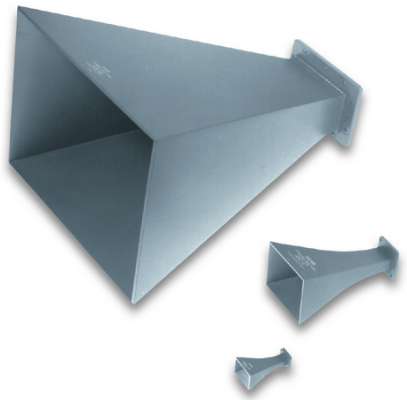
Standard Gain Horns 2.60 to 40 GHz



Features

- Primary Standard of Antenna Gain
- 7 Models Cover from 2.60 GHz to 40 GHz

Models

- 644, 643, 642, 640, 639, 638, V637

Model	644	643	642	640
Low Frequency (GHz)	2.6	3.95	5.4	8.2
High Frequency (GHz)	3.95	5.9	8.2	12.4
Band	S*	C*	XN*	X*
Waveguide Size	WR-284	WR-187	WR-137	WR-90
Input Cover Flange Equivalent	UG-584/U	UG-407/U	UG-441/U	UG-135/U
VSWR (max)	1.15	1.15	1.15	1.15
Weight (max) in lbs	6	2.30	1	0.50
Weight (max) in kg	2.80	1.10	0.50	0.23
Special Notes:	A , B	A , B	A , B	A , B

Special Notes:
A: *For a complete listing of all band letters and codes in use, refer to Band Designation Table.

Patterns for all models in this series conform to the following description: Beam width in E and H plane varies from 23° at the highest frequency to 34° at the lowest frequency. Side lobes in the H plane are all more than 20 dB down. First side lobes in the E plane are 13 dB down, second side lobes are 18 dB down and all other E plane lobes are more than 20 dB down.

Gain at Mid Frequency; 16.5 dB (with reference to isotropic radiation) variation is 1.5 dB over total band about the mid band value.

See Waveguide Flange Data on the following pages for flange detail.
B: See Standard Gain Horns Charts at the end of this section.

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Standard Gain Horns 2.60 to 40 GHz

Model	639	638	V637
Low Frequency (GHz)	12.4	18.0	26.5
High Frequency (GHz)	18.0	26.5	40.0
Band	KU*	K*	V*
Waveguide Size	WR-62	WR-42	WR-28
Input Cover Flange Equivalent	UG-419/U	UG-595/U	UG-599/U
VSWR (max)	1.15	1.15	1.15
Weight (max) in lbs	0.20	0.20	0.10
Weight (max) in kg	0.10	0.10	0.05
Special Notes:	A , B	A , B	A

Special Notes:
A: *For a complete listing of all band letters and codes in use, refer to Band Designation Table.

Patterns for all models in this series conform to the following description: Beam width in E and H plane varies from 23° at the highest frequency to 34° at the lowest frequency. Side lobes in the H plane are all more than 20 dB down. First side lobes in the E plane are 13 dB down, second side lobes are 18 dB down and all other E plane lobes are more than 20 dB down.

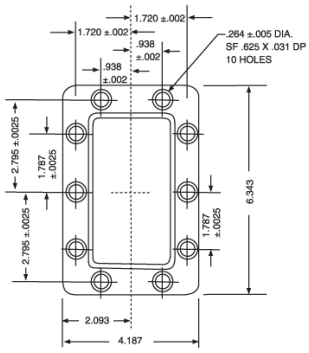
Gain at Mid Frequency; 16.5 dB (with reference to isotropic radiation) variation is 1.5 dB over total band about the mid band value.

See Waveguide Flange Data on the following pages for flange detail.
B: See Standard Gain Horns Charts at the end of this section.

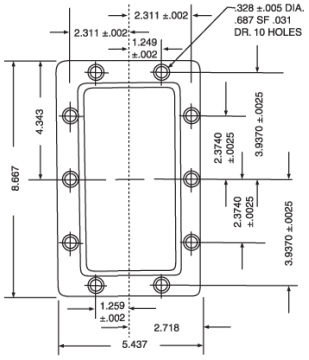
Band (GHz)	Waveguide Size	Band Letters And Codes In Use
1.12-1.7	WR-650	D, L
1.7-2.6	WR-430	D, LS, M, R
2.6-3.95	WR-284	S
3.95-5.85	WR-187	C, G, H
5.4-8.2	WR-137	A, C, G, J, XB, XN
7.05-10	WR-112	B, H, W, XB, XL
8.2-12.4	WR-90	X, XS
12.4-18	WR-62	G, Ku, P, U, Y
18-26.5	WR-42	K
26.5-40	WR-28	A, ,Ka, R, T, U, Y

Band Designation Table

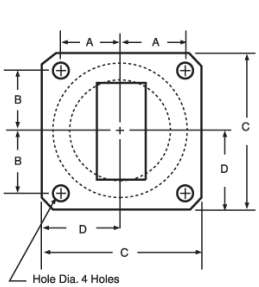
Standard Gain Horns 2.60 to 40 GHz



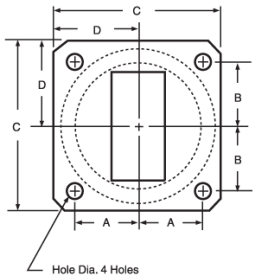
LS BAND



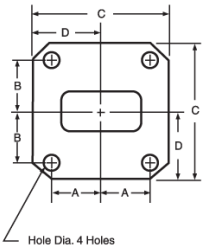
L BAND



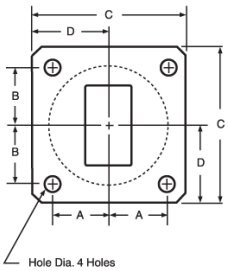
X BAND



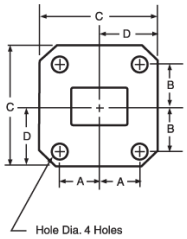
XB BAND



K BAND

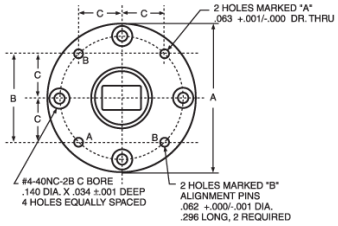


KU BAND



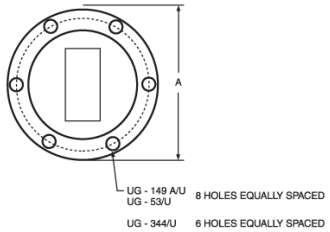
V BAND

BAND*	TYPE	A	B	C	D	HOLE DIA.
X	UG-39/U	.640	.610	1.625	.813	.169
XB	UG-51/U	.737	.676	1.875	.938	.169
K	UG-595/U	.320	.335	.875	.438	.116
KU	UG-419/U	.478	.497	.313	.656	.144
V	UG-599/U	.250	.265	.750	.375	.116



K, V, Q, M, E BAND

BAND*	TYPE	A	B	C
K	UG-425/U	1.125	.937	.331
V	UG-381/U	1.125	.937	.331
Q	UF-383/U	1.125	.937	.331
M	UF-385/U	.75	.562	.199
E	UG-387/U	.75	.562	.199



XN, C, S BAND

BAND*	TYPE	A	HOLE DIA.
S	UG-53/U	5.313	.257
C	UG-149A/U	3.625	.199

Waveguide Flange Data.
For a complete listing of all band letters and codes in use, refer to the Band Designation Table.

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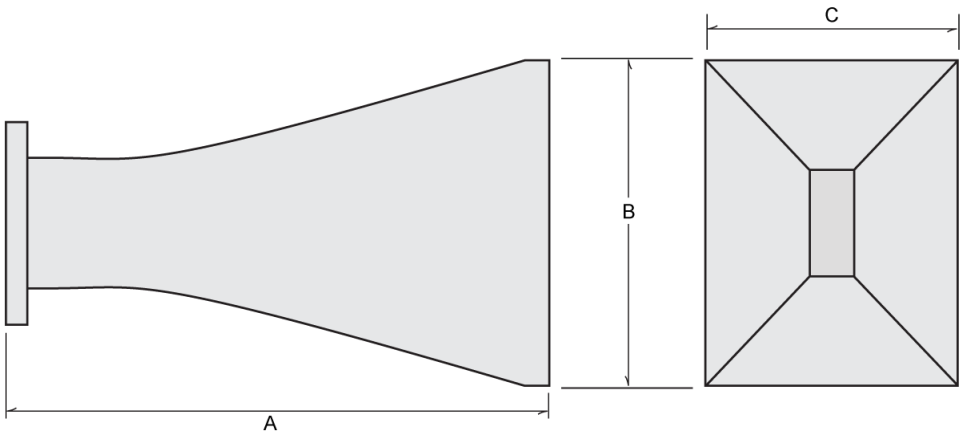


Outline Drawings For Models : 644, 643, 642, 640, 639, 638, V637

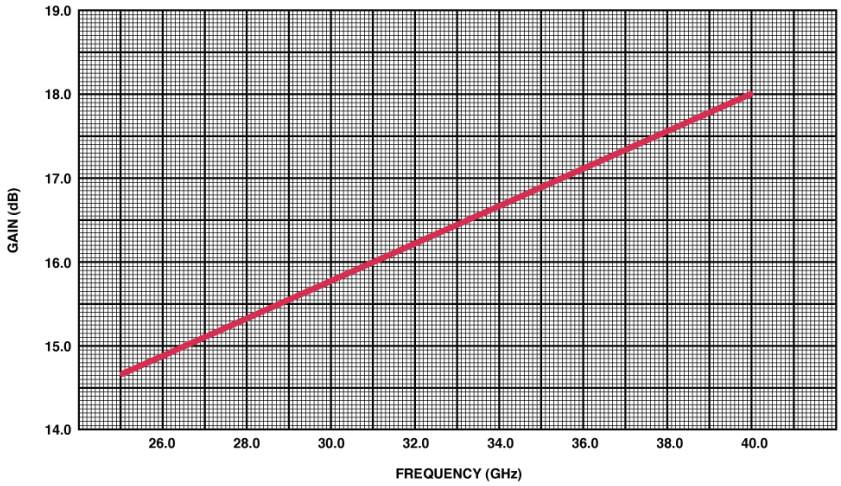
Units	A	B	C
644			
in.	15.82	9.52	7.16
mm	401.83	241.81	181.86
643			
in.	10.47	6.34	4.80
mm	265.94	161.04	121.92
642			
in.	7.76	4.67	3.53
mm	197.10	118.62	89.66
640			
in.	5.06	3.09	2.34
mm	128.52	78.49	59.44
639			
in.	3.48	2.20	1.73
mm	88.39	55.88	43.94
638			
in.	2.57	1.51	1.16
mm	65.28	38.35	29.46
V637			
in.	1.76	1.06	.82
mm	44.70	26.92	20.83

Notes:

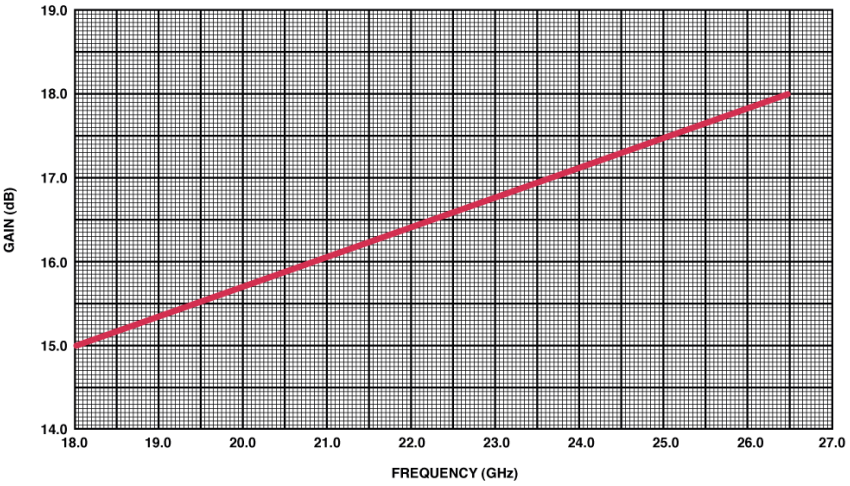
Dimensions are maximum and for reference only. Contact the factory for detailed specifications and outline drawing.

Standard Gain Horns 2.60 to 40 GHz

ABSOLUTE GAIN CALIBRATION
NARDA MODEL V637 STANDARD GAIN HORN



ABSOLUTE GAIN CALIBRATION
NARDA MODEL 638 STANDARD GAIN HORN



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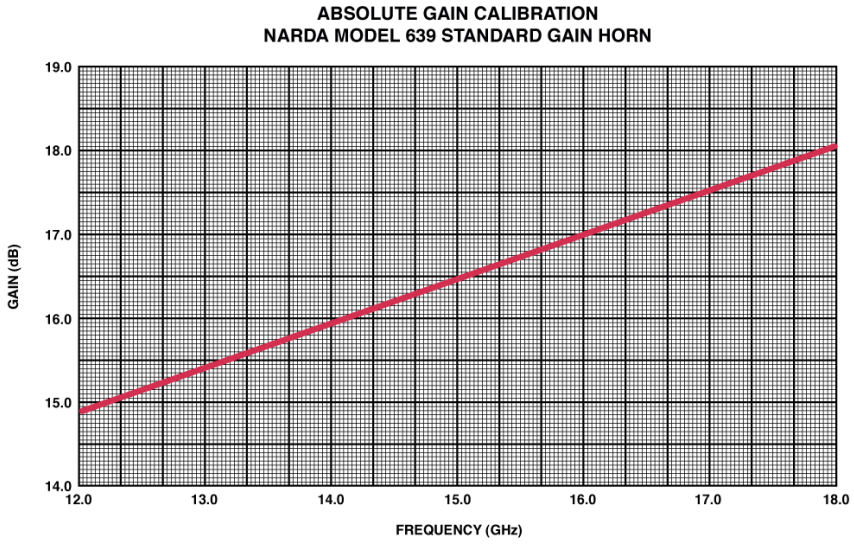

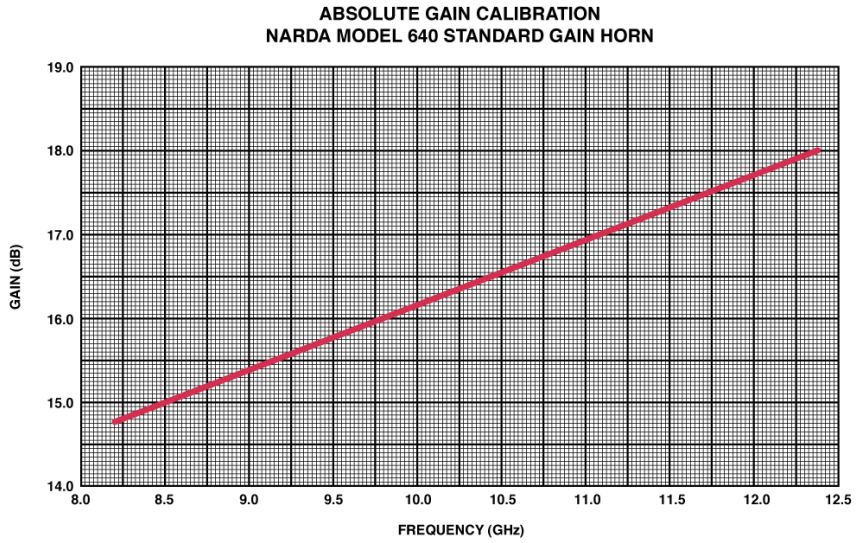

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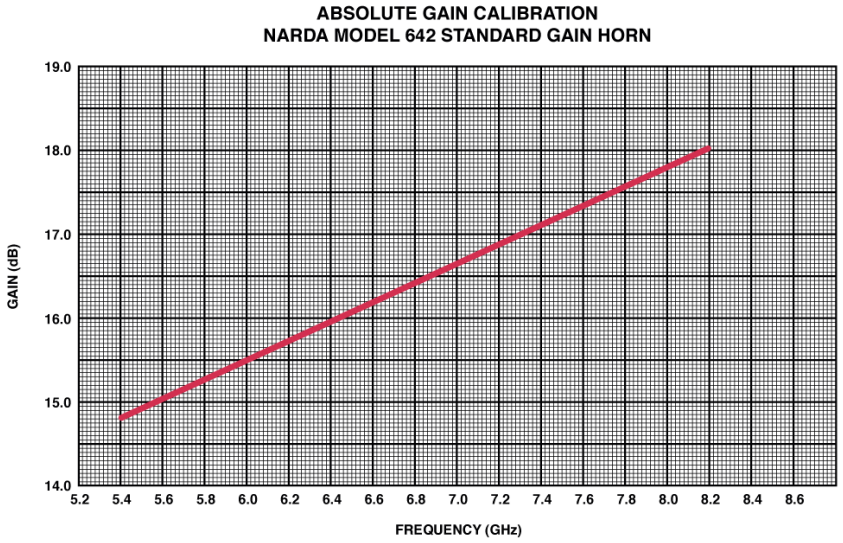

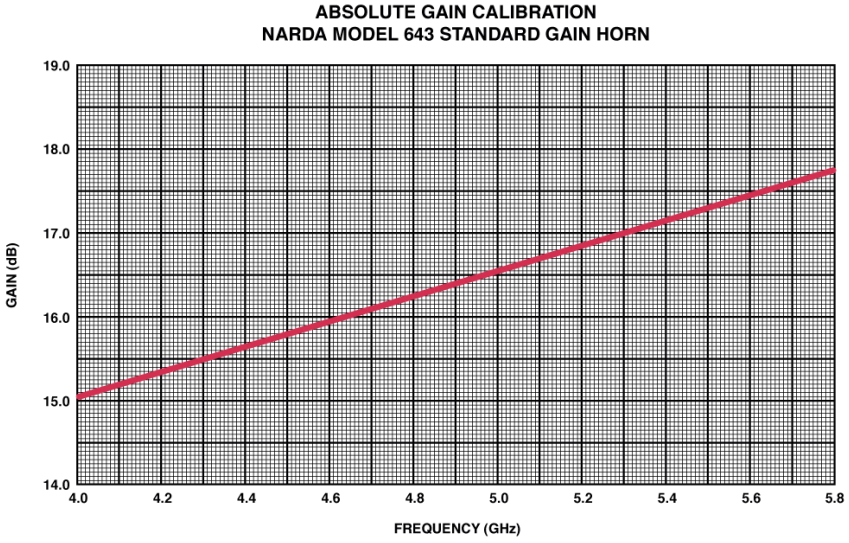

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