

# Broadband Calibrated Noise Sources For Noise Figure Measurements

## NC 346 Series 10 kHz to 60 GHz

### Features:

- Noise output on and off times less than 20 and 80  $\mu$ s respectively in repetitive operation. Single-shot turn on time less than 3 ms.
- VSWR less than 1.15:1 from 10 MHz to 5 GHz for units with 5 to 7 dB or 14 to 16 dB ENR
- Temperature coefficient less than 0.009 dB/ $^{\circ}$ C
- Noise output variation with voltage less than 0.002 dB/% $\Delta$ V
- Operating temperature 0 $^{\circ}$ C to +55 $^{\circ}$ C
- Input power +28 VDC  $\pm$ 2 VDC at 15 mA typical for NC 346 A, B, & D
- Built-in regulator

Noise Com's NC 346 Series is designed for precision noise figure measurement applications. The VSWR has been improved, reducing multiple reflections of the test signals and significantly increasing the measurement accuracy of most noise figure set-ups.

The NC 346 Series noise sources have broadband coverage and extremely good temperature and voltage stability, which makes them the finest noise figure meter compatible laboratory standards. Outputs of 6, 15.5 and 22 dB ENR are available, allowing the units to accurately measure noise figures up to 20, 30 and 36 dB respectively.

The return loss of the noise sources is measured in both the on and off states and is included in the calibration report provided with each noise source. Each noise source is also supplied with calibration data traceable to NIST.

See page 16 for package styles and dimensions.



### NC 346 COAXIAL SERIES

NOISE COM MODEL	RF CONNECTOR	FREQUENCY (GHz)	OUTPUT ENR (dB)	VSWR (MAXIMUM @ ON/OFF)			
				0.01-5 GHz	5-18 GHz	18-26.5 GHz	26.5-40 GHz
NC 346 Y	SMA Male	10 kHz - 1 GHz	14 to 16	1.20:1			
NC 346 A	SMA Male	0.01-18.0	5 to 7	1.15:1	1.25:1		
NC 346 A Precision	APC3.5 Male	0.01-18.0	5 to 7	1.15:1	1.25:1		
NC 346 A Option 1	N Male	0.01-18.0	5 to 7	1.15:1	1.25:1		
NC 346 A Option 2	APC7	0.01-18.0	5 to 7	1.15:1	1.25:1		
NC 346 A Option 4	N Female	0.01-18.0	5 to 7	1.15:1	1.25:1		
NC 346B	SMA Male	0.01-18.0	14 to 16	1.15:1	1.25:1		
NC 346B Precision	APC3.5 Male	0.01-18.0	14 to 16	1.15:1	1.25:1		
NC 346B Option 1	N Male	0.01-18.0	14 to 16	1.15:1	1.25:1		
NC 346B Option 2	APC7	0.01-18.0	14 to 16	1.15:1	1.25:1		
NC 346B Option 4	N Female	0.01-18.0	14 to 16	1.15:1	1.25:1		
NC 346 C	APC3.5 Male	0.01-26.5	13 to 17	1.15:1	1.25:1	1.35:1	
NC 346 D	SMA Male	0.01-18.0	19 to 25*	1.50:1	1.50:1		
NC 346 D Precision	APC3.5 Male	0.01-18.0	19 to 25*	1.50:1	1.50:1		
NC 346 D Option 1	N Male	0.01-18.0	19 to 25*	1.50:1	1.50:1		
NC 346 D Option 2	APC7	0.01-18.0	19 to 25*	1.50:1	1.50:1		
NC 346 D Option 3	N Female	0.01-18.0	19 to 25*	1.50:1	1.50:1		
NC 346 E	APC3.5 Male	0.01-26.5	19 to 25*	1.50:1	1.50:1	1.50:1	
NC 346 Ka	K Male**	0.10-40.0	10 to 17	1.25:1	1.30:1	1.40:1	1.50:1
NC 346 V	V Male***	TBD-60.0	TBD to 17	Consult Factory			

\*Flatness better than  $\pm$ 2 dB

\*\* Compatible with SMA and APC3.5

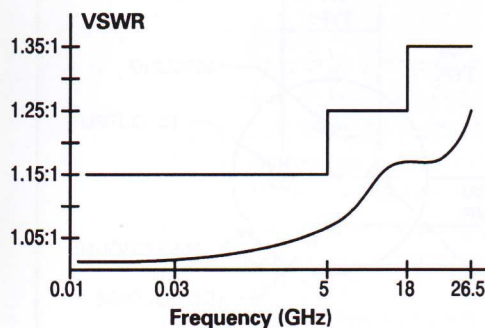
\*\*\* Compatible with APC2.4

### NC 346 WAVEGUIDE SERIES WITH BUILT-IN ISOLATOR\*

Noise Com Model	Flange	Frequency (GHz)	ENR (dB)	VSWR (on/off)
NC 346B WR 229	CPR229F	3.7 - 4.2	14 to 16**	1.15:1
NC 346B WR 90	UG39/U	8.5 - 9.6	14 to 16**	1.15:1
NC 346B WR 75	UBR 120	10.5 - 13.0	14 to 16**	1.15:1

\*Inquire for other flanges or waveguide sizes

\*\* Flatness better than  $\pm$ 0.15 dB



Typical VSWR for NC 346C