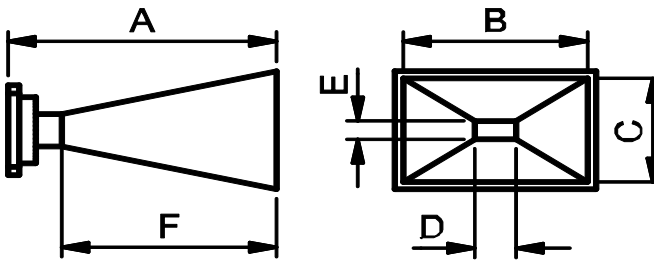
STANDARD GAIN HORN

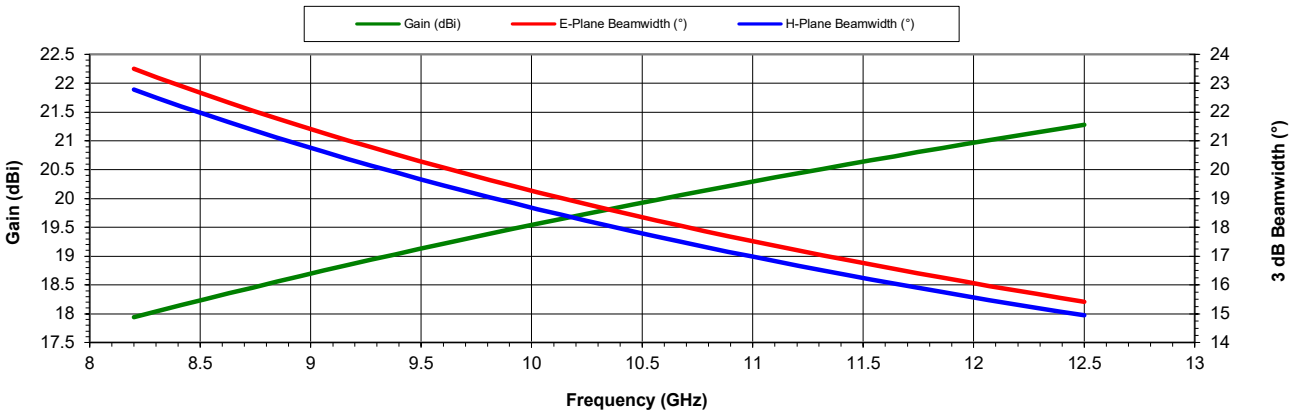
Model 16240-20

Waveguide Size:	WG16 (WR90, R100)
Nominal Gain:	20 dBi
Operating Frequencies:	8.2 - 12.5 GHz
Overall Length (A):	246.6 mm (9.709 inch)
Aperture Width (B):	109.25 mm (4.301 inch)
Aperture Height (C):	79.00 mm (3.110 inch)
Waveguide Width (D):	22.860 mm (0.900 inch)
Waveguide Height (E):	10.160 mm (0.400 inch)
Flare Length (F):	232.50 mm (9.154 inch)



Typical Performance Data

Frequency (GHz)	Gain (dBi)	Beamwidth E-Plane	Beamwidth H-Plane	Frequency (GHz)	Gain (dBi)	Beamwidth E-Plane	Beamwidth H-Plane	Frequency (GHz)	Gain (dBi)	Beamwidth E-Plane	Beamwidth H-Plane
8.2	17.94	23.5°	22.8°	9.75	19.34	19.8°	19.2°	11.325	20.52	17.0°	16.5°
8.25	17.99	23.4°	22.6°	9.825	19.40	19.6°	19.0°	11.4	20.57	16.9°	16.4°
8.325	18.06	23.1°	22.4°	9.9	19.46	19.5°	18.9°	11.475	20.62	16.8°	16.3°
8.4	18.14	22.9°	22.2°	9.975	19.52	19.3°	18.7°	11.55	20.67	16.7°	16.2°
8.475	18.21	22.7°	22.0°	10.05	19.58	19.2°	18.6°	11.625	20.72	16.6°	16.1°
8.55	18.28	22.5°	21.8°	10.125	19.64	19.0°	18.5°	11.7	20.77	16.5°	16.0°
8.625	18.35	22.3°	21.7°	10.2	19.70	18.9°	18.3°	11.775	20.82	16.4°	15.9°
8.7	18.42	22.2°	21.5°	10.275	19.76	18.8°	18.2°	11.85	20.87	16.3°	15.8°
8.775	18.49	22.0°	21.3°	10.35	19.82	18.6°	18.0°	11.925	20.92	16.2°	15.7°
8.85	18.56	21.8°	21.1°	10.425	19.87	18.5°	17.9°	12	20.97	16.1°	15.6°
8.925	18.63	21.6°	20.9°	10.5	19.93	18.4°	17.8°	12.075	21.01	16.0°	15.5°
9	18.70	21.4°	20.8°	10.575	19.99	18.2°	17.7°	12.15	21.06	15.9°	15.4°
9.075	18.76	21.2°	20.6°	10.65	20.04	18.1°	17.5°	12.225	21.11	15.8°	15.3°
9.15	18.83	21.1°	20.4°	10.725	20.10	18.0°	17.4°	12.3	21.16	15.7°	15.2°
9.225	18.90	20.9°	20.3°	10.8	20.15	17.8°	17.3°	12.375	21.20	15.6°	15.1°
9.3	18.96	20.7°	20.1°	10.875	20.21	17.7°	17.2°	12.45	21.25	15.5°	15.0°
9.375	19.03	20.6°	19.9°	10.95	20.26	17.6°	17.1°	12.5	21.28	15.4°	14.9°
9.45	19.09	20.4°	19.8°	11.025	20.31	17.5°	16.9°				
9.525	19.15	20.2°	19.6°	11.1	20.37	17.4°	16.8°				
9.6	19.22	20.1°	19.5°	11.175	20.42	17.2°	16.7°				
9.675	19.28	19.9°	19.3°	11.25	20.47	17.1°	16.6°				



Notes:
Gain calculations based on NRL Report 4433 - accuracy to approx ± 0.3dBi. Antenna Gain is only valid within the 'far-field' of the antenna. For more details, please see Ch 16, 'Antenna Theory, Analysis & Design' Balanis, Wiley or Ch 18 'Antenna', Kraus, McGraw-Hill.
Half-power (3dB) beamwidth estimates calculated using 50.8 λ / C (E-Plane) and 68.1 λ / B (H-Plane). This is a 'large aperture' approximation that breaks down at gain values smaller than around 12 dBi. For 10dBi Standard Gain Horns, beamwidths are approximately 63º at the lowest frequency and 48º at the highest frequency.

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