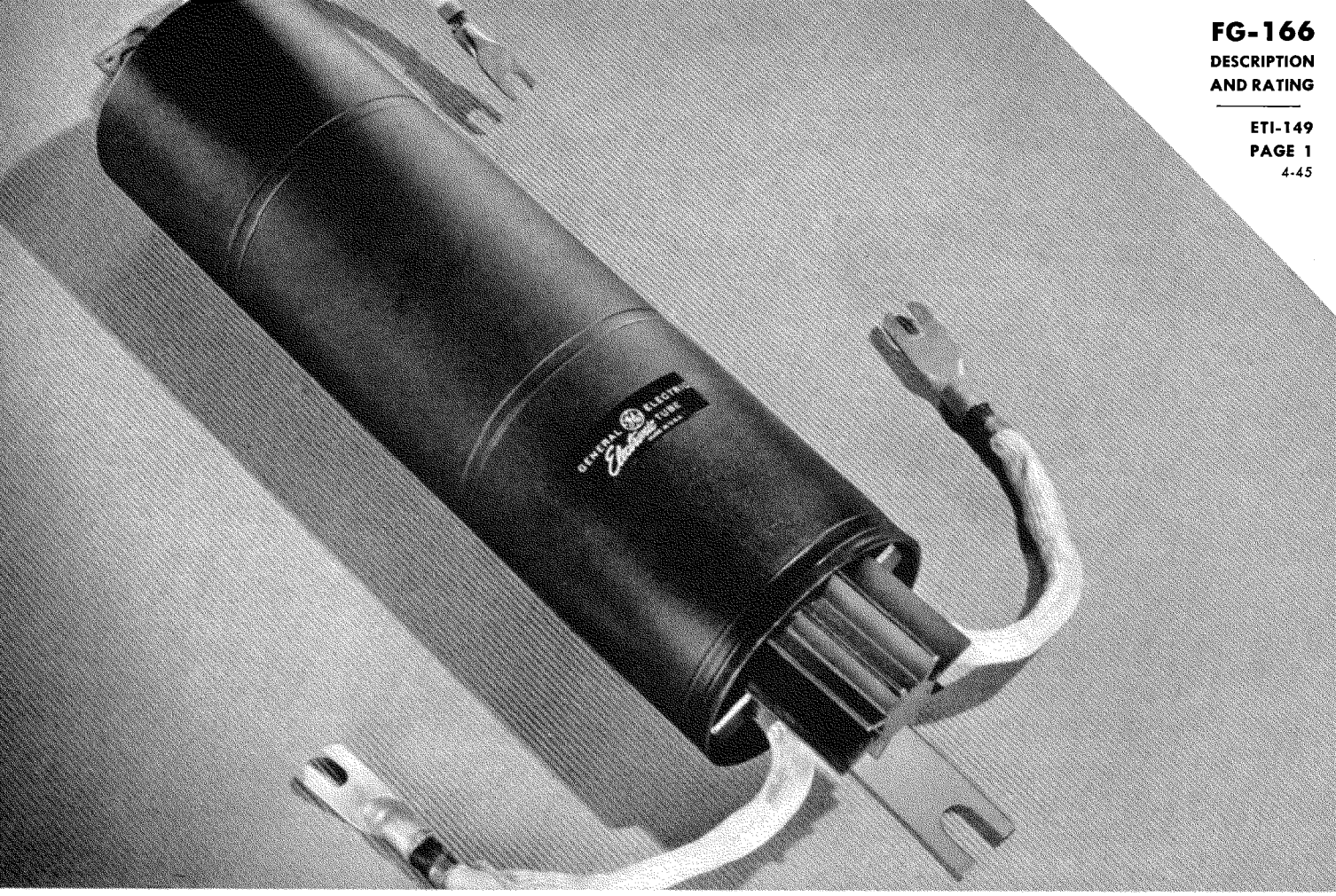

PHANOTRON

DESCRIPTION

The FG-166 half-wave, all-metal mercury-vapor rectifier is capable of carrying peak currents as high as 75 amperes. It is suitable for rectifiers that supply 125 or 250 to 600 volts in capacities of 15 to 50 kilowatts. The sturdy all-metal construction combines mechanical strength with simplicity of design.

TECHNICAL INFORMATION

These data are for reference only. For design information refer to specifications.

GENERAL CHARACTERISTICS

Number of electrodes	2	
Electrical		
Cathode—Filamentary type		
Filament voltage	2.5	volts
Filament current, approx	100	amperes
Filament heating time, typical	2	minutes
Optimum phase of filament voltage with respect to anode voltage	90	degrees
Peak voltage drop	9	volts
Rise of tube temperature above ambient without forced-air circulation		
Average anode current 0 amperes		
Condensed mercury temperature	30	centigrade
Temperature of side of tube	100	centigrade
Average anode current 20 amperes		
Condensed mercury temperature	35	centigrade
Temperature of side of tube	150	centigrade

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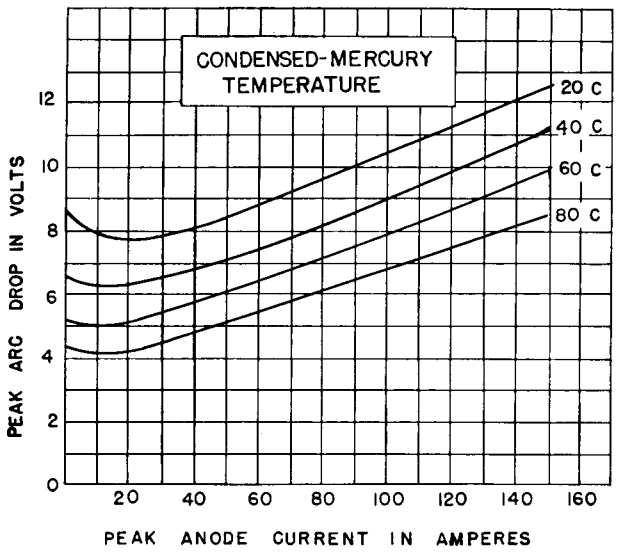
TECHNICAL INFORMATION (CONT'D)

Mechanical

Net weight, approx.	5.5	pounds
Shipping weight, approx.	14	pounds
Mounting position		vertical, with radiator down

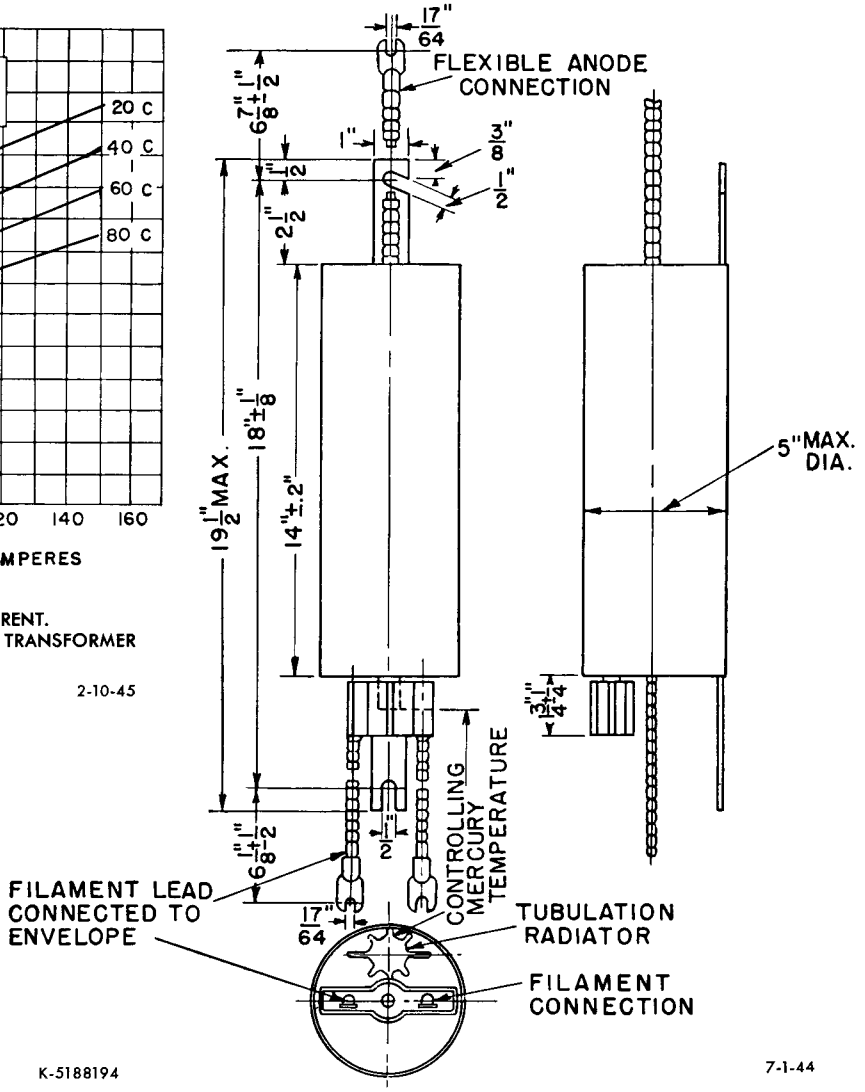
MAXIMUM RATINGS

Maximum peak anode voltage		
20 to 60 C condensed mercury	1500	volts
20 to 70 C condensed mercury	800	volts
Maximum anode current		
Instantaneous	75	amperes
Average	20	amperes
Surge, for design only	750	amperes
Maximum time of averaging current	30	seconds
Temperature limits, condensed mercury	+40 to +60	centigrade



FG-166 PHANOTRON
PEAK DROP VS PEAK ANODE CURRENT.
AVERAGE VALUES MEASURED FROM FILAMENT TRANSFORMER MIDTAP TO ANODE

K-6917484 2-10-45



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OUTLINE
PHANOTRON FG-166

Electronics Department
GENERAL ELECTRIC
Schenectady, N. Y.