

NOISE DIODE

Rare gas filled noise diode for use in waveguide systems in the 3 cm wave band

QUICK REFERENCE DATA			
Noise level above 290 °K	F	=	18.75 dB
Ignition voltage	V _{ign}	>	6000 V
Anode current	I _a	= max.	150 mA

HEATING: direct, parallel supply

Filament voltage	V _f	=	2 V ± 10%
Filament current	I _f	=	2 A
Heating time	T _w	= min.	15 sec

TYPICAL CHARACTERISTICS

Anode voltage	V _a	=	165 V
Anode current	I _a	=	125 mA
Noise temperature	t _F	=	21700 °K ± 5%
Noise level above 290 °K 1)	F	=	18.75 ± 0.2 dB
Ignition voltage 2)	V _{ign}	>	6000 V

LIMITING VALUES (Absolute limits)

Anode current	I _a	= max.	150 mA
		= min.	50 mA
Ambient temperature	t _{amb}	=	-55 to +75 °C

REMARKS

It is recommended that the noise diode and the microwave part of the mount are not touching (min. diameter of pipe 7.5 mm).

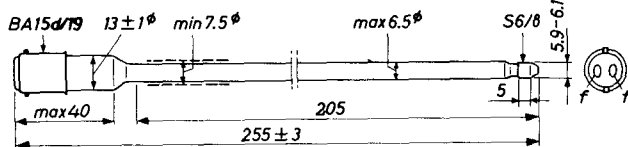
The V.S.W.R. in the test mount with the noise diode in operation should not be more than 1.1

1) Change in noise level over 200 hours of operation is negligible.

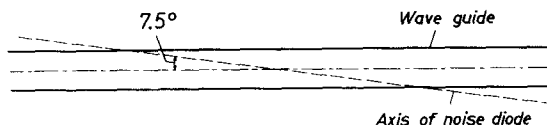
2) For recommended ignition circuit see page 2.

MECHANICAL DATA

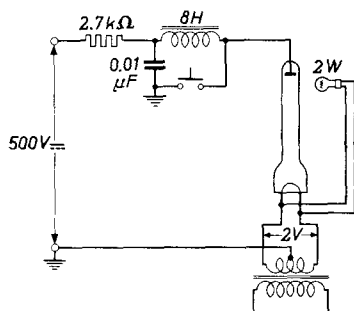
Dimensions in mm



MOUNTING POSITION: Cathode at receiver side



RECOMMENDED IGNITION CIRCUIT



The minimum value of V_{ign} is only valid if some ambient illumination is present. Hence in darkness the presence of a small light-source (about 2W) is necessary.

The inductance of 8H should be of proper construction in order to be able to produce the minimum value of V_{ign} .



PHILIPS

Data handbook



**Electronic
components
and materials**

K50A

page	sheet	date
1	1	1968.12
2	2	1968.12
3	3	1968.12
4	FP	2001.05.18