

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

	<u>XD-66W</u>	<u>XD-66R</u>
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)

	<u>XD-66W</u>	<u>XD-66R</u>
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

NATIONAL CORPORATION OF AMERICA
ELECTRONIC MANUFACTURING DIVISION
Convent, New Jersey

High Vacuum Model
Type XP-665 & XP-666

DESCRIPTION

The XP-665 is available as a vacuum or sealed (XP-666) or water cooled (XP-667) for use in rectifier and capacitor applications and features a special filament mounting.

SPECIFICATIONS

PHYSICAL	XP-665	XP-666	XP-667
Length	10 1/2 in.	10 1/2 in.	10 1/2 in.
Diameter	2 1/2 in.	2 1/2 in.	2 1/2 in.
Weight	10 lbs.	10 lbs.	10 lbs.
Mounting Position	Vertical	Vertical	Vertical
Mounting Bracket	Standard	Standard	Standard
Type of Cooling	Water	Water	Water
Rated for Use as Rectifier	Yes	Yes	Yes
Anode Dissipation (Watt)	1.5	1.5	1.5
Cathode Dissipation (Watt)	1.5	1.5	1.5
Maximum Plate Current (mA)	100	100	100
Maximum Plate Voltage (V)	1500	1500	1500
Maximum Grid Current (mA)	10	10	10
Rated for Use as Rectifier	Yes	Yes	Yes

ELECTRICAL

Element	XP-665	XP-666	XP-667
Element Voltage	15 Volts	15 Volts	15 Volts
Element Current	10 Amperes	10 Amperes	10 Amperes
Element Starting Time (Sec)	10	10	10
Element Cold Resistance	1.5 Ohms	1.5 Ohms	1.5 Ohms

ELECTRICAL CHARACTERISTICS

Element Voltage	XP-665	XP-666	XP-667
Element Current	15 Amperes	15 Amperes	15 Amperes
Element Starting Time (Sec)	10	10	10
Element Cold Resistance	1.5 Ohms	1.5 Ohms	1.5 Ohms

ELECTRICAL (RECTIFIER)

WATER COOLED

AIR COOLED

Peak Anode Current (max.)
Maximum Dissipation

25 Amperes
12 Kilowatts

10 Amperes
3 1/2 Kilowatts

ELECTRICAL (CLIPPER)

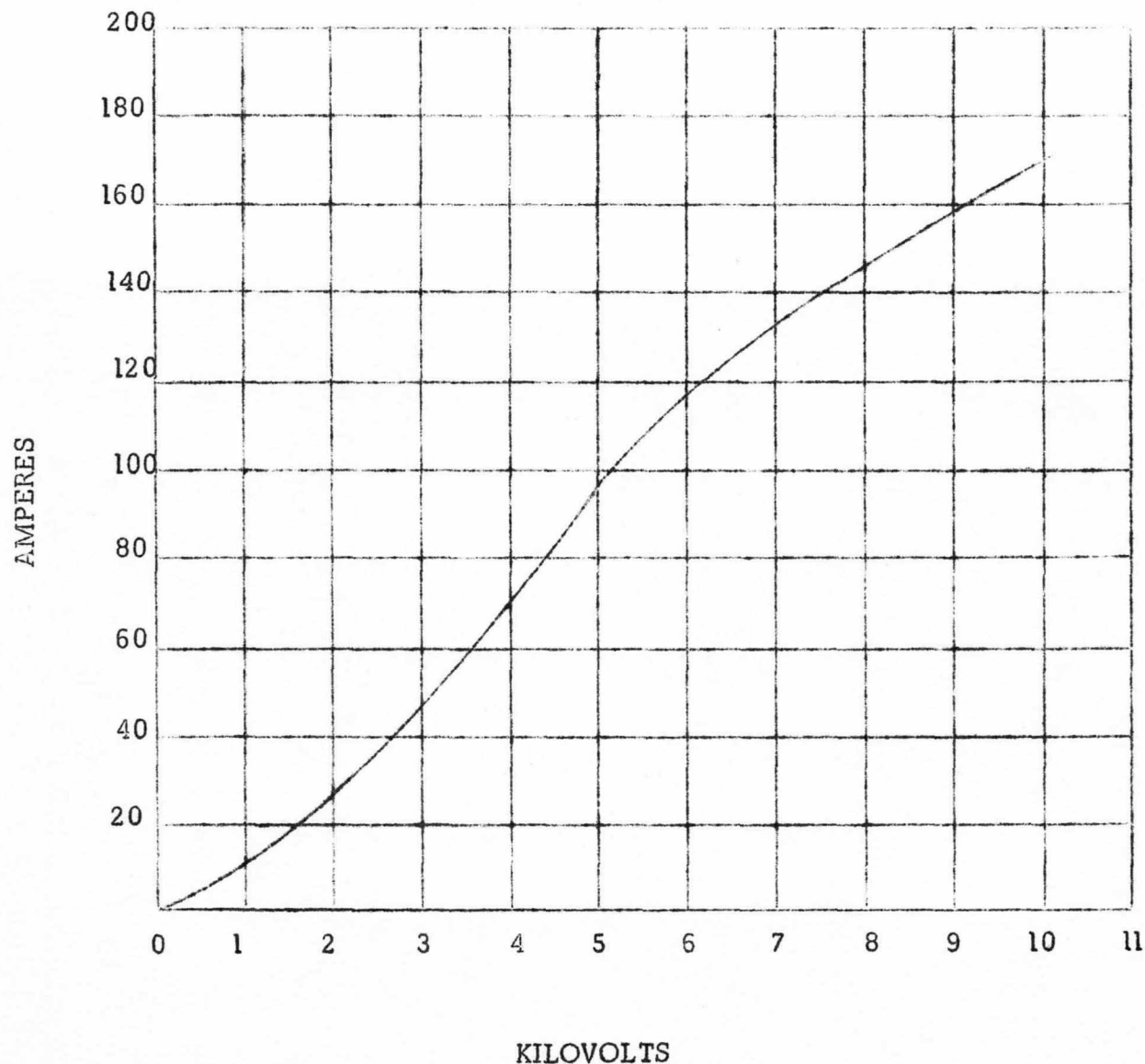
Filament Voltage
Filament Current
Peak Inverse Voltage (max.)
Peak Anode Current (max.)
RMS Anode Current

16.2 Volts
39 Amperes
80 Kilovolts
160 Amperes
8 Amperes

16.2 Volts
39 Amperes
80 Kilovolts
160 Amperes
4 Amperes

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

ANODE CURVE
PULSE CHARACTERISTICS

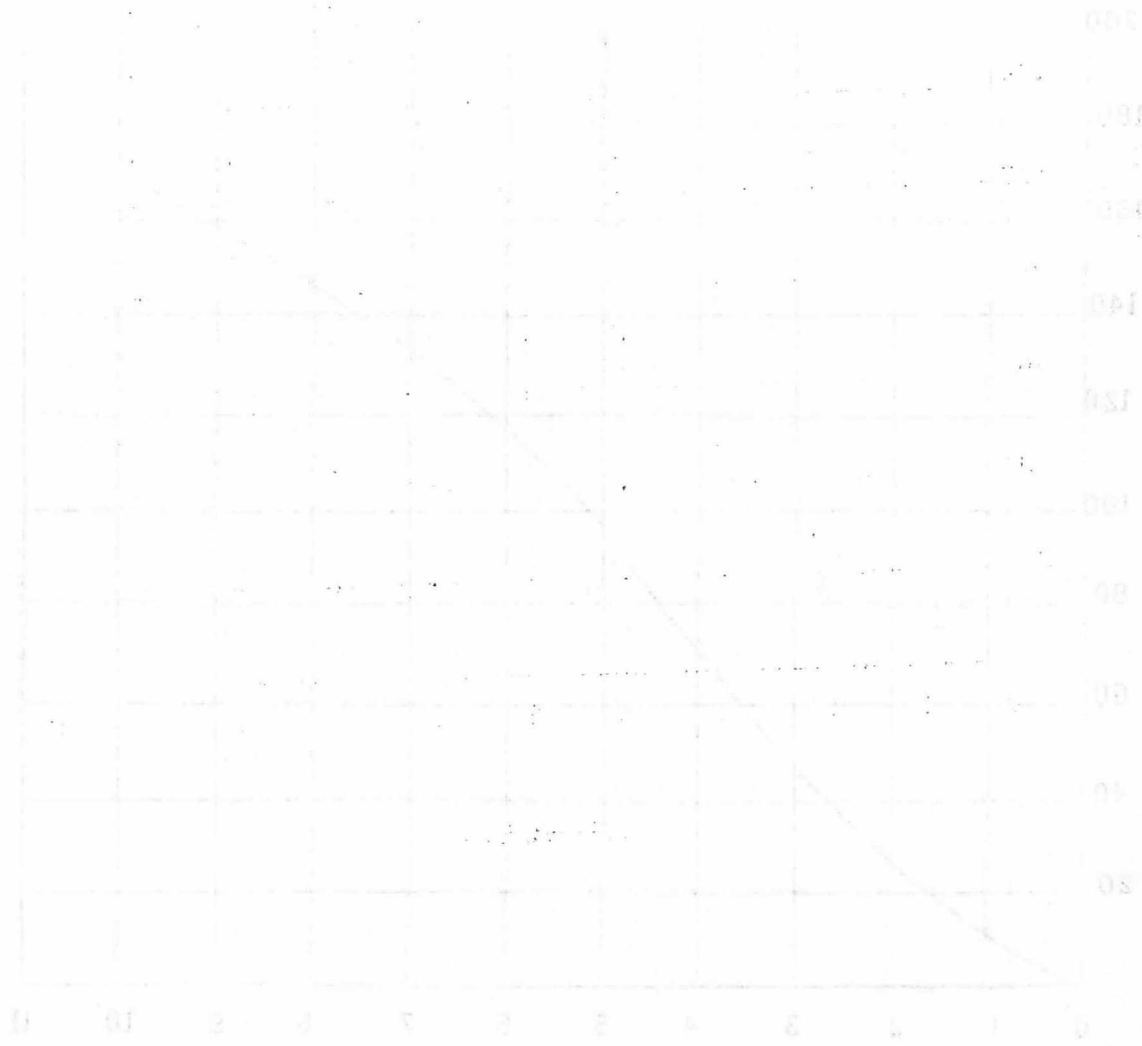


ELECTRICAL PROPERTIES
 Peak Anode Current (mA)
 Maximum Dissipation
 ELECTRICAL (C101) 501

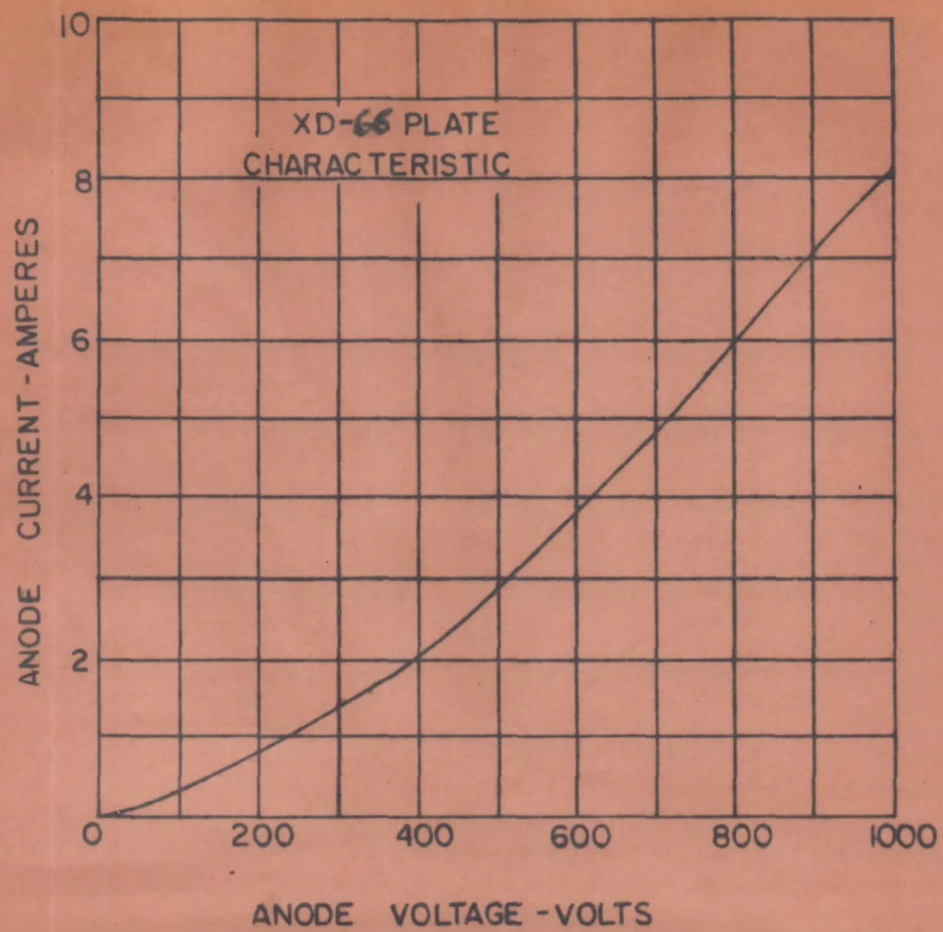
Element Voltage
 Filament Current
 Peak Inverse Voltage (mA)
 Peak Anode Current (mA)
 Peak Anode Current

See Safety along the internal use of 501- regulated by A.S.

TUBE CHARACTERISTICS
 TUBE CURVE



KILOVOLTS



XD-66R

XD-66W

