

DESCRIPTION

The B3NG1639 is a noise generator, used for X-band marine radar receiver calibration. It comprises a noise diode coupled into a short waveguide section.

Frequency range	8800 to 9000	MHz
Calibration frequency	8900	MHz
Excess Noise Ratio	15	dB

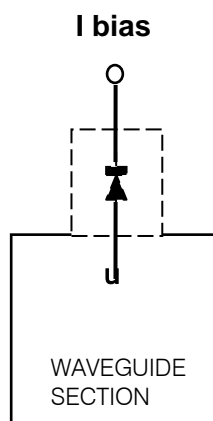
GENERAL DATA

Operating voltage	18	V d.c.
Operating current	0 to 25	mA
Overall dimensions	93 x 15 x 42 mm	max
Net weight	100 g	approx
Waveguide size	WR90 (WG16)	

MAXIMUM AND MINIMUM RATINGS

	Min	Max	
Operating voltage (see note 1) . . .	+13	+21	V
Maximum current	0	30	mA
Peak R.F. input (1uS,1kHz) . . .		60	kW
Body temperature:			
Operating	-15	+70	°C
Storage	-40	+ 85	°C
Vibration (50Hz)		10	g
Shock (0.5ms, 3 axis)		100	g

BLOCK DIAGRAM



TYPICAL OPERATION

Operating Conditions

Calibration frequency	8900	MHz
Frequency	8900 ± 100	MHz

Typical Performance (at 25 °C)

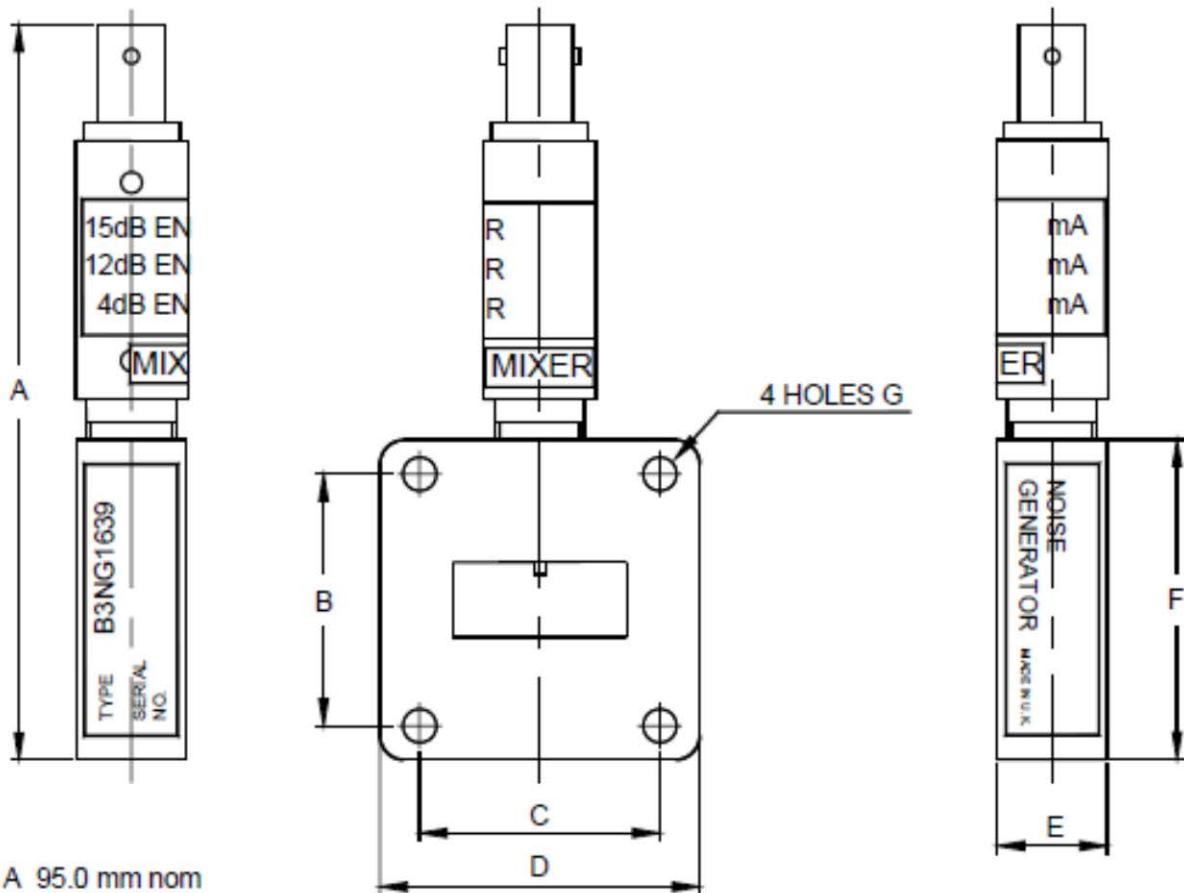
	Min	Typ	Max	
Operating current	-	15	25	mA
ENR versus current (see note 2).				
ENR	14.5	15.0	15.5	dB
(Current 17 to 23mA)				
Tolerance at calibration points	± 0.25			dB
Linearity between calibration points . .	± 0.35			dB
temperature coefficient of ENR	-0.015			dB/ °C
Insertion Loss		0.2		dB
VSWR.		1.25:1		
(Operating & non operating) .				
Noise turn on time (5% to 95%)		3.5		µS
Noise turn off time (95% to 5%)		5.0		µS

NOTES

1. Positive only; negative voltage must not be applied.
2. Current values for ENR at 15, 12, and 4 dB are indicated on device label.

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OUTLINE



- A 95.0 mm nom
- B 32.5 mm ± 0.1
- C 31.0 mm ± 0.1
- D 41.5 mm nom
- E 15.0 mm max
- F 41.5 mm nom
- G Ø 4.2/4.4 mm

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