



ELECTRONIC TUBE REFERENCE

6CA7

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

Glass-octal beam-power output tube designed for audio-frequency amplifiers, capable of substantial single-ended and push-pull power in high-fidelity equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8ET	BASE PINS	8
NOMINAL HEATER	6.3 V / 1.5 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
PLATE RESISTANCE	18000 Ω
TRANSCONDUCTANCE	0.009 S
MAXIMUM PLATE VOLTAGE	800 V
MAXIMUM SCREEN VOLTAGE	500 V
MAXIMUM PLATE DISSIPATION	25 W
MAXIMUM SCREEN DISSIPATION	8 W
MAXIMUM CATHODE CURRENT	150 mA
<i>Published ratings/characteristics promoted where unambiguous.</i>	

Glass octal types used in the output stage of audio- frequency amplifiers. Maximum dimensions: over-all length, 4% inches; seated height, 3% inches; diameter, 1% inches. Tube requires octal socket. 8ET



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1956 Amperex Hi Fi Brochure

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

1956 AMPEREX HI FI BROCHURE

Section 1 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	—
Screen Voltage	250 V	—
Plate Current	100 mA	—
Screen Current	14.9 mA	—
Control Grid Voltage	-13.5 V	—
Amplification Factor Grid1-to-Grid2	11 ratio	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	20 W	PushPull; TwoTubes; DistributedLoad
Power Output	37 W	PushPull; TwoTubes; DistributedLoad
Plate Voltage	430 V	PushPull; TwoTubes; DistributedLoad
Power Output	100 W	PushPull; TwoTubes; FixedBias



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Amperex Industrial

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

1958 AMPEREX INDUSTRIAL

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	800 V	Published Amperex table
Maximum screen voltage	400 V	Published Amperex table
Power output	100 W	Published Amperex table
Push-pull grid bias	39 V	Published Amperex table
Push-pull plate current	182 mA	Published Amperex table
Push-pull screen current	38 mA	Published Amperex table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11300 μ S	Published Amperex table
Heater/filament voltage	6.3 V	Published Amperex table
Heater/filament current	1.5 A	Published Amperex table



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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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen-grid voltage	250 V	ClassA
Grid voltage	-13.5 V	ClassA
Plate current	100 mA	ClassA
Screen-grid current	15 mA	ClassA
Load resistance	2000 ohm	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power output	11 W	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11000 μ S	ClassA


SOURCE DATA APPENDIX

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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	1.5 A	—
Plate voltage	800 V	Typical operating conditions
Plate current	70100 mA	Typical operating conditions


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1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	800 V	AudioOutput;PushPull;TwoTubes
Screen voltage	400 V	AudioOutput;PushPull;TwoTubes

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Control-grid voltage	-39 V	AudioOutput;PushPull;TwoTubes
Plate current per pair	182 mA	AudioOutput;PushPull;TwoTubes
Screen current per pair	38 mA	AudioOutput;PushPull;TwoTubes
Load resistance plate-to-plate	11000 Ω	AudioOutput;PushPull;TwoTubes

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11300 μS	Section1
Amplification factor	100	Section1



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 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	15000 ohm	PromotedValue
Transconductance	0.011 A/V	PromotedValue
HEATER VOLTAGE	6.3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
CATHODE CURRENT	150	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	800 V	PromotedValue
Maximum screen voltage	425 V	PromotedValue
Maximum plate dissipation	25 W	PromotedValue
Maximum screen dissipation	8 W	PromotedValue

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum cathode current	150 mA	PromotedValue
MAXIMUM PLATE VOLTAGE	800 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM PLATE VOLTAGE WITHOUT PLATE CURRENT	2000 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM PLATE DISSIPATION	25 WATTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM PLATE DISSIPATION WITHOUT INPUT SIGNAL	27.5 WATTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM GRID #2 VOLTAGE – published value 1	2 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM GRID #2 VOLTAGE – published value 2	425 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM GRID #2 VOLTAGE WITHOUT PLATE CURRENT – published value 1	2 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM GRID #2 VOLTAGE WITHOUT PLATE CURRENT – published value 2	800 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM GRID #2 DISSIPATION – published value 1	2 WATTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM GRID #2 DISSIPATION – published value 2	8 WATTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
MAXIMUM GRID CURRENT STARTING POINT. GRID #1 VOLTAGE WHEN	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.



1975 RCA RC30

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

1975 RCA RC30
Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Zero-Signal Grid-No	4 mA	Published value from supplied target entry
Plate Resistance (Approx.)	15000 ohms	Published value from supplied target entry
Transconductance	9200	Published value from supplied target entry
Load Resistance	4500 ohms	Published value from supplied target entry
Total Harmonic Distortion	6 per cent	Published value from supplied target entry
Grid-No	1	Published value from supplied target entry
Heater Voltage (ac/dc)	6.3 volts	Published value from supplied target entry
Heater Current	1.5 amperes	Published value from supplied target entry
Plate Voltage	800 volts	Published value from supplied target entry
Grid-No	425 volts	Published value from supplied target entry
Grid-No	2 watts	Published value from supplied target entry
Plate Voltage	265 volts	Published value from supplied target entry
Grid-No	250 volts	Published value from supplied target entry
Grid-No.1 (Control-Grid) Voltage	-13.5 volts	Published value from supplied target entry
Peak AF Grid-No.1 Voltage	12.3 volts	Published value from supplied target entry

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum-Signal Grid-No	11 mA	Published value from supplied target entry
Maximum-Signal Power Output	1.5 watts	Published value from supplied target entry
Peak Heater-Cathode Voltage ±	200 volts	Published value from supplied target entry

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to Cathode, Heater, Grid No	7.2 PF	Published value from supplied target entry

SOURCE OPERATING CONDITIONS

199X Svetlana

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

199X SVETLANA
Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) 5.7 6.3	6.9 V	SourcePage1-2
Current	1.6 A	SourcePage1-2
Cathode-to-heater potential, max.	100 V	SourcePage1-2
base sleeve and heater <	16 pF	SourcePage1-2
base sleeve and heater <	0.6 pF	SourcePage1-2
Grid no.1 to plate <	1.1 pF	SourcePage1-2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC plate voltage	800 V	SourcePage1-2
Grid no.2 DC (screen) voltage	500 V	SourcePage1-2
Grid no.1 (control) voltage	-100 V	SourcePage1-2
DC cathode current	150 mA	SourcePage1-2
Plate dissipation	25 W	SourcePage1-2
Grid no.2 DC (screen) dissipation	8 W	SourcePage1-2
Plate Voltage	250 V	TypicalOperation
Grid 2 Screen Voltage	250 V	TypicalOperation
Grid 1 Control Voltage	-14 V	TypicalOperation
Peak AF Grid 1 Control Voltage	14 V	TypicalOperation
Zero Signal Plate Current	100 mA	TypicalOperation
Maximum Signal Plate Current	105 mA	TypicalOperation

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Zero Signal Grid 2 Screen Current (avg)	15 mA	TypicalOperation
Load Resistance	2000 Ohms	TypicalOperation



SOURCE DATA APPENDIX

2026 JJ Electronic

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

2026 JJ ELECTRONIC

Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	50 mA	Plate 400 V;Screen 400 V
GridInputCapacitance	16.5 pF	—