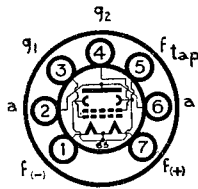
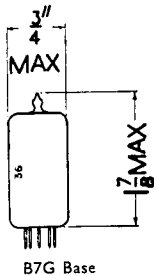


Replacement Type

TYPE 3S4

MINIATURE BATTERY
OUTPUT BEAM TETRODE

BRIMAR type 3S4 completes the range of miniature valves for use in battery receivers and compact portable equipment. The filament is in two sections which may be series or parallel connected. When series connected type 3S4 may be used in conjunction with other valves in the range and the filament operated from a high voltage source where the current is limited to 50 mA. When parallel connected this valve has identical characteristics to BRIMAR type 1S4 which it supersedes.

RATINGS

	Parallel Filaments	Series Filaments†	
Filament Voltage	1.4	2.8	volts
Filament Current	0.1	0.05	amp.
Anode Voltage	90	90	volts max.
Screen (g_2) Voltage	67.5	67.5	volts max.
Cathode Current (no signal) ...	9.0	4.5††	mA max.
Cathode Current (max. signal) ...	11.0	5.5††	mA max.

OPERATING CHARACTERISTICS

	Parallel Filaments		Series Filaments†		
Anode Voltage	67.5	90	67.5	90	volts
Anode Current	7.2	7.4	6.0	6.1	mA
Screen Voltage	67.5	67.5	67.5	67.5	volts
Screen Current	1.5	1.4	1.2	1.1	mA
Control Grid (g_1) Voltage ...	-7.0	-7.0	-7.0	-7.0	volts*
Mutual Conductance	1.55	1.575	1.4	1.425	mA/V
Anode Impedance	0.1	0.1	0.1	0.1	meg.
Optimum Load	5,000	8,000	5,000	8,000	ohms
Power Output	0.18	0.27	0.16	0.235	watts
Harmonic Distortion	10	12	12	13	per cent.

† For series operation of the sections, a shunting resistor must be connected across the section between Pins No. 1 and No. 5 to by-pass any cathode current in excess of the rated maximum per section. When other tubes in series-filament arrangement contribute to the filament current of the 3S4, an additional shunting resistor may be required between Pins 1 and No. 7.

†† Values are for each 1.4 volt section.

* Control grid volts measured from negative filament (Pin 5 in parallel connection, Pin 1 in series connection).

Type 3S4 is a commercial equivalent to the CV820