



ELECTRONIC TUBE REFERENCE

20J8GM

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

HEPTODE-TRIODE

Rogers 20J8 (GM) indirectly heated triode-heptode superheterodyne frequency converter with 20 V 0.15 A heater, common cathode and 8H octal base.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8H	BASE PINS	8
NOMINAL HEATER	20 V / 150 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
TRANSCONDUCTANCE	0.0023 S
AMPLIFICATION FACTOR	15
MAXIMUM PLATE VOLTAGE	100 V
Rogers 20J8 (GM) oscillator triode: max oscillator anode voltage 100 V; max dissipation not legible. Oscillator characteristics at anode 100 V and grid -3 V: μ 15, gm 0.0023 A/V; oscillator current about 8.5 mA in documented converter arrangement. Oscillator grid resistor 50 kΩ, grid current varies with load (500/400/80 μA for specified impedance cases). Common cathode with heptode, triode grid internally coupled to heptode g3. Capacitance oscillator output-to-all 5.5 pF.	

SECTION2 Heptode	
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	100 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.6 W
MAXIMUM CATHODE CURRENT	18 mA
<i>Rogers 20J8 (GM) heptode mixer: maximum plate 250 V, screen 100 V, plate dissipation 2.5 W, screen dissipation 0.6 W, maximum total tube cathode current 18 mA (shared with oscillator). Typical plate 100/250 V, screen 100 V, conversion conductance 320/350 μmhos at rated bias; do not store as conventional gm. Grid1 minimum bias -1 V, typical converter oscillator grid resistor 50 kΩ and minimum peak oscillator grid voltage 25 V. Signal grid-to-mixer plate capacitance max 0.012 pF, input 5 pF. Top-cap heptode signal grid; 8H base.</i>	

Triode-heptode converter for receiver frequency-changing service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1959 Rogers

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

1959 ROGERS

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	20 V	—
HeaterOrFilamentCurrent	150 mA	—

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