



ELECTRONIC TUBE REFERENCE

12SA7GT

Voltage Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

HEPTODE

GT-envelope heptode frequency converter for superheterodyne receivers. Local-oscillator and mixer functions are integrated in one tube, with heater characteristics suited to AC/DC series-string radio designs.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8AD	BASE PINS	8
NOMINAL HEATER	12.6 V / 150 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

8AD - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – IS	A	IS – Internal Screen	CONNECTED
PIN2 – H	–	H – Heater	CONNECTED
PIN3 – P	A	P – Plate (Anode)	CONNECTED
PIN4 – G2	A	G2 – Screen Grid	CONNECTED
PIN4 – G4	A	G4 – Fourth Grid	CONNECTED
PIN5 – G1	A	G1 – Control Grid	CONNECTED
PIN6 – G5	A	G5 – Fifth Grid	CONNECTED
PIN6 – K	A	K – Cathode	CONNECTED
PIN7 – H	–	H – Heater	CONNECTED
PIN8 – G3	A	G3 – Suppressor Grid	CONNECTED

SECTION RATINGS

SECTION1 Heptode	
PLATE RESISTANCE	500000 Ω
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	100 V
<i>Promoted from printed maximum/characteristic columns; additional published values retained in TUBE_SECTION_PARAMETER.</i>	

GT-envelope pentagrid converter for frequency-conversion service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Oscillator-grid current	0.5 mA	Converter
Oscillator-grid resistor	20000 Ω	Converter
Plate voltage	100 V	Converter
Screen voltage	100 V	Converter
Control-grid voltage	-2 V	Converter
Plate current	3.3 mA	Converter
Screen current	8.5 mA	Converter

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	500000 Ω	Converter
Conversion transconductance	425 μS	Converter