 150 Milliamperes . . . . .	---	810	950	Volts
For DC Output Current of 250 Milliamperes . . . . .	.700	---	---	Volts

FULL-WAVE RECTIFIER WITH CHOKE-INPUT FILTER

AC Plate-Supply Voltage per Plate, RMS			
Full Load . . . . .	750	950	Volts
No Load . . . . .	850	1000	Volts
Filter Input Choke. . . . .	5	10	Henrys
DC Output Current. . . . .	250	175	Milliamperes
DC Output Voltage at Filter Input			
For DC Output Current of 87.5 Milliamperes . . . . .	---	810	Volts
For DC Output Current of 125 Milliamperes. . . . .	590	---	Volts
For DC Output Current of 175 Milliamperes. . . . .	---	750	Volts
For DC Output Current of 250 Milliamperes. . . . .	550	---	Volts

Tube Voltage Drop

I<sub>b</sub> = 250 Milliamperes DC per Plate . . . . . 67 Volts

\* See Chart A for restrictions on applying the plate and filament voltages simultaneously.

∧ Horizontal operation permitted if pins 1 and 4 are in a vertical plane.

⚡ Operation with peak inverse plate voltages up to 2400 volts maximum is permitted at altitudes up to 40000 feet. Operation with peak inverse plate voltages greater than 2400 and up to 2800 volts is permitted only when the altitude does not exceed 20000 feet and the d-c output current is reduced to the value indicated in the maximum ratings.

§ Input choke of 5 henrys minimum required for 60-cycle power supply.

π Input choke of 10 henrys minimum required for 60-cycle power supply.

TUBE DEPARTMENT  
GENERAL ELECTRIC COMPANY  
SCHENECTADY 5, N. Y.

# CHART A

FOR CAPACITOR-INPUT FILTER

