

# Technical Information

## 12BZ7

TWIN TRIODE

The 12BZ7 is a heater-cathode type high- $\mu$  twin triode of miniature construction designed for use as a resistance-coupled voltage amplifier or phase inverter and blocking oscillator. The 12BZ7 employs a center-tapped heater permitting operation from either a 6.3 or 12.6 volt supply. By design one 12BZ7 section has characteristics equivalent to two 12AX7 sections in parallel.

### MECHANICAL DATA

ENVELOPE . . . . . T-6½ glass  
BASE . . . . . Miniature button 9-pin  
MOUNTING POSITION . . . . . any

### ELECTRICAL DATA

#### HEATER CHARACTERISTICS:

	Parallel heater conn.	Series heater conn.
Heater voltage	6.3 ± 10%+	12.6 ± 10%+ volts
Heater current	0.6□	0.3□ amp.
Maximum heater-cathode voltage:		
Heater positive with respect to cathode		
DC . . . . .		100 volts
Total DC and peak . . . . .		200 volts
Heater negative with respect to cathode		
Total DC and peak . . . . .		200 volts

#### DIRECT INTERELECTRODE CAPACITANCES:●

	Unit #1	Unit #2
Grid to plate	0.49	0.45 pf.
Input	6.5	6.5 pf.
Output	0.7	0.55 pf.
Plate #1 to plate #2 . . . . .		1.3 pf.

#### DESIGN MAXIMUM RATINGS: (Each Unit) SEE EIA STANDARD RS-239

Plate voltage . . . . .	330 volts
Grid voltage . . . . .	50 volts
Negative-bias value . . . . .	50 volts
Positive-bias value . . . . .	0 volts
Plate dissipation . . . . .	1.65 watt
Grid #1 circuit resistance . . . . .	5 meg.

#### CHARACTERISTICS AND TYPICAL OPERATION—CLASS A1 AMPLIFIER:

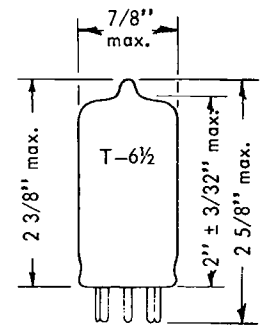
Plate voltage	100	250 volts
Grid voltage	-1	-2 volts
Amplification factor	100	100
Plate resistance	40 000	31,800 ohms
Transconductance	2500	3200 $\mu$ mhos
Plate current	1.0	2.5 ma.

● Without shield.

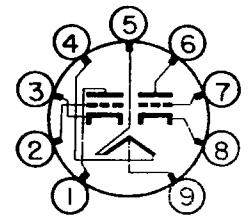
+ The equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

□ Heater current at bogey heater voltage.

### PHYSICAL DIMENSIONS



BASING 9A



BOTTOM VIEW

### TERMINAL CONNECTIONS:

- Pin 1 Plate, unit #2
- Pin 2 Grid, unit #2
- Pin 3 Cathode, unit #2
- Pin 4 Heater
- Pin 5 Heater
- Pin 6 Plate, unit #1
- Pin 7 Grid, unit #1
- Pin 8 Cathode, unit #1
- Pin 9 Heater center-tap



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## TWIN TRIODE

AVERAGE PLATE CHARACTERISTICS  
(Each Unit)

