NUCLEAR CORPORATION OF AMERICA
CENTRAL ELECTRONIC MANUFACTURERS DIVISION
Denville, New Jersey

High Vacuum Diode
Type XD-66R & XD-66W

DESCRIPTION

The XD-66 is available as a forced air cooled (XD-66R) or water cooled diode (XD-66W) for use in rectifier and clipper services and features a special thoriated tungsten filament.

SPECIFICATIONS

PHYSICAL	XD-66W	XD-66R
Length	13 1/8 max.	12 5/8 max.
Diameter	5 1/8 max.	4 21/32 max.
Weight	6 pounds	7 pounds
Mounting Position	Vertical	Vertical
Mounting Socket	--	CAS-A or CAS-B Series
Type of Cooling	Water	Forced Air

Required Air Flow on Anode (Air Cooled Tube)

Anode Dissipation (kw)	Air Flow (cfm)	Pressure (in. of Water)
2.4	75	.35
2.8	125	.78
3.5	190	1.6

Maximum Incoming Air Temperature	45°C
Maximum Glass Seal Temperature	180°C
Required Water Flow (Water Cooled Tube)	6 gpm for 12 Kw dissipation

ELECTRICAL

Filament	Thoriated Tungsten
Filament Voltage	15 Volts
Filament Current	36 Amperes
Filament Starting Surge Current	80 Amperes
Filament Cold Resistance	.042 Ohms

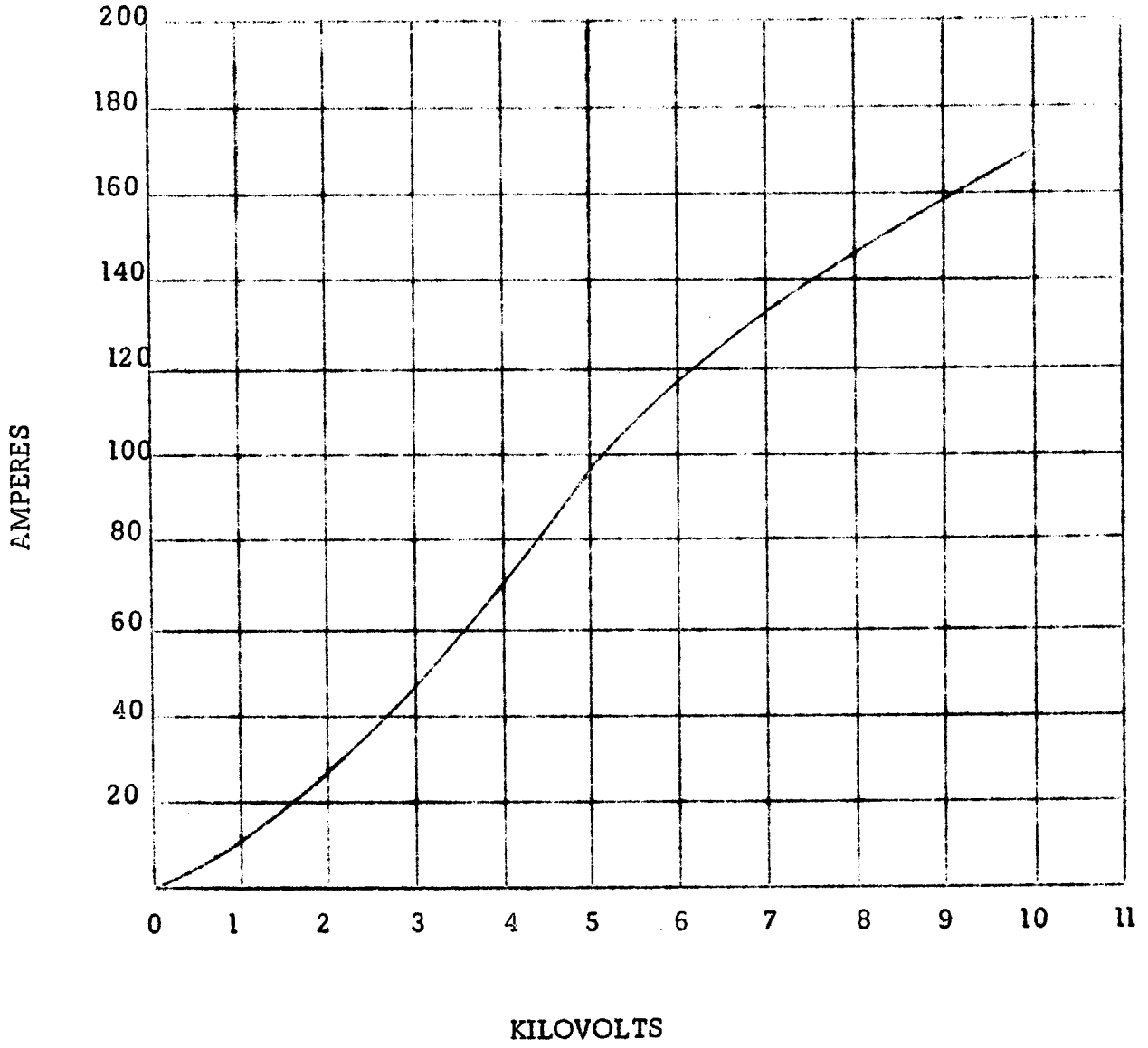
ELECTRICAL (RECTIFIER)	XD-66W	XD-66R
Filament Voltage	15 Volts	15 Volts
Filament Current	36 Amperes	36 Amperes
Peak Inverse Voltage (max.)	80 Kilovolts	80 Kilovolts
Average Anode Current	7 Amperes	3 Amperes

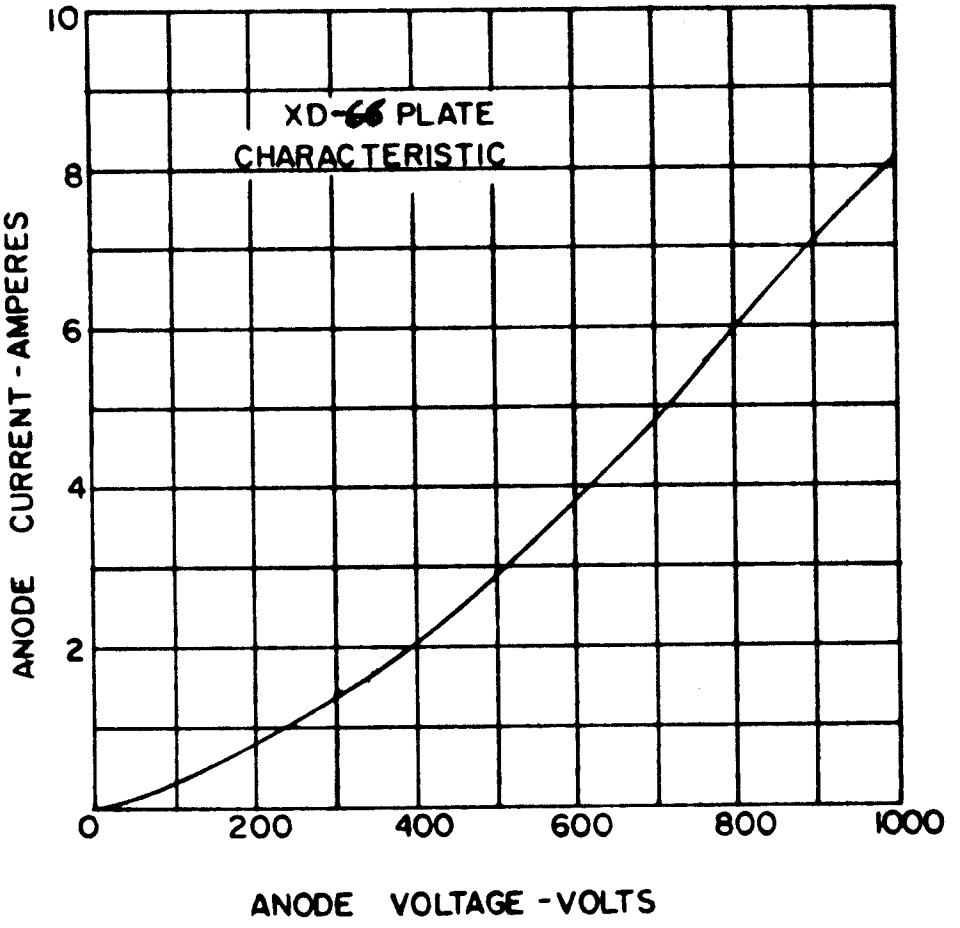
ELECTRICAL (RECTIFIER)	WATER COOLED	AIR COOLED
Peak Anode Current (max.)	25 Amperes	10 Amperes
Maximum Dissipation	12 Kilowatts	3 1/2 Kilowatts

ELECTRICAL (CLIPPER)		
Filament Voltage	16.2 Volts	16.2 Volts
Filament Current	39 Amperes	39 Amperes
Peak Inverse Voltage (max.)	80 Kilovolts	80 Kilovolts
Peak Anode Current (max.)	160 Amperes	160 Amperes
RMS Anode Current	8 Amperes	4 Amperes

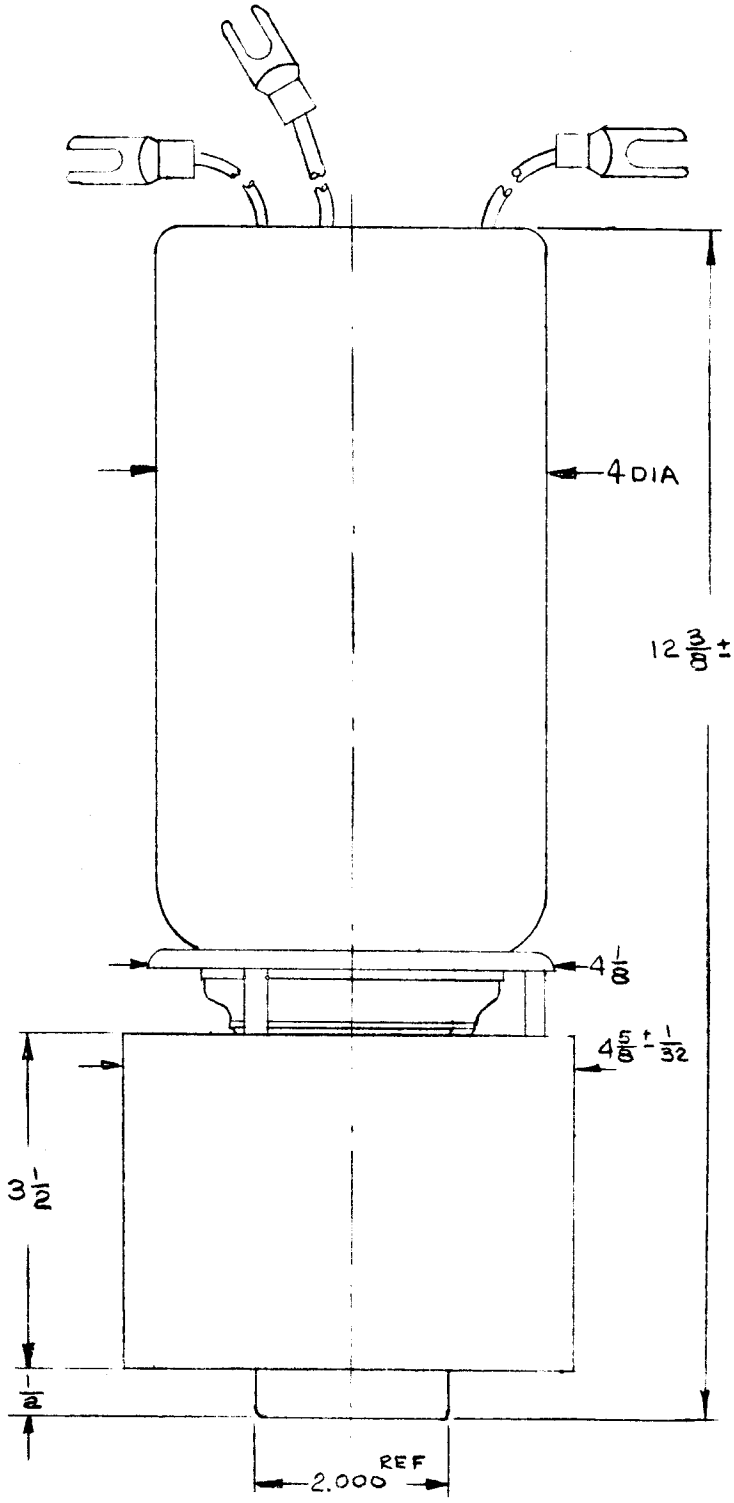
See Safety Code for Industrial Use of X-Rays published by A.S.A.

ANODE CURVE
PULSE CHARACTERISTICS

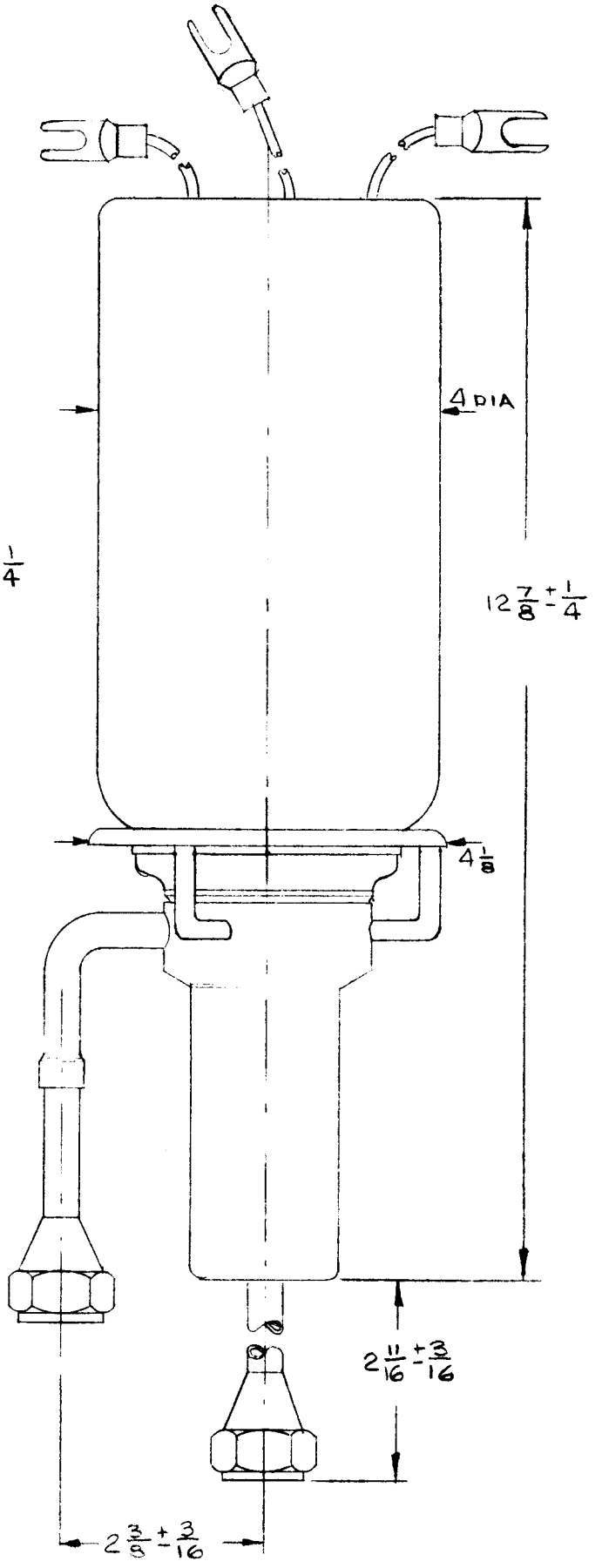



XD-66 PLATE
CHARACTERISTIC
ANODE CURRENT - AMPERES
10
8
6
4
2
0
200
400
600
800
1000
ANODE VOLTAGE - VOLTS

XD-66R


4 DIA
12 3/8 ± 1/4
4 1/8
4 5/8 + 1/32
3 1/2
1/2
2.000 REF

XD-66W


4 DIA
12 7/8 ± 1/4
4 1/8
2 11/16 ± 3/16
2 3/8 ± 3/16