



ELECTRONIC TUBE REFERENCE

6688

Voltage Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Premium-quality E180F/6688 high-transconductance pentode developed for demanding broadband amplification in professional communications and instrumentation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	3300 Ω
TRANSCONDUCTANCE	0.0165 S
AMPLIFICATION FACTOR	50
MAXIMUM PLATE VOLTAGE	270 V
MAXIMUM SCREEN VOLTAGE	175 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	0.9 W
MAXIMUM CATHODE CURRENT	25 mA
<i>Representative characteristics and published operating limits from the special-quality E180F sheet.</i>	

Premium-quality E180F/6688 broad-band amplifier pentode.



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	6.3 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	210 V	—
Maximum Plate Dissipation	2.7 W	—
Maximum Cathode Current	25 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	16500 μ S	Typical
Plate Resistance	90000 ohm	Typical



SOURCE OPERATING CONDITIONS

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1958 Amperex Industrial

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

1958 AMPEREX INDUSTRIAL

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	2100 V	Published table
Plate voltage	160 V	Published table
Screen voltage	190 V	Published table

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	25 mA	Published table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	16500 ohm	Published table
Transconductance	3300 μ S	Published table
Amplification factor	50	Published table
Heater/filament voltage	6.3 V	Published rating
Heater/filament current	300 mA	Published rating


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

195X Tesla

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

195X TESLA

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Interelectrode capacitances	Published	See source sheet for electrode-specific capacitance values


SOURCE DATA APPENDIX

SOURCE 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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	3 W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	175 V	—
Screen voltage	160 V	—
Plate current	13 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	3.3 kΩ	—
Transconductance	16500 μS	—
Amplification Factor	50	—