



ELECTRONIC TUBE REFERENCE

70L7GT

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

BEAMPOWER-RECTIFIER

Combined half-wave rectifier and beam-power amplifier designed for AC/DC receiver power supply and audio-output service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8AA	BASE PINS	8
NOMINAL HEATER	70 V / 150 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Rectifier	
PEAK INVERSE VOLTAGE	350 V
NOMINAL OUTPUT CURRENT	70 mA
PEAK FORWARD CURRENT	350 mA
FORWARD VOLTAGE DROP	20 V
MAXIMUM HEATER-CATHODE VOLTAGE	175 V
Amplifier unit absolute maxima and Class-A characteristics promoted.	

SECTION2 Beam Power	
PLATE RESISTANCE	15000 Ω
MAXIMUM PLATE VOLTAGE	117 V
MAXIMUM SCREEN VOLTAGE	117 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM SCREEN DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	65 mA
PEAK INVERSE VOLTAGE	390 V
NOMINAL OUTPUT CURRENT	77 mA
PEAK FORWARD CURRENT	462 mA
FORWARD VOLTAGE DROP	20 V
MAXIMUM HEATER-CATHODE VOLTAGE	175 V
<i>Rectifier-unit absolute ratings promoted; OCR-corrupted table checked semantically against headings.</i>	

Combined half-wave rectifier and beam-power amplifier for AC/DC receiver service. Data was extracted from the supplied Tung-Sol source, including published ratings, characteristics, and operating information.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1937 Ken Rad

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

1937 KEN RAD

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	110 V	Plate Voltage 110 Volts Max.
Screen Voltage	110 V	Screen Voltage 110 Volts Max.
Grid Voltage	-7.5 V	Grid Voltage -7.5 Volts Min.
Plate Current	40 mA	Plate Current EZero Signalg 40 Milliamperes
Plate Current	43 mA	Plate Current (Max. Signal 43 Milliamperes
Screen Current	3 mA	Screen Current (Zero Ssignalg 3.0 Milliamperes
Screen Current	6 mA	Screen Current (Max. Signal 6.0 Milliamperes
Mutual Conductance	7500 μ S	Mutual Conductance 7,500 Micromhos
Load Resistance	2000 ohm	Load Resistance 2,000 Ohms
Plate voltage	110 V	BeamPowerSection
Screen voltage	110 V	BeamPowerSection
Control grid voltage	-7.5 V	BeamPowerSection

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power output	1.8 W	BeamPowerSection

1937 KEN RAD

Section 2 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	AC Plate Voltage (RMS) 125 Volts Max.
Plate Current	350 mA	Peak Plate Current 350 Milliamperes Max.
Average Tube Voltage Drop	140 V	Average Tube Voltage Drop 20 Volts at 140 Milliamperes

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AC plate voltage RMS	125 V	HalfWaveRectifier
Peak plate current	350 mA	HalfWaveRectifier



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	117 V	Published handbook rating
Maximum screen voltage	110 V	Published handbook rating
Plate voltage	110 V	ClassA
Screen voltage	110 V	ClassA
Control-grid bias	7.5 V	ClassA
Plate current	40 mA	ClassA
Screen current	3 mA	ClassA
Load resistance	2000 ohm	ClassA
Power output	1.8 W	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	15000 ohm	Published handbook characteristic
Transconductance	7500 μ S	Published handbook characteristic
Heater voltage	70 V	Published heater rating
Heater current	150 mA	Published heater rating



SOURCE DATA APPENDIX

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 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	70 V	Nominal
Heater current	150 mA	Nominal
Plate voltage	110 V	ClassA
Screen voltage	110 V	ClassA
Grid voltage	-7.5 V	ClassA
Load resistance	2000 ohm	ClassA
Maximum-signal power output	1.8 W	ClassA
Total harmonic distortion	10 %	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Zero-signal plate current	40 mA	ClassA
Zero-signal screen current	3 mA	ClassA
Maximum-signal plate current	43 mA	ClassA
Maximum-signal screen current	6 mA	ClassA
Plate resistance	15000 ohm	ClassA
Transconductance	7500 uS	ClassA

1961 TUNG SOL

Section 2 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	70 V	Nominal
Heater current	150 mA	Nominal
Maximum AC plate voltage RMS	117 V	CapacitorInputFilter

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum total effective plate supply impedance	15 ohm	CapacitorInputFilter



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 3 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 3 OF 4

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak inverse voltage	350 V	PromotedValue
MAX. PEAK INVERSE PLATE VOLTAGE	35 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAX. PEAK PLATE CURRENT	2 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAX. DC OUTPUT CURRENT – published value 1	7	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAX. DC OUTPUT CURRENT – published value 2	4	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAX. PLATE	117 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAX. PLATE DISSIPATION	5 WATTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAX.– SIGNAL PLATE CURRENT	43 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC output current	70 mA	PromotedValue

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER VOLTAGE ~AC OR DC~	70 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER CURRENT	0.17 AMP	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MA%, DC HEATER-CATHODE POTENTIAL	175 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MA%, AC PLATE	117 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID VOLTAGE	7	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
PEAK AF GRID VOLTAGE	5 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
Z ER 0–SIGNAL PLATE CURRENT	4 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
LOAD RESISTANCE	2000 OHMS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
TRANSCONDUCTANCE – published value 1	7	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
TRANSCONDUCTANCE – published value 2	0	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
E _f = 70 Volts	70 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
Plate Volts = 117 RMS	117 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
E _f = 70 Volts – published value 1	70 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
E _f = 70 Volts – published value 2	11 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

Section 2 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	15000 ohm	PromotedValue
THE 70L7GT IS A COMBINED RECTIFIER AND POWER OUTPUT BEAM TETRODE DE – published value 1	70	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
THE 70L7GT IS A COMBINED RECTIFIER AND POWER OUTPUT BEAM TETRODE DE – published value 2	7	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MA%. SCREEN DISSIPATION	1 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
SCREEN VOLTAGE	11 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
ZERO–SIGNAL SCREEN CURRENT ~APPROX.~	3 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MA%.– SIGNAL POWER OUTPUT	1 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
Screen Volts = 110	110 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
Screen Volts – published value 1	110 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
Screen Volts – published value 2	-7.5 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	117 V	PromotedValue
Maximum screen voltage	117 V	PromotedValue
Maximum plate dissipation	10 W	PromotedValue
Maximum screen dissipation	1 W	PromotedValue
Maximum cathode current	65 mA	PromotedValue

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAX. SCREEN VOLTAGE	117 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	110 V	ClassA
Screen Voltage	110 V	ClassA
Power Output	1.8 W	ClassA
Load Resistance	2000 ohm	ClassA

1968 GENERAL ELECTRIC CO

Section 2 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AC Plate Voltage RMS	123 V	—

TUBE TINKER

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