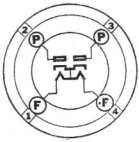


Sylvania

TYPE 83V

FULL-WAVE HIGH VACUUM RECTIFIER

CHARACTERISTICS

Heater Voltage AC	5.0 Volts
Heater Current	2.0 Amperes
Maximum Over-all Length	$4\frac{13}{16}$"
Maximum Diameter	$1\frac{13}{16}$"
Bulb	ST-14
Base—Medium 4-Pin	4-L

Operating Conditions and Characteristics:

Heater Voltage AC	5.0 Volts
A-C Voltage per Plate (RMS)	400 Volts Max.
D-C Output Current	200 Ma. Max.

NOTE: For rectifier curve data see Page 157.

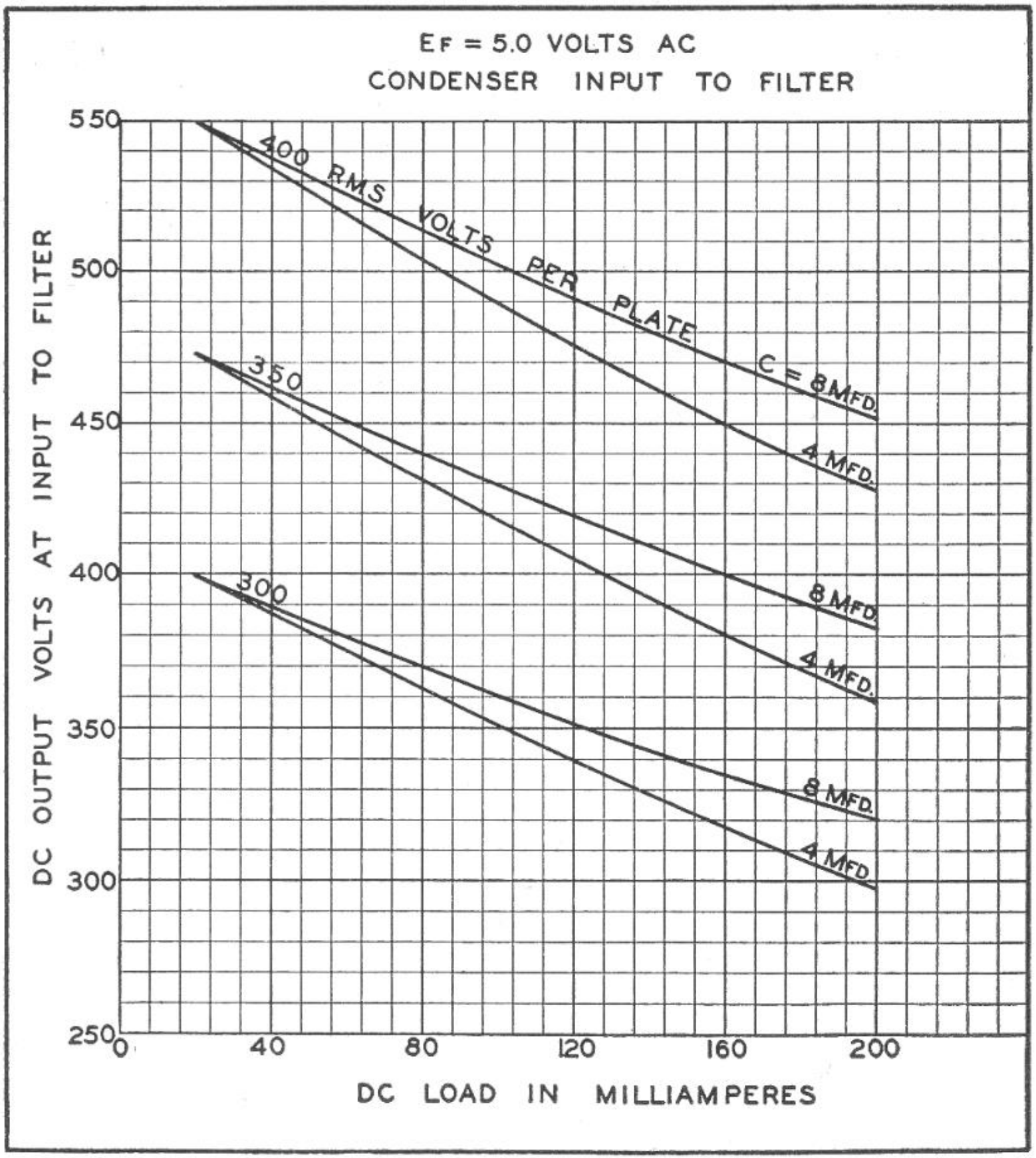
CIRCUIT APPLICATION

Sylvania 83V is a heater cathode type high vacuum rectifier designed for full-wave circuit applications. The heater requires 2.0 amperes at 5 volts. This differs from the rating for Type 83, which takes 3 amperes at 5 volts. The d-c output current (200 milliamperes) is intermediate between the ratings for Types 80 and 5Z3.

In general, high vacuum rectifiers are to be preferred to mercury vapor types for radio circuit applications. The latter types may be the source of objectionable noise, and usually require shielding, particularly in receivers with high sensitivity. Radio frequency chokes are generally required in such sets, and whenever employed, should be connected in series with each plate lead and located within the shield. These precautions are unnecessary when high vacuum rectifiers are employed. A further advantage of the heater cathode type high vacuum rectifier is that the heating time for the tube will be comparable with that required for the other tubes of the receiver. This delay will prevent excessive peak voltages and therefore adds to the protection of the filter condensers.

The 83V is not directly interchangeable in some cases with the mercury vapor Type 83, since the recommended maximum plate voltage is only 400 volts r-m-s per plate and the d-c output current is limited to 200 milliamperes. Choke-input filters will reduce the peak plate current and afford improved voltage regulation, although there will be a sacrifice in d-c output voltage. If voltages of the order of 400 to 500 volts are to be employed a Type 5Z3 should be used.

TYPES 83V, 5V4G



TYPES 83V, 5V4G