

Type 6679/12AT7 is designed specifically for use in mobile communications equipment. The 6679/12AT7 may be operated without serious degradation under normal variations in supply voltage as encountered with automotive electrical systems. Also consistent with the requirements of the equipment, the tube is capable of withstanding appreciable on-off cycling.

## MECHANICAL DATA

|                             |                          |
|-----------------------------|--------------------------|
| Bulb . . . . .              | T-6½                     |
| Base . . . . .              | E9-1, Small Button 9-Pin |
| Outline . . . . .           | 6-2                      |
| Basing . . . . .            | 9A                       |
| Cathode . . . . .           | Coated Unipotential      |
| Mounting Position . . . . . | Any                      |

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

|                                                   | Series/Parallel |      |
|---------------------------------------------------|-----------------|------|
| Heater Voltage <sup>1</sup> . . . . .             | 12.6/6.3 Volts  |      |
| Heater Current . . . . .                          | 150/300 Ma      |      |
| Heater-Cathode Voltage (Design Maximum Values)    |                 |      |
| Heater Positive with Respect to Cathode . . . . . | 100 Volts       | Max. |
| Heater Negative with Respect to Cathode . . . . . | 100 Volts       | Max. |

### DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

|                             | Section 1 <sup>2</sup> | Section 2 <sup>2</sup> |      |
|-----------------------------|------------------------|------------------------|------|
| Grid to Plate . . . . .     | 1.5                    | 1.5 $\mu\mu\text{f}$   |      |
| Input . . . . .             | 2.2                    | 2.2 $\mu\mu\text{f}$   |      |
| Output . . . . .            | 0.5                    | 0.4 $\mu\mu\text{f}$   |      |
| Grid to Grid . . . . .      | .005                   | $\mu\mu\text{f}$       | Max. |
| Plate to Plate . . . . .    | 0.4                    | $\mu\mu\text{f}$       | Max. |
| Heater to Cathode . . . . . | 2.4                    | 2.4 $\mu\mu\text{f}$   |      |

### Grounded Grid Operation

|                            |     |                      |
|----------------------------|-----|----------------------|
| Plate to Cathode . . . . . | 0.2 | 0.2 $\mu\mu\text{f}$ |
| Input . . . . .            | 4.6 | 4.6 $\mu\mu\text{f}$ |
| Output . . . . .           | 1.8 | 1.8 $\mu\mu\text{f}$ |

### RATINGS (Design Maximum Values) Each Section

|                                 |           |      |
|---------------------------------|-----------|------|
| Plate Voltage . . . . .         | 330 Volts | Max. |
| Positive Grid Voltage . . . . . | 0 Volts   | Max. |
| Negative Grid Voltage . . . . . | 55 Volts  | Max. |
| Plate Dissipation . . . . .     | 2.8 Watts | Max. |

### CHARACTERISTICS AND TYPICAL OPERATION

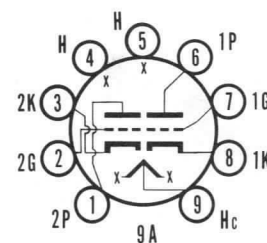
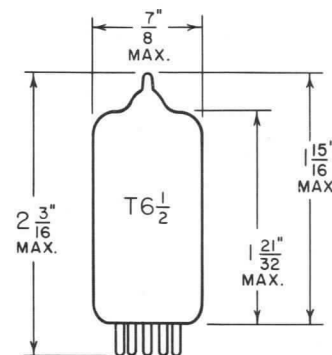
#### Class A1 Amplifier — Each Section

|                                                  |        |                       |
|--------------------------------------------------|--------|-----------------------|
| Plate Voltage . . . . .                          | 100    | 250 Volts             |
| Cathode Bias Resistor . . . . .                  | 270    | 200 Ohms              |
| Plate Current . . . . .                          | 3.7    | 10.0 Ma               |
| Plate Resistance . . . . .                       | 15,000 | 10,900 Ohms           |
| Transconductance . . . . .                       | 4000   | 5500 $\mu\text{mhos}$ |
| Amplification Factor . . . . .                   | 60     | 60                    |
| Ec for Ib = 10 $\mu\text{a}$ (Approx.) . . . . . | -5     | -12 Volts             |

## QUICK REFERENCE DATA

Sylvania Type 6679/12AT7 is designed specifically for mobile operation. It is a T-6½ high mu duo triode intended for use as a grounded grid amplifier or a frequency converter at frequencies below 300 Mc.

Type 6679/12AT7 possesses electrical characteristics essentially equivalent to Type 12AT7.



## SYLVANIA ELECTRONIC TUBES

A Division of  
Sylvania Electric Products Inc.

### RECEIVING TUBE OPERATIONS EMPORIUM, PA.

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File Under  
RECEIVING TUBES

## SPECIAL TESTS AND RATINGS

### Heater-Cycling Life Test

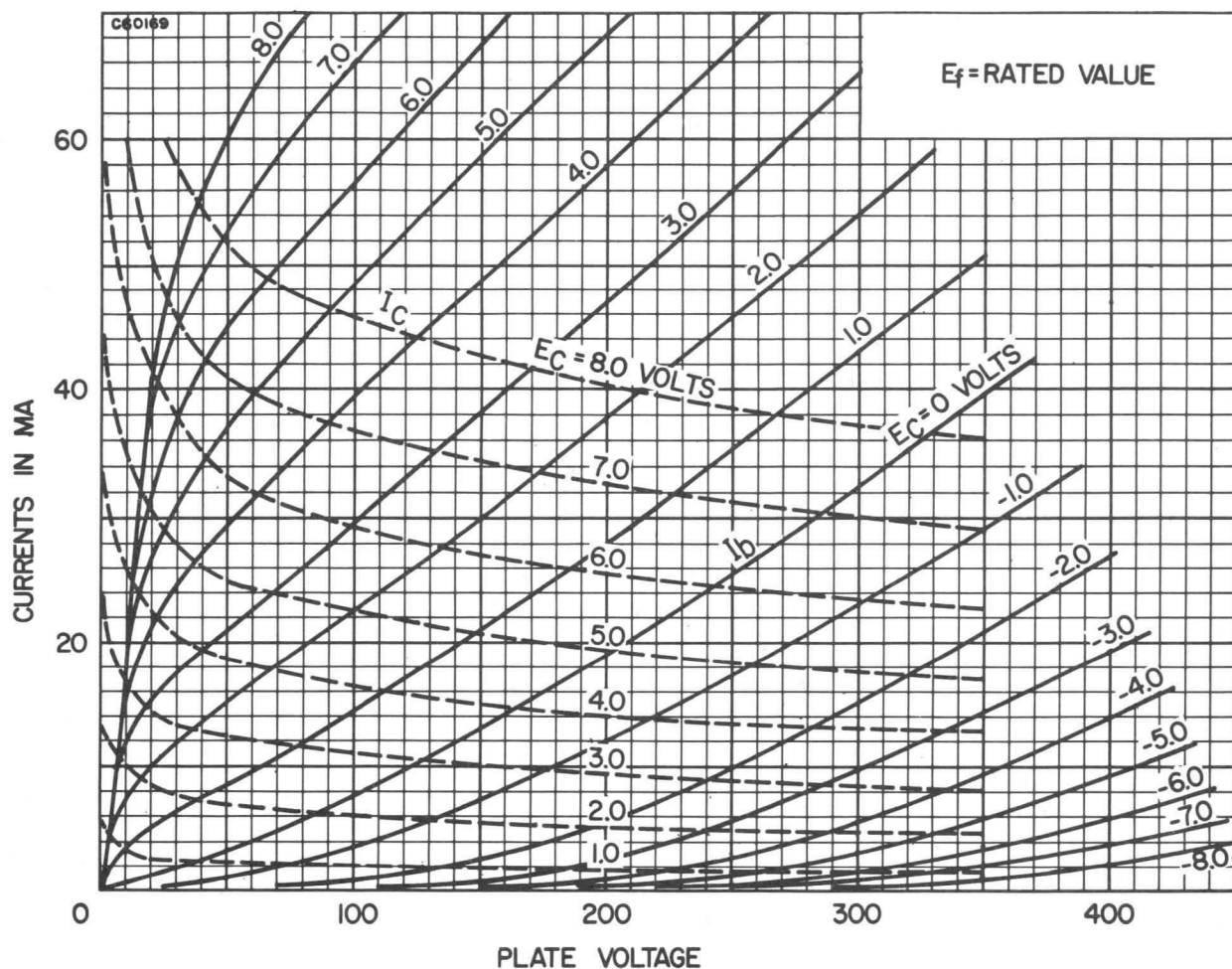
Statistical sample operated for 2000 cycles minimum to evaluate and control heater-cathode defects. Conditions of test include  $E_f = 15$  volts (series-heater connection) cycled for one minute on and one minute off.  $E_b + E_c = 0$  volts and  $E_{hk} = 135$  volts with heater positive with respect to cathode.

Average Transconductance at Reduced Heater Voltage, Each Section . . . . . 4400  $\mu$ mhos  
 $E_f = 10.0$  volts,  $E_b = 250$  volts,  $R_k = 200$  ohms (bypassed).

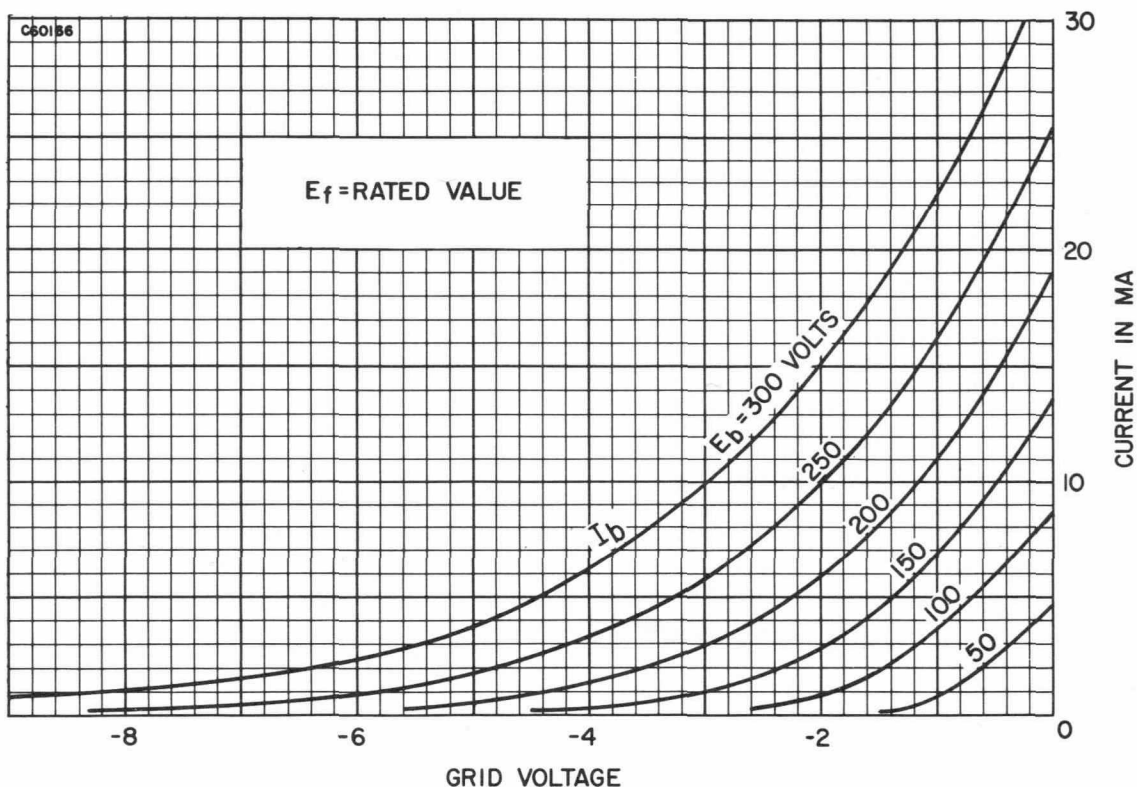
### NOTES:

1. When operated from automotive electrical systems, the heater may be subjected to voltage variations as great as  $\pm 20$  percent. Although such extremes in heater voltage may be tolerated for short periods, increased equipment reliability can be achieved with improved supply-voltage regulation.
2. Section No. 1 connects to Pins 6, 7 and 8. Section No. 2 connects to Pins 1, 2 and 3.

## AVERAGE PLATE CHARACTERISTICS



# AVERAGE TRANSFER CHARACTERISTICS



# AVERAGE TRANSFER CHARACTERISTICS

