TWIN-DIODE HIGH-MU TRIODE TYPES 6AT6 AND 12AT6

The 6AT6 and 12AT6 are 7-pin miniature twin diode and high-mu triode types used as combined detector, amplifier, and AVC tubes in automobile and ac-operated radio receivers.

GENERAL DATA

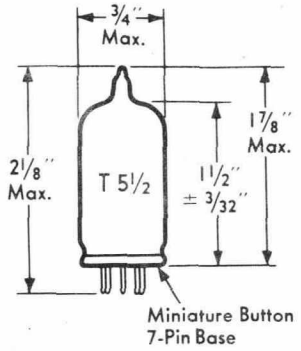
ELECTRICAL:

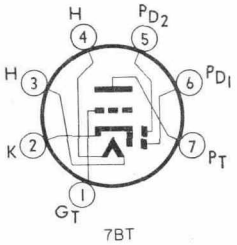
Cathode	Coated Unipotential		
Heater:	6AT6	12AT6	
Voltage (ac or dc)	6.3	12.6	Volts
Current	0.30	0.15	Ampere
Direct Interelectrode Capacitances:	Shielded□	Unshielded	
Grid to Plate	2.0	2.0	uuf
Input	2.2	2.2	uuf
Output	1.2	0.8	uuf
Diode Plate No. 2 to Triode Grid	0.04	0.04	max. uuf

MECHANICAL:

Bulb	T-5-1/2
Base	Miniature 7-Pin (JETEC E7-1)
Outline	5-2
Basing	7BT
Mounting Position	Any

□ With external shield No. 316 connected to Pin 2.





AMPLIFIER - CLASS A

Triode Unit

MAXIMUM RATINGS:

Design-Center Values

Plate Voltage	300	max.	Volts
Grid Voltage:			
Positive Bias Value	0	max.	Volts
Plate Dissipation	0.5	max.	Watts
Peak Heater-Cathode Voltage:			
Heater Positive or Negative with Respect to Cathode	90	max.	Volts

CHARACTERISTICS AND TYPICAL OPERATION:

Plate Voltage	100	250	Volts
Grid Voltage	-1	-3	Volts
Amplification Factor	70	70	
Plate Resistance (approx.)	54000	58000	Ohms
Transconductance	1300	1200	umhos
Plate Current	0.8	1.0	Ma.

Diode Units

MAXIMUM RATINGS:

Design-Center Values

DC Output Current per Plate	1.0	max.	Ma.
Peak Heater-Cathode Voltage:			
Heater Positive or Negative with Respect to Cathode	90	max.	Volts

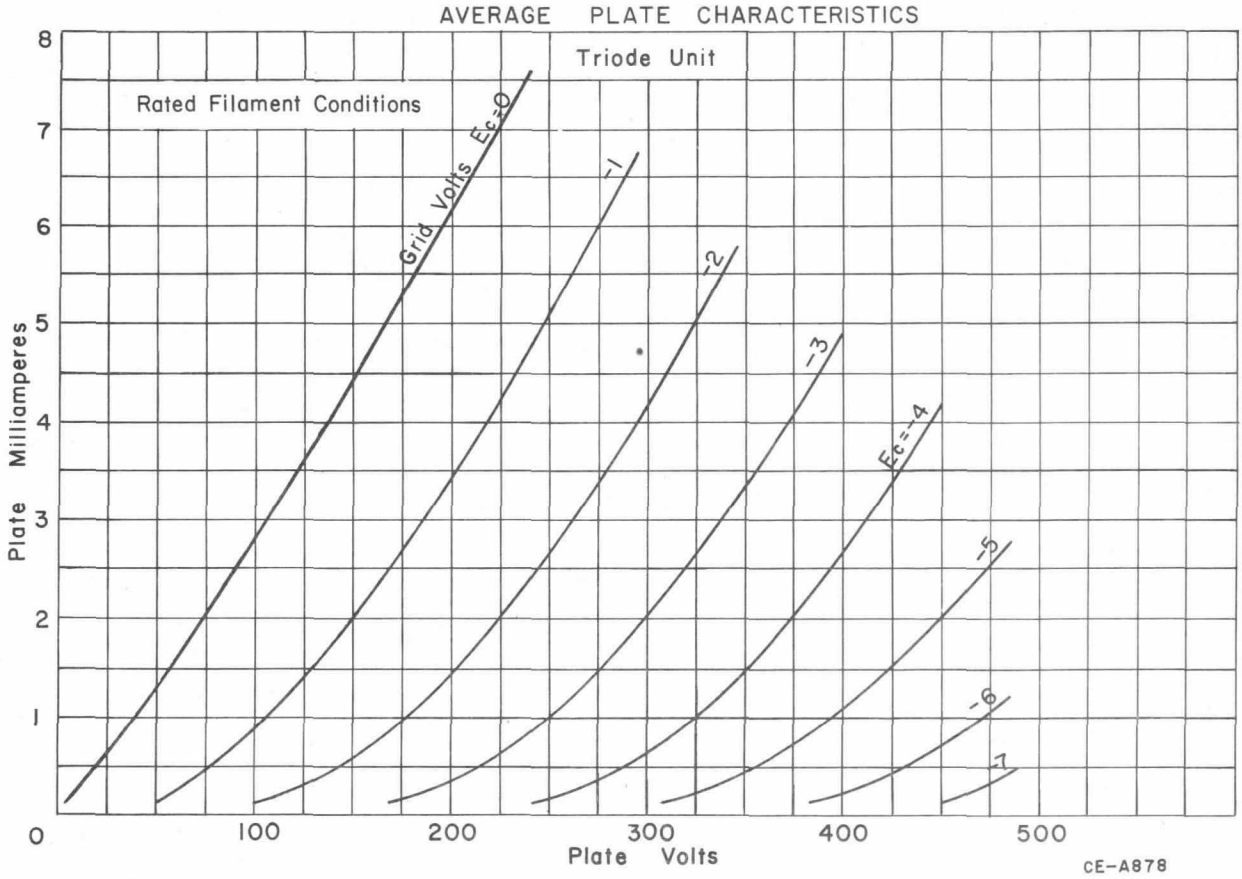
CHARACTERISTICS:

Average Plate Current (Each Unit) with 10VDC	2.0		Ma.

RESISTANCE COUPLED AMPLIFIER DATA:

Plate Supply Voltage	90	250	Volts
Plate Load Resistor	0.22	0.47	Megohm
Grid Voltage	0	0	Volts
Grid Resistor	10	10	Megohms
Coupling Condenser:			
Input	0.01	0.01	uf
Output	0.01	0.01	uf
Grid Resistor of Following Stage	0.47	0.47	Megohm
Max. Signal Source Impedance	1000	1000	Ohms
Distortion	5	5	Percent
Output Voltage	8	34	Volts
Voltage Gain at 400 cps	35	46	Volts

Supersedes 6AT6 Data Sheet Dated October 1, 1954
Supersedes 12AT6 Data Sheet Dated August 5, 1954


AVERAGE PLATE CHARACTERISTICS
Triode Unit
Rated Filament Conditions
Grid Volts Ec=0
-1
-2
-3
Ec=-4
-5
-6
-7
Plate Milliamperes
0
1
2
3
4
5
6
7
8
100
200
300
400
500
Plate Volts
CE-A878