

Sylvania

# TYPE 53

## CLASS B AMPLIFIER



### CHARACTERISTICS

Heater Voltage AC or DC . . . . .	2.5 Volts
Heater Current . . . . .	2.0 Amperes
Maximum Over-all Length . . . . .	4 11/16"
Maximum Diameter . . . . .	1 13/16"
Bulb . . . . .	ST-14
Base—Medium 7-Pin . . . . .	7-B

### Operating Conditions and Characteristics:

#### CLASS B POWER AMPLIFIER

Heater Voltage . . . . .	2.5 Volts
Plate Voltage . . . . .	300 Volts
Dynamic Peak Plate Current (per plate) . . . . .	125 Ma.
Average Plate Dissipation . . . . .	10 Watts

#### Typical Operation:

Plate Voltage . . . . .	250	300 Volts
Grid Voltage . . . . .	0	0 Volts
Static Plate Current (per plate) . . . . .	14	17.5 Ma.
Load Resistance (plate-to-plate) . . . . .	8000	10000 Ohms
Power Output* . . . . .	8	10 Watts

\*With average input of 350 milliwatts applied between grids.

#### CLASS A DRIVER†

Heater Voltage . . . . .	2.5	2.5 Volts
Plate Voltage . . . . .	250	294 Volts
Grid Voltage . . . . .	-5	-6 Volts
Plate Current . . . . .	6	7 Ma.
Plate Resistance . . . . .	11300	11000 Ohms
Mutual Conductance . . . . .	3100	3200 $\mu$ mhos
Amplification Factor . . . . .	35	35

†Both grids and both plates connected together at the socket.

### CIRCUIT APPLICATION

Sylvania 53 is a complete Class B output tube of the heater cathode type with two sets of triode elements in a single bulb. Power output up to 10 watts may be obtained when the plate voltage available is 300 volts. No grid bias is required and distortion is extremely low due to careful design. By connecting the triode elements in parallel Type 53 will operate as a Class A tube delivering sufficient power to another 53 in a Class B output stage giving high output with low percentage distortion.

The 53 is used primarily as a Class B output tube for a-c operated receivers.

The general design and characteristics of the 53, as well as its applications, are very similar to Type 79 except for heater rating. More detailed information as to the use of these Class B twin amplifiers is given under **Circuit Application** of Types 79 and 6A6.