ELECTRONIC TUBE REFERENCE

7855AL

Power - Triode Single (under 10W) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRIODE

High-reliability ceramic-metal planar triode designed for transponder and pulsed airborne service at frequencies extending to approximately 3 GHz.

General characteristics

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	5.7 V / 950 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

Section ratings

SECTION1 Triode	
TRANSCONDUCTANCE	0.025 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	3500 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM GRID DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	4.8 A

Promoted maximum ratings/characteristics populated from published headings; service-specific values retained in parameters.

Airline/high-reliability ceramic/metal planar triode for transponder and pulsed service to 3 GHz.

SOURCE OPERATING CONDITIONS

1962 Eimac

SOURCE PDF

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

1962 EIMAC

Section 1 · Triode

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater: Voltage . . .., e e e [1]	**57**	Heater: Voltage . . .., e e e 57+ 2% V
Heater: Voltage . . .., e e e [2]	**2**	Heater: Voltage . . .., e e e 57+ 2% V
Current, at [1]	**5.7 V**	Current, at 5.7 volts . . . . .. v vt v i v e v s e e e . 0.95 A
Current, at [2]	**0.95 V**	Current, at 5.7 volts . . . . .. v vt v i v e v s e e e . 0.95 A
Amplification Factor (Average) ... .. e et ettt et ee	**100**	Amplification Factor (Average) ... .. e et ettt et ee 100
Direct Interelectrode Capacitance (grounded cathode)	**2**	Direct Interelectrode Capacitance (grounded cathode)2
Plate or Grid-Pulsed .. .. et et e e	**3000 MHz**	Plate or Grid-Pulsed .. .. et et e e 3000 MHz
Published value	**2**	2. Capacitance values are for a cold tube as measured in a special shielded fixture. When the cathode is heated to
the proper temperature, the grid-cathode capacitance will increase from the cold value by approximately	**1 pF**	the proper temperature, the grid-cathode capacitance will increase from the cold value by approximately 1 pf due
Published value [1]	**3**	3. Measured with one milliampere plate current and a plate voltage of 1 kVdc.
Published value [2]	**1**	3. Measured with one milliampere plate current and a plate voltage of 1 kVdc.
Heater: Current at [1]	**5.7 V**	Heater: Current at 5.7 volts . ... e e e e e .... 087 1.02 A

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater: Current at [2]	**87 V**	Heater: Current at 5.7 volts . ... e e e e e .... 087 1.02 A
Heater: Current at [3]	**1.02 V**	Heater: Current at 5.7 volts . ... e e e e e .... 087 1.02 A
Published value	**1**	1. Capacitance values are for a cold tube as measured in a special shielded fixture.
FreQUeNCY . v v v v o v e ie e e ee v oo	**1.09 GHz**	FreQUeNCY . v v v v o v e ie e e ee v oo 1.090 GHz
DC PLATE VOLTAGE (grid pulsed) [1]	**2500 V**	DC PLATE VOLTAGE (grid pulsed). . 2500 VOLTS Heater Voltage . . . . 5.7 V
DC PLATE VOLTAGE (grid pulsed) [2]	**5.7 V**	DC PLATE VOLTAGE (grid pulsed). . 2500 VOLTS Heater Voltage . . . . 5.7 V
PEAK PULSE PLATE VOLTAGE DC Plate Voltage	**2000**	PEAK PULSE PLATE VOLTAGE DC Plate Voltage . . .. 2000 vdc
(plate pulsed) .. ..nno	**3500 V**	(plate pulsed) .. ..nno... 3500 VOLTS te vortag
DC Grid Voltage	**-75**	DC Grid Voltage . ... -75 Vdc
DC GRID VOLTAGE . . . v v v v vv e [1]	**-150 V**	DC GRID VOLTAGE . . . v v v v vv e -150 VOLTS Ponk VVideo Plate . 13 A
DC GRID VOLTAGE . . . v v v v vv e [2]	**13 V**	DC GRID VOLTAGE . . . v v v v vv e -150 VOLTS Ponk VVideo Plate . 13 A
Grid negative to cathode [1]	**-750 V**	Grid negative to cathode . . . ... -750 VOLTS Peak Video Grid Current .. .. -8 a
Grid negative to cathode [2]	**-8 V**	Grid negative to cathode . . . ... -750 VOLTS Peak Video Grid Current .. .. -8 a
Grid positive to cathode [1]	**250 V**	Grid positive to cathode . . . . .. 250 VOLTS Useful Power Output (approx.) .. . . .. 750 w
Grid positive to cathode [2]	**750 V**	Grid positive to cathode . . . . .. 250 VOLTS Useful Power Output (approx.) .. . . .. 750 w
PULSE PLATE CURRENT [1]	**3 A**	PULSE PLATE CURRENT. . . . . 3.0 AMPERES Pulse DUFLION .+ o o v oo e ee e e 0.5 us
PULSE PLATE CURRENT [2]	**500 mA**	PULSE PLATE CURRENT. . . . . 3.0 AMPERES Pulse DUFLION .+ o o v oo e ee e e 0.5 us
PULSE GRID CURRENT [1]	**1.8 A**	PULSE GRID CURRENT .. .. 1.8 AMPERES Duty FACTOr .+« v v v vt ve e ve e e s 0.001
PULSE GRID CURRENT [2]	**1 mA**	PULSE GRID CURRENT .. .. 1.8 AMPERES Duty FACTOr .+« v v v vt ve e ve e e s 0.001
Conduction and convection([1]	**7855 W**	Conduction and convection(7855KAL) 10 WATTS PLATE PULSED AMPLIFIER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conduction and convection([2]	**10 W**	Conduction and convection(7855KAL) 10 WATTS PLATE PULSED AMPLIFIER
GRID DISSIPATION (Average) [1]	**2 W**	GRID DISSIPATION (Average). . . . . 2.0 WATTS Frequency . .. . 1.1 GHz
GRID DISSIPATION (Average) [2]	**1.1 W**	GRID DISSIPATION (Average). . . . . 2.0 WATTS Frequency . .. . 1.1 GHz
FREQUENCY [1]	**2**	FREQUENCY . . . 2 """""" 28 GSHZ Heater Voltage . ..... 5.7 V
FREQUENCY [2]	**28**	FREQUENCY . . . 2 """""" 28 GSHZ Heater Voltage . ..... 5.7 V
FREQUENCY [3]	**5.7**	FREQUENCY . . . 2 """""" 28 GSHZ Heater Voltage . ..... 5.7 V
F[;LLJJ"TSYEF%JCRT%E%N """""" [1]	**33**	F[;LLJJ"TSYEF%JCRT%E%N """""" 0033 Peak Plate Voltage .. .. 2000 v
F[;LLJJ"TSYEF%JCRT%E%N """""" [2]	**2000**	F[;LLJJ"TSYEF%JCRT%E%N """""" 0033 Peak Plate Voltage .. .. 2000 v
"""""""" Peak Video Plate Current	**1.8**	"""""""" Peak Video Plate Current .. .. 1.8 a
Published value [1]	**1**	1. Using EIMAC radiator PN 158601. Peak Video Grid Current ... . 1.0 a
Published value [2]	**158601**	1. Using EIMAC radiator PN 158601. Peak Video Grid Current ... . 1.0 a
Published value [3]	**1**	1. Using EIMAC radiator PN 158601. Peak Video Grid Current ... . 1.0 a
Published value [1]	**2**	2. For applications using longer pulse duration and/or Pulse Duration . . . . 3.5 ps
Published value [2]	**3.5**	2. For applications using longer pulse duration and/or Pulse Duration . . . . 3.5 ps
higher duty cycle consult the nearest Varian Elec- Duty Factor	**0.001**	higher duty cycle consult the nearest Varian Elec- Duty Factor 0.001
the designated tube stop are shown in the outline The maximum plate dissipation of the	**7855**	the designated tube stop are shown in the outline The maximum plate dissipation of the 7855KAL
drawing. Electrical contact to the cathode, grid, is	**10 W**	drawing. Electrical contact to the cathode, grid, is 10 watts average power. This can be accomp-
Dimensions should never be taken from sample sipation of the [1]	**7855**	Dimensions should never be taken from sample sipation of the 7855AL in pulse service is 35

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Dimensions should never be taken from sample sipation of the [2]	**35**	Dimensions should never be taken from sample sipation of the 7855AL in pulse service is 35
to cathode capacitance will be	**15**	to cathode capacitance will be 15%, or more,

SOURCE OPERATING CONDITIONS

1971 Machlette Laboratories

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

1971 MACHLETTE LABORATORIES

Section 1 · Triode

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Plate Capacitance	**2.5 pF**	—
Grid-Cathode Capacitance	**6.3 pF**	—
Plate-Cathode Capacitance Maximum	**0.06 pF**	—

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Heating Time	**60 s**	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-Pulsed Peak Supply Voltage	**3500 V**	PlatePulsed
Peak Plate Current	**3 A**	Pulse
Frequency Maximum	**3 GHz**	Pulsed
Plate Dissipation	**100 W**	CW
Typical RF Useful Output	**40 W**	Frequency=500MHz

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1975 Eimac Tube Manual

SOURCE PDF

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

1975 EIMAC TUBE MANUAL

Section 1 · Triode

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current Range	**870 mA–1.02 A**	—
Cathode Heating Time	**60 s**	—
Airline High Reliability Processing	**1 boolean**	—

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Capacitance	**6.8 pF**	—
Output Capacitance	**0.04 pF**	—
Grid-Plate Capacitance	**2 pF**	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency Maximum	**3 GHz**	—
Pulse Plate Voltage Maximum	**3500 V**	PlatePulsed
Pulse Current Maximum	**4.8 A**	PulseModulator
Pulse Duration Maximum	**6 us**	—
Duty Factor Maximum	**0.0033**	—

TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1976 Eimac Tube Manual

SOURCE PDF

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

1976 EIMAC TUBE MANUAL

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heater Current Range	**870 mA–1.02 A**	—
Cathode Heating Time	**60 s**	—
Airline High Reliability Processing	**1 boolean**	—

CAPACITANCE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Input Capacitance	**6.8 pF**	—
Output Capacitance	**0.04 pF**	—
Grid-Plate Capacitance	**2 pF**	—

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Frequency Maximum	**3 GHz**	—
Pulse Plate Voltage Maximum	**3500 V**	PlatePulsed
Pulse Current Maximum	**4.8 A**	PulseModulator
Pulse Duration Maximum	**6 us**	—
Duty Factor Maximum	**0.0033**	—

Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

Catalog Tube types Full books Blog Feedback & corrections

© 2026 Tube Tinker