

ELECTRONIC TUBE REFERENCE

Z77

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PENTODE

Miniature RF pentode for Class-A amplification and mixer service, with manufacturer operating data specifically covering suppressor-grid oscillator injection and frequency conversion in receiver front ends.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B7G	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	300000 Ω
TRANSCONDUCTANCE	0.0075 S
AMPLIFICATION FACTOR	75
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.8 W
MAXIMUM CATHODE CURRENT	30 mA
Pentode ratings promoted from the printed RATING table. Amplification factor and 30 mA cathode-current limit are published for triode connection; connection-specific values are also retained as parameters.	

Miniature 6.3 V indirectly heated RF pentode for Class-A amplification and mixer service, with published pentode- and triode-connected operating data.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1955 Marconi

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

1955 MARCONI

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater-Cathode Peak Voltage Maximum	150 V	—
Triode Plate Voltage Maximum	250 V	TriodeConnection
Triode Plate+Screen Dissipation Maximum	3.3 W	TriodeConnection
Typical Anode Voltage	250 V	ClassA;PentodeConnection
Typical Screen Voltage	250 V	ClassA;PentodeConnection
Typical Suppressor Voltage	0 V	ClassA;PentodeConnection
Typical Anode Current	10 mA	ClassA;PentodeConnection
Typical Screen Current	2.5 mA	ClassA;PentodeConnection
Typical Grid1 Voltage	-2 V	ClassA;PentodeConnection
Typical Cathode Resistor	160 ohm	ClassA;PentodeConnection
Mixer Anode Voltage	250 V	Mixer;PentodeConnection;SeriesInjectionG3
Mixer Screen Voltage	250 V	Mixer;PentodeConnection;SeriesInjectionG3
Mixer Anode Current	4.5 mA	Mixer;PentodeConnection;SeriesInjectionG3
Mixer Screen Current	1.5 mA	Mixer;PentodeConnection;SeriesInjectionG3
Mixer Cathode Resistor	680 ohm	Mixer;PentodeConnection;SeriesInjectionG3
Oscillator Peak Injection Voltage	4.5 V	Mixer;SeriesInjectionG3

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode Plate Resistance	300000 ohm	PentodeConnection;Va=250V;Vg2=250V;Ia=10mA
Pentode Transconductance	0.0075 A/V	PentodeConnection;Va=250V;Vg2=250V;Ia=10mA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode Amplification Factor	75	TriodeConnection;Va=250V;Vg1=-2V
Triode Plate Resistance	10000 ohm	TriodeConnection;Va=250V;Vg1=-2V
Triode Transconductance	0.0075 A/V	TriodeConnection;Va=250V;Vg1=-2V
Conversion Transconductance	0.0027 A/V	Mixer;PentodeConnection;SeriesInjectionG3
Grid-Cathode Input Resistance at 45MHz	9000 ohm	Frequency=45MHz
Equivalent Noise Resistance Referred to Grid1	1000 ohm	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid1-All Capacitance	7.4 pF	—
Anode-All Capacitance	3.1 pF	—
Anode-Grid1 Capacitance	0.009 pF	—

TUBE TINKER

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