

Directly heated sharp-cutoff RF pentode in the low-power 2E31 family for compact battery-operated high-frequency equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	2E31	BASE PINS	5
NOMINAL HEATER	1.25 V / 50 mA	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	350000 Ω
TRANSCONDUCTANCE	0.0005 S
MAXIMUM PLATE VOLTAGE	90 V
MAXIMUM SCREEN VOLTAGE	90 V
MAXIMUM PLATE DISSIPATION	0.2 W
MAXIMUM CATHODE CURRENT	3 mA
<i>Promoted from the printed maximum-rating/characteristic columns; additional operating-point and capacitance data are retained in TUBE_SECTION_PARAMETER.</i>	

Directly heated sharp-cutoff RF pentode sharing the printed characteristics of the 2E31 family.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 Raytheon

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

1938 RAYTHEON

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	1.25 V	Nominal
HeaterCurrentNominal	50 mA	Nominal
Maximum Plate Voltage	90 V	—
Maximum Screen Voltage	90 V	—
Maximum Plate Dissipation	0.2 W	—
Maximum Cathode Current	3 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	700 μ S	Typical



SOURCE OPERATING CONDITIONS

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195X General Electric Essential Characteristics

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195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	4.2 pF	Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output capacitance	4 pF	Section1
Grid-to-plate capacitance	0.018 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	22.5 V	ClassA
Screen voltage	22.5 V	ClassA
Plate current	0.4 mA	ClassA
Screen current	0.3 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	350000 Ω	ClassA
Transconductance	500 μ S	ClassA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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195X Raytheon Special Purpose Tubes

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195X RAYTHEON SPECIAL PURPOSE TUBES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	22.5 V	—
Grid 1 Voltage	0 V	—
Grid 2 Voltage	22.5 V	—
Plate Current	0.4 mA	—
Grid 2 Current	0.3 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	500 μ S	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	0.35 Mohm	—