

ELECTRONIC TUBE REFERENCE

6BJ7

Diode (NOT rectifier) electronic tube

CONSOLIDATED TECHNICAL DATA
3 SECTIONS
CONSTRUCTION
DIODE-DIODE-DIODE

Miniature triple diode designed for detector and rectifier applications, including television DC-restorer service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AX	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9AX - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 3K	C	K – Cathode	CONNECTED
PIN2 – 3P	C	P – Plate (Anode)	CONNECTED
PIN3 – IS	A	IS – Internal Screen	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – 2P	B	P – Plate (Anode)	CONNECTED
PIN7 – 2K	B	K – Cathode	CONNECTED
PIN8 – 1P	A	P – Plate (Anode)	CONNECTED
PIN9 – 1K	A	K – Cathode	CONNECTED

SECTION RATINGS

SECTION1 Diode	
MAXIMUM PLATE VOLTAGE	330 V
PEAK INVERSE VOLTAGE	330 V
NOMINAL OUTPUT CURRENT	1 mA
PEAK FORWARD CURRENT	10 mA
FORWARD VOLTAGE DROP	2.7 V
MAXIMUM HEATER-CATHODE VOLTAGE	330 V
Representative row for three identical DC-restorer diode sections; detector/restorer PIV and current data are preserved in parameters rather than rectifier-specific promoted fields.	

SECTION2 Diode	
No fixed ratings recorded.	
Second physical diode section added for documented triple-diode construction.	

SECTION3 Diode	
No fixed ratings recorded.	
Third physical diode section added for documented triple-diode construction.	

Triple-diode miniature tube for detector and rectifier applications.



SOURCE OPERATING CONDITIONS

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195X General Electric Essential Characteristics

Published test conditions and operating points. Values on this page are preserved as reported by this source.

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube voltage drop	2.7 V	At 10 mA DC

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC output current per plate maximum	1 mA	DCRestorer
Peak inverse voltage maximum	330 V	DCRestorer
Peak current per plate maximum	10 mA	DCRestorer



SOURCE OPERATING CONDITIONS

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1961 Tung Sol

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1961 TUNG SOL

Section 1 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AverageCurrentAt40VDC	1 mA	EachPlate

Characteristic		
Parameter	Published Value	Condition / Note
VoltageDropAt10mA	2.7 V	EachSection



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 1 of 4

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Diode

Capacitance		
Parameter	Published Value	Condition / Note
PLATE #	3 μf	Capacitances PLATE #1 TO CATHODE #1. HEATER & INTERNAL SHIELD 3.0 μf
PLATE #	2.6 μf	Capacitances PLATE #2 TO CATHODE #2. HEATER & INTERNAL SHIELD 2.6 μf
PLATE #} TO CATHODE #	2.6 μf	Capacitances PLATE #} TO CATHODE # 3. HEATER h INTERNAL SHIELD 2.6 μf
CATHODE #	4 μf	Capacitances CATHODE #1 TO PLATE #1. HEATER g~ INTERNAL SHIELD 4.0 μf
CATHODE #	3.8 μf	Capacitances CATHODE #2 TO PLATE #2. HEATER & INTERNAL SHIELD 3.8 μf
CATHODE #} TO PLATE #}. HEATER & INTERNAL SHIELD	4 μf	Capacitances CATHODE #} TO PLATE #}. HEATER & INTERNAL SHIELD 4.0 μf
PLATE #	0.055 μf	Capacitances PLATE #1 TO PLATE #2 0.055 μf
PLATE #	0.036 μf	Capacitances PLATE #2 TO PLATE #} 0.036 μf
PLATE #} TO PLATE #i	0.036 μf	Capacitances PLATE #} TO PLATE #i 0.036 μf

Other		
Parameter	Published Value	Condition / Note
HEATER VOLTAGE	6.3 V	Maximum Ratings HEATER VOLTAGE 6.3 VOLTs

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER NEGATIVE WITH RESPECT TO CATHODE	330 V	Maximum Ratings HEATER NEGATIVE WITH RESPECT TO CATHODE 330 voLTs
MAXIMUM PEAK INVERSE PLATE VOLTAGE	330 V	Maximum Ratings MAXIMUM PEAK INVERSE PLATE VOLTAGE 330 voLTs
TUBE VOLTAGE DROP (EACH SECTION) Ib	10 mA	Maximum Ratings TUBE VOLTAGE DROP (EACH SECTION) Ib = 10 MA. (DC) Q.7 VOLTS
TUBE VOLTAGE DROP (EACH SECTION) Ib	7 V	Maximum Ratings TUBE VOLTAGE DROP (EACH SECTION) Ib = 10 MA. (DC) Q.7 VOLTS



SOURCE OPERATING CONDITIONS

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1968 General Electric Co

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1968 GENERAL ELECTRIC CO

Section 1 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Inverse Plate Voltage	330 V	EachDiode
Peak Plate Current Per Plate	10 mA	EachDiode
DCOutputCurrentPerPlate	1 mA	EachDiode
HeaterCathodeVoltagePositive	100 V	EachDiode
HeaterCathodeVoltageNegative	330 V	EachDiode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube Voltage Drop	2.7 V	EachDiode; PlateCurrent=10mA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate To Cathode Heater Shield Capacitance	3 pF	Section1
Cathode To Plate Heater Shield Capacitance	4 pF	Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate To Cathode Heater Shield Capacitance	2.6 pF	Section2
Cathode To Plate Heater Shield Capacitance	3.8 pF	Section2
Plate To Cathode Heater Shield Capacitance	2.6 pF	Section3
Cathode To Plate Heater Shield Capacitance	4 pF	Section3



SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 4 of 7

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Diode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
unit No.1, internal shield, and heater	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
unit No.2, internal shield, and heater	2.6	Published datasheet value; multiple values represent separate source-table limits or conditions.
unit No.1, internal shield, and heater	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
unit No.2, internal shield, and heater	3.6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate of unit No.1 to plate of unit No.2	0.055	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate of unit No.2 to plate of unit No.3	0.036	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Cathode of – published value 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Cathode of – published value 2	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Plate of – published value 1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Plate of – published value 2	7	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 -Internal – published value 1	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 -Internal – published value 2	8	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 -Heater – published value 1	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 -Heater – published value 2	9	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 5 -Heater	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current for plate volts = 2 7 – published value 1	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current for plate volts = 2 7 – published value 2	7 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current for plate volts = 2 7 – published value 3	10 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PEAK INVERSE PLATE VOLTAGE	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PEAK PLATE CURRENT	10 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC OUTPUT CURRENT	1 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater negative with respect to cathode	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater positive with respect to cathode	100 V	Published datasheet value; multiple values represent separate source-table limits or conditions.