

# TYPES 6EC7 - 13EC7\*

## GENERAL

The 6F18 is a variable- $\mu$  HF. Pentode intended for use in AM/FM Receivers having parallel connected heater chains, and is suitable for use on A.C. Mains.

## RATING

|                                                |                 |      |
|------------------------------------------------|-----------------|------|
| Heater Voltage (volts)                         | $V_h$           | 6.3  |
| Heater Current (amps)                          | $I_h$           | 0.2  |
| Maximum Anode Voltage (volts)                  | $V_a(\max)$     | 250  |
| Maximum Screen Voltage (volts)                 | $V_{g2}(\max)$  | 250  |
| Maximum Anode Dissipation (watts)              | $P_a$           | 2.25 |
| Maximum Screen Dissipation (watts)             | $P_{g2}$        | 0.5  |
| Maximum Heater to Cathode Voltage (Volts D.C.) | $V_{h-k}(\max)$ | 150  |

## INTER-ELECTRODE CAPACITANCES (pF)

|                    |            |        |        |
|--------------------|------------|--------|--------|
| Control Grid/Earth | $c_{in}$   | 5.2*   | 6.5**  |
| Anode/Earth        | $c_{out}$  | 5.0    | 6.3    |
| Control Grid/Anode | $c_{a-g1}$ | 0.0017 | 0.0021 |

"Earth" denotes the remaining earthy potential electrodes, heater and shields connected to cathode.

\* Inter-electrode capacity with holder capacity balanced out but with cylindrical screen can.

\*\* Total capacity including Carr Fastener holder type 76/840E/T with radial shield and cylindrical screen. The  $c_{a-g1}$  holder Capacity can be reduced to 0.00004 pF by the insertion of a shield between pins 4 and 5, 9 and 1. If an unscreened holder is used (without can or skirt) the total a to g1 capacity with holder becomes 0.0025 pF.

## DIMENSIONS

|                           |       |               |
|---------------------------|-------|---------------|
| Maximum Overall length    | (mm)  | 56.0          |
| Maximum Diameter          | (mm)  | 22.2          |
| Maximum Seated Height     | (mm)  | 49.0          |
| Approximate Nett Weight   | (ozs) | $\frac{1}{8}$ |
| Approximate Packed Weight | (ozs) | $\frac{3}{4}$ |

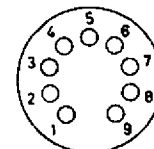
## MOUNTING POSITION Unrestricted

## TYPICAL OPERATION

|                                                            |            |      |       |
|------------------------------------------------------------|------------|------|-------|
| Anode Voltage (volts)                                      | $V_a$      | 175  | 175   |
| Screen Voltage (volts)                                     | $V_{g2}$   | 100  | 175   |
| Grid Bias Voltage (volts)                                  | $V_{g1}$   | -1.3 |       |
| Anode Current (mA)                                         | $I_a$      | 12.0 |       |
| Screen Current (mA)                                        | $I_{g2}$   | 3.5  |       |
| Mutual Conductance (mA/V)                                  | $g_m$      | 4.4  |       |
| Anode Impedance (k $\Omega$ )                              | $r_a$      | 220  |       |
| Bias to give mutual conductance of 100 $\mu$ A/V (volts)   |            |      | -19.5 |
| Input Capacity working (Hot) (pF)                          | $c_{in}$   | 7.1  |       |
| Input Capacity change at cut-off (pF)                      | $\Delta c$ | 1.7  |       |
| Input Loss at 38 Mc/s, cathode pins strapped (k $\Omega$ ) |            |      | 16    |

BULB Clear T 6  $\frac{1}{2}$

BASE Noval (B.9.A.) E 9-1



View from free end of Pins

## CONNECTIONS

|       |                 |    |
|-------|-----------------|----|
| Pin 1 | Cathode         | k  |
| Pin 2 | Control Grid    | g1 |
| Pin 3 | Cathode         | k  |
| Pin 4 | Heater          | h  |
| Pin 5 | Heater          | h  |
| Pin 6 | Internal Shield | s  |
| Pin 7 | Anode           | a  |
| Pin 8 | Screen Grid     | g2 |
| Pin 9 | Suppressor Grid | g3 |

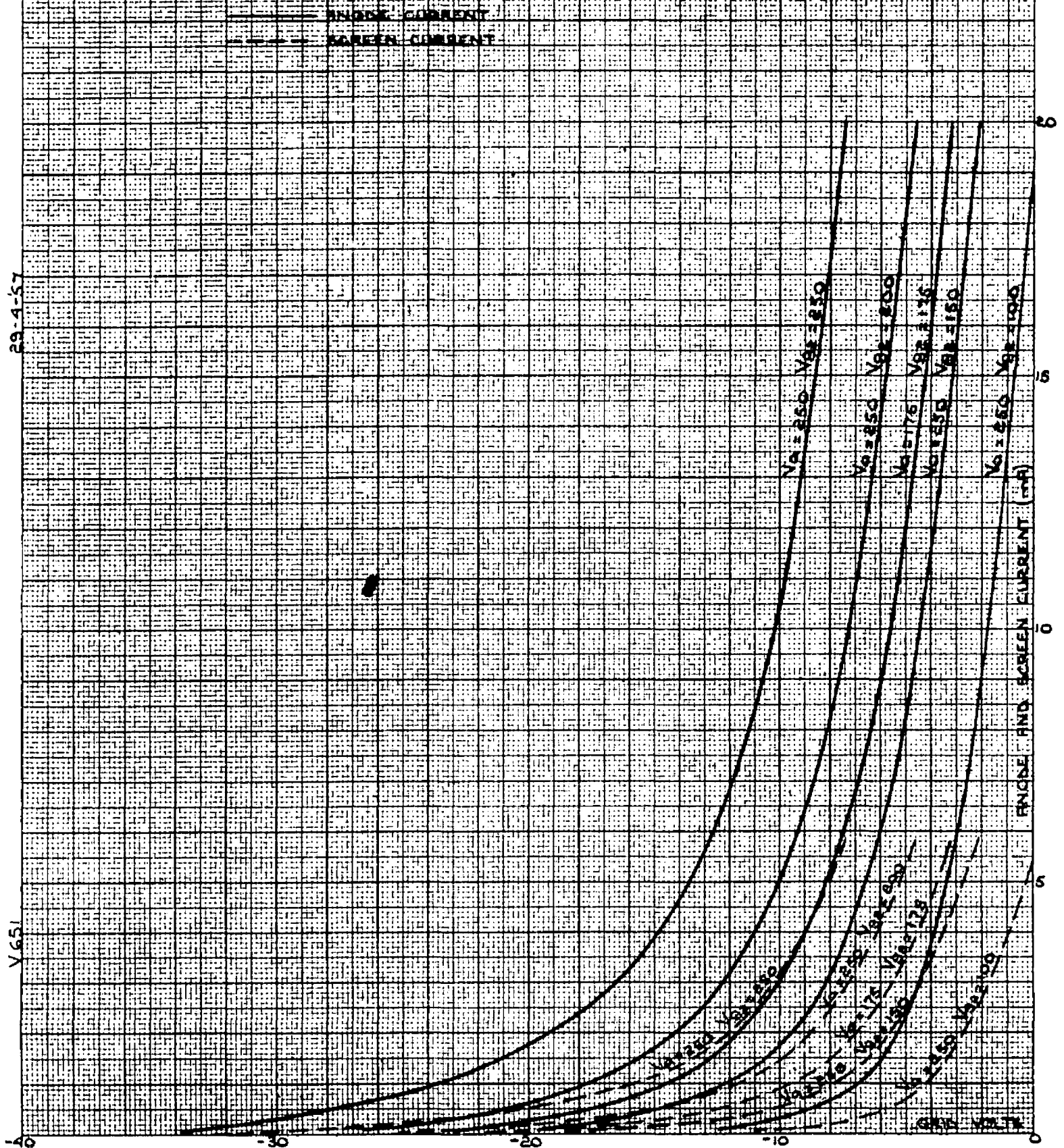
## NOTES

If only one cathode pin is required it is recommended that Pin 3 be used.

SIEMENS EDISON SWAN LIMITED

\*The type 13EC7 is identical to the 6EC7, except for heater ratings of 13 volts @ 100 ma.

# CHARACTERISTIC CURVES OF AVERAGE MAZDA VALVE TYPE 6F18



# TYPES 6EC7 - 13EC7

TDS-No. 2-6F18-103-1A.

