Full-Wave Mercury-Vapor Rectifier

For DC Power Supplies Having Large Current Requirements

GENERAL DATA

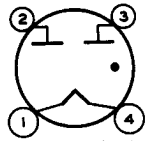
Electrical:

Filament, Coated:	
Voltage (AC or DC)	5.0 volts
Current	3.000 amp

Mechanical:

Operating Position	Vertical, base down
Maximum Overall Length	5-3/8"
Maximum Seated Length	4-3/4"
Maximum Diameter	2-1/16"
Bulb	ST-16
Base	Medium 4-Pin
Basing Designation for BOTTOM VIEW	4C

Pin 1 - Filament
Pin 2 - Plate of Unit No. 2



Pin 3 - Plate of Unit No. 1
Pin 4 - Filament

FULL-WAVE RECTIFIER

Maximum and Minimum Ratings:

PEAK INVERSE VOLTAGE	1550 max.	volts
PEAK PLATE CURRENT PER PLATE	1 max.	amp
CONDENSED MERCURY TEMPERATURE RANGE	20 - 60	°C
With Capacitor-Input Filter		
AC PLATE VOLTAGE PER PLATE (RMS)	450 max.	volts
TOTAL EFFECTIVE PLATE-SUPPLY IMPEDANCE PER PLATE[a]	50 min.	ohms
DC OUTPUT CURRENT	225 max.	ma
With Choke-Input Filter		
AC PLATE VOLTAGE PER PLATE (RMS)	550 max.	volts
INPUT-CHOKE INDUCTANCE	3 min.	henries
DC OUTPUT CURRENT	225 max.	ma

Characteristics:

Tube Voltage Drop (Approx.)	15	volts

[a] When a filter-input capacitor larger than 40 μf is used, it may be necessary to use more plate-supply impedance than the minimum value shown to limit the peak plate current to the rated value.

HALF-WAVE RECTIFIER

As a half-wave rectifier, the 83 is operated with plates connected in parallel. Two 83's so connected in a full-wave circuit can supply twice the output current of a single tube. Both plates within the same tube should be connected to the same terminal of the plate transformer. To equalize the current distribution between plates, a resistor of not less than 50 ohms should be connected in series with each plate.