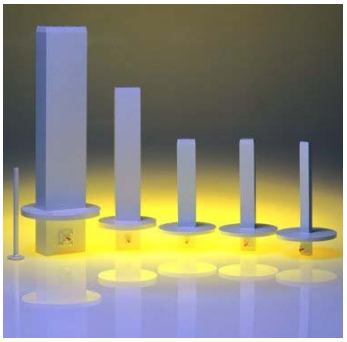
NSI NEARFIELD SYSTEMS, INC.

Open Ended Waveguide (OEWG) Probes



NSI's open-ended waveguide probes have been specifically designed for near-field measurements.

All probes are standard WR waveguide bands and are supplied with a mounting flange, coaxial transition (for probes below 50 GHz only), absorber, and aperture cover unless otherwise noted.

The NSI 2000 software includes a built-in open-ended waveguide probe model based on a NIST algorithm (Yaghjian-1983).

NSI also offers 0.75 to 40 GHz ridged waveguide probes for broadband near-field measurements. Please call the NSI sales department for your custom probe needs.

Features:
Tapered ends to minimize diffraction effects
Standard mounting fits all NSI scanners
Polyurethane white paint
Waveguide to coaxial transition included (for probes below 50 GHz)
Absorber included

Probe Assembly Dimensions and Weight

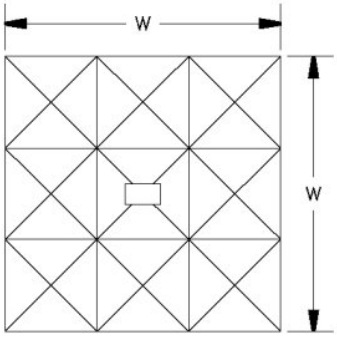
Model	Frequency Range	"D" Absorber Depth	"L" Probe Length	"W" Absorber Size *	Transition	Assembly Weight**
	GHz	in. (mm)	in. (mm)	in. (mm)		lb. (kg)
NSI-RF-WR1500	0.49 - 0.75	18 (457)	32 (813)	24 (610)	SMA (f)	31.0 (14.1)
NSI-RF-WR975	0.75 - 1.12	18 (457)	32 (813)	24 (610)	SMA (f)	31.0 (14.1)
NSI-RF-WR770	0.96 - 1.45	18 (457)	37 (940)	24 (610)	SMA (f)	29.0 (13.2)
NSI-RF-WR650	1.12 - 1.7	12 (305)	32 (813)	24 (610)	SMA (f)	23.0 (10.4)
NSI-RF-WR510	1.45 - 2.2	12 (305)	25 (635)	24 (610)	SMA (f)	20.0 (9.1)
NSI-RF-WR430	1.7 - 2.6	12 (305)	21 (533)	24 (610)	SMA (f)	11.0 (5.0)
NSI-RF-WR340	2.2 - 3.3	12 (305)	18 (457)	24 (610)	SMA (f)	10.0 (4.5)
NSI-RF-WR284	2.6 - 3.95	8 (203)	14 (356)	12 (305)	SMA (f)	4.1 (1.9)
NSI-RF-WR229	3.3 - 4.9	8 (203)	12 (305)	12 (305)	SMA (f)	3.6 (1.6)
NSI-RF-WR187	3.95 - 5.85	5 (127)	9 (229)	12 (305)	SMA (f)	1.8 (0.8)
NSI-RF-WR159	4.9 - 7.05	5 (127)	8 (203)	12 (305)	SMA (f)	1.7 (0.8)
NSI-RF-WR137	5.85 - 8.2	5 (127)	8 (203)	12 (305)	SMA (f)	1.6 (0.7)
NSI-RF-WR112	7.05 - 10	5 (127)	8 (203)	12 (305)	SMA (f)	1.6 (0.7)
NSI-RF-WR90	8.2 - 12.4	3 (76)	6 (152)	12 (305)	SMA (f)	1.2 (0.5)
NSI-RF-WR75	10 - 15	3 (76)	6 (152)	12 (305)	SMA (f)	1.2 (0.5)
NSI-RF-WR62	12.4 - 18	3 (76)	6 (152)	12 (305)	SMA (f)	1.1 (0.5)
NSI-RF-WR51	15 - 22	3 (76)	6 (152)	12 (305)	High Freq. SMA (f)***	1.1 (0.5)
NSI-RF-WR42	18 - 26.5	3 (76)	6 (152)	12 (305)	High Freq. SMA (f)***	1.1 (0.5)
NSI-RF-WR34	22 - 33	3 (76)	6 (152)	12 (305)	2.9 mm "K" (f)	1.1 (0.5)
NSI-RF-WR28	26.5 - 40	3 (76)	6 (152)	12 (305)	2.9 mm "K" (f)	1.1 (0.5)
NSI-RF-WR22	33 - 50	3 (76)	6 (152)	12 (305)	2.4 mm "V" (f)	1.1 (0.5)
NSI-RF-WR15	50 - 75	3 (76)	6 (152)	12 (305)	WR15	N/A+
NSI-RF-WR12	60 - 90	3 (76)	6 (152)	12 (305)	WR12	N/A+
NSI-RF-WR10	75 - 110	3 (76)	6 (152)	12 (305)	WR10	N/A+

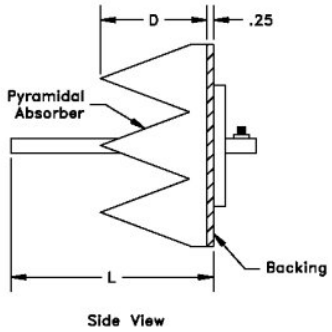
* Note: W=24" for all probes on 300V scanners.

+ Note: These probes do not include mounting brackets.

** Note: Including transition, mounting bracket and absorber.

*** Note: Connector is Macom part # 2752-1201-00





Side View

Probe Only Dimensions

Model	Freqency Range	Figure 1.			Figure 3.				
		A	B	C	D	E	F	H	W
	GHz	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)
NSI-RF-WR1500	0.49 - 0.75	39.00 (990.6)	32.00 (812.8)	0.63 (15.88)	18.50 (469.9)	11.00 (279.4)	0.406 (10.31)	7.50 (190.50)	15.00 (381)
NSI-RF-WR975	0.75 - 1.12	38.00 (965.2)	32.00 (812.8)	0.50 (12.70)	13.25 (336.6)	8.38 (212.7)	0.397 (10.08)	4.88 (125.95)	9.75 (247.7)
NSI-RF-WR770	0.96 - 1.45	43.00 (1092.2)	37.00 (939.8)	0.50 (12.70)	11.22 (285.0)	7.35 (186.7)	0.397 (10.08)	3.85 (97.79)	7.70 (195.58)
NSI-RF-WR650	1.12 - 1.7	38.00 (965.2)	32.00 (812.8)	0.50 (12.70)	8.69 (220.7)	5.44 (138.2)	0.332 (8.43)	3.25 (82.55)	6.50 (165.1)
NSI-RF-WR510	1.45 - 2.2	31.00 (787.4)	25.00 (635.00)	0.50 (12.70)	8.69 (220.7)	5.44 (138.2)	0.332 (8.43)	2.55 (64.77)	5.10 (129.54)
NSI-RF-WR430	1.7 - 2.6	25.00 (635.0)	21.00 (533.4)	0.50 (12.70)	6.34 (161.0)	4.19 (106.4)	0.266 (6.76)	2.15 (54.61)	4.30 (109.22)
NSI-RF-WR340	2.2 - 3.3	22.00 (558.8)	18.00 (457.12)	0.50 (12.70)	5.44 (138.2)	3.75 (95.3)	0.266 (6.76)	1.70 (43.18)	3.40 (86.36)

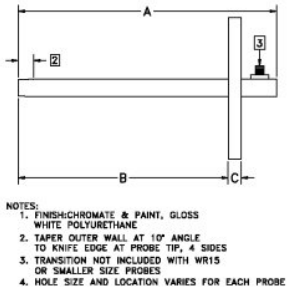


Figure 1

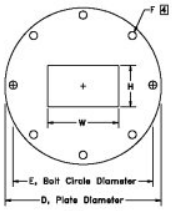


Figure 2

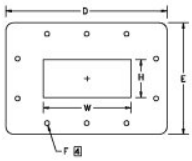


Figure 3

Model	Freqency Range	Figure 1.			Figure 2.				
		A	B	C	D	E	F	H	W
	GHz	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)
NSI-RF-WR284	2.6 - 3.95	17.00 (431.8)	14.00 (355.6)	0.38 (9.65)	5.31 (134.9)	4.75 (120.7)	0.266 (6.76)	1.34 (34.03)	2.84 (72.14)
NSI-RF-WR229	3.3 - 4.9	15.00 (381.0)	12.00 (304.8)	0.38 (9.65)	5.31 (134.9)	4.75 (120.7)	0.266 (6.76)	1.15 (29.21)	2.29 (58.17)
NSI-RF-WR187	3.95 - 5.85	12.00 (304.8)	9.00 (228.6)	0.38 (9.65)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.87 (22.10)	1.87 (47.50)
NSI-RF-WR159	4.9 - 7.05	11.00 (279.4)	9.00 (228.6)	0.38 (9.65)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.80 (20.06)	1.59 (40.39)
NSI-RF-WR137	5.85 - 8.2	10.00 (254.0)	8.00 (203.2)	0.38 (9.65)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.62 (15.80)	1.37 (34.79)
NSI-RF-WR112	7.05 - 10	10.00 (254.0)	8.00 (203.2)	0.38 (9.65)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.50 (12.7)	1.12 (8.44)
NSI-RF-WR90	8.2 - 12.4	7.50 (190.5)	6.00 (152.4)	0.25 (6.35)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.40 (10.16)	0.90 (22.86)
NSI-RF-WR75	10 - 15	7.50 (190.5)	6.00 (152.4)	0.25 (6.35)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.38 (9.53)	0.75 (19.05)
NSI-RF-WR62	12.4 - 18	7.50 (190.5)	6.00 (152.4)	0.25 (6.35)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.31 (7.90)	0.62 (15.80)
NSI-RF-WR51	15 - 22	7.50 (190.5)	6.00 (152.4)	0.25 (6.35)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.26 (6.48)	0.51 (12.95)
NSI-RF-WR42	18 - 26.5	7.50 (190.5)	6.00 (152.4)	0.25 (6.35)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.17 (4.32)	0.42 (10.67)
NSI-RF-WR34	22 - 33	7.50 (190.5)	6.00 (152.4)	0.25 (6.35)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.17 (4.32)	0.34 (8.64)
NSI-RF-WR28	26.5 - 40	7.50 (190.5)	6.00 (152.4)	0.25 (6.35)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.14 (3.56)	0.28 (7.11)
NSI-RF-WR22	33 - 50	7.50 (190.5)	6.00 (152.4)	0.25 (6.35)	4.00 (101.6)	3.50 (88.9)	0.189 (4.80)	0.11 (2.85)	0.22 (5.69)
NSI-RF-WR15	50 - 75	Contact NSI						0.07 (1.88)	0.15 (3.76)
NSI-RF-WR12	60 - 90							0.06 (1.55)	0.12 (3.10)
NSI-RF-WR10	75 - 110							0.05 (1.27)	0.10 (2.54)

Note: Probe gain is approximately 5dB at the center of the applicable frequency range