

TEST INSTRUMENTS & POWER SUPPLIES

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Patent No.: 6258045
by Noise Laboratory Co., Ltd. and Toyota Motor Corporation.

Models: NKU07M32G / NKU2460G / NKU5080G

Broadband Sleeve Antenna

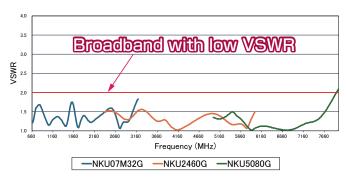
Broadband sleeve antenna has been developed for efficient immunity testing against hand-held transmitters and cellular phones. In the conventional strong electromagnetic field immunity test in the near field, it was necessary to replace the antenna according to each frequency, which required a lot of labor and time. These Broadband sleeve antennas is a single antenna solution eliminating the need for antenna changes and dramatically reducing the test time. Furthermore, these antennas with their small-size and lightweight properties and a flexible handle are suitable for testing in narrow spaces.

- Ompliant with ISO 11452-9 (2021) and ISO 11451-3 (2024).
- Tests can also be conducted for the 6GHz band (5.925GHz to 7.125GHz) expanded by Wi-Fi 6E and 7.
- A wide frequency range eliminating the need for antenna changes.
- With a power handling capacity of 20W (10W for NKU2460G/NKU5080G), it is capable of testing strong electromagnetic fields.
- High efficiency due to a low VSWR and high gain.
- Suitable for broadband digital modulation thanks to a good VSWR flatness.
- Small, light-weight and flat antennas easy to use in narrow spaces.
- The flexible antenna handle makes it easy to handle and maneuver during testing.
- Since there is little variation in the near-field distribution for each frequency, it is possible to radiate an
 electromagnetic field to the EUT without changing the position of the antenna.

Specifications

Parameter -	Specifications /Performance		
	NKU07M32G	NKU2460G	NEW NKU5080G
Frequency range	(660) 700 MHz \sim 3.2 GHz	2.4 GHz \sim 6 GHz	5 GHz \sim 8 GHz
VSWR	≤ 2.0		\sim 7.5GHz : \leq 2.0 7.5GHz \sim : \leq 2.5
Maximum power input	20 W (continuous)	10 W (continuous)	
Input impedance	50Ω		
Connector	SMA (J) % antenna part only		
Dimensions % protrusions excluded	W 50mm × H 186mm× D 8mm	W 35mm × H 108mm × D 10mm	$\label{eq:washing} W33\text{mm}\times\text{H}90\text{mm}\times\text{D}9.5\text{mm}$ The handle attachment 03-00139A is required.
Weight	Approx. 73.5g	Approx. 20g	Approx. 14g

VSWR



Antenna Spacer MODEL: 03-00113A / 114A / 140A



Antenna Spacer for the Broadband Sleeve Antenna. Equipping it allows the irradiation distance from the EUT to be kept at 50 mm.



Image of the equipped Antenna Spacer

Antenna Configuration



Dedicated Antenna Adapter for NKU2460G MODEL: 03-00126A



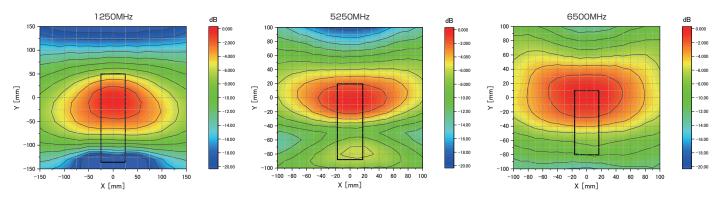
NKU07M32G / NKU2460G /NKU5080G

CALIBRATION SERVICE AVAILABLE

Calibration services are available for VSWR, electric field distribution and proximity gain characteristics of the Broadband Sleeve Antenna (NKU07M32G, NKU2460G,NKU5080G). In ISO 11452-9 standard the calibration of electric field is not specified, and testing level is set in accordance with input power to the transmitting antenna. The calibration allows to confirm proper functions of the transmitting antenna, which is necessary to ensure the quality of the testing. In addition, the electric field distribution and proximity gain characteristics allow to confirm the position and strength of strong radiation from the Antenna.

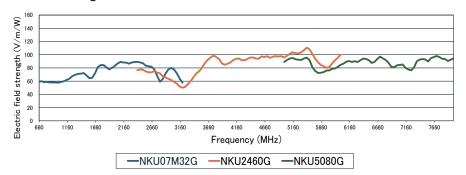


Image of Electric Field Distribution Characteristics



[Distribution map conditions]

- 1-axis electric field ●Measurement distance: 50 mm from the antenna Contour line interval: 2dB / Line
- Image of Electric Field Strength Characteristics



(Conditions for Acquiring Electric Field Strength)

- 1-axis electric field

 Measurement distance: 50 mm from the antenna
- Measurement position coordinates (X : Y): NKU07M32G (0 : 10), NKU2460G (0 : 0), NKU5080G (0 : 0)

* Designs, appearances and specifications on the products are subject change without notice.

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