



WR-159 Standard Gain Horn Antenna Operates  
From 4.9 GHz to 7.05 GHz With a Nominal 20 dB  
Gain SMA Female Input Connector

TECHNICAL DATA SHEET

PE9860/SF-20

**WR-159 Standard Gain Horn Antenna Operates From 4.9 GHz to 7.05 GHz With a Nominal 20 dB Gain SMA Female Input Connector**

**Configuration**

Design	WR-159 Standard Gain Horn
Frequency Range, GHz	4.9 to 7.05
Polarization	Linear
Interface 1	SMA Female

**Electrical Specifications**

Impedance, Ohms	50
Nominal Gain, dB	20
Maximum Input VSWR	1.25:1

**Mechanical Specifications**

**Size**

Length, in [mm]	13.38 [339.85]
Width, in [mm]	10 [254]
Height, in [mm]	7.8 [198.12]

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

**Plotted and Other Data**

2 Dimensional OML Drawing	PE9860/SF
Notes:	Values at 25 °C, sea level

WR-159 Standard Gain Horn Antenna Operates From 4.9 GHz to 7.05 GHz With a Nominal 20 dB Gain SMA Female Input Connector from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and fiber optic products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-159 Standard Gain Horn Antenna Operates From 4.9 GHz to 7.05 GHz With a Nominal 20 dB Gain SMA Female Input Connector PE9860/SF-20](http://www.pasternack.com/standard-gain-horn-waveguide-size-wr159-20-db-gain-sma-female-pe9860sf-20-p.aspx)

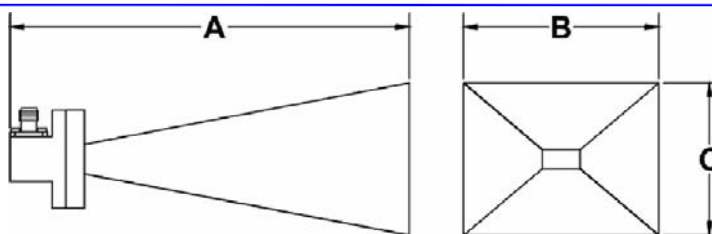
URL: <http://www.pasternack.com/standard-gain-horn-waveguide-size-wr159-20-db-gain-sma-female-pe9860sf-20-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal.



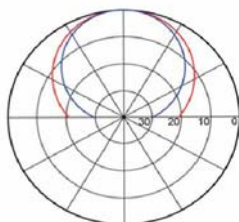
# PE9860/SF-20 CAD Drawing

WR-159 Standard Gain Horn Antenna Operates From 4.9 GHz to 7.05 GHz  
With a Nominal 20 dB Gain SMA Female Input Connector

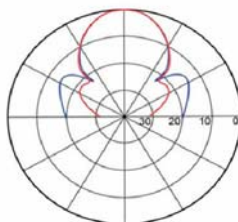


## Specifications <sup>(1)</sup> & Ordering Information

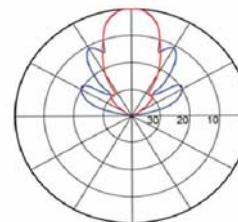
SMA/2.92mm CONNECTOR MODEL NO.	Description	WAVEGUIDE SIZE	FREQUENCY RANGE (DC TO GHz)	GAIN	3 dB Width		Dimensions		
					E-Plane	H-Plane	A	B	C
PE9850/2F-10 PE9850/2F-15 PE9850/2F-20	WR28 Standard Gain Horn with 2.92mm Female Connector 10, 15 & 20 dB Gain	WR28	26.50-40.00	10 dB	54.2°	54.4°	1.56	0.50	0.40
				15 dB	32.1°	31.3°	2.44	0.84	0.62
				20 dB	16.7°	18.3°	3.69	1.45	1.10
PE9851/2F-10 PE9851/2F-15 PE9851/2F-20	WR34 Standard Gain Horn with 2.92mm Female Connector 10, 15 & 20 dB Gain	WR34	22.00-33.00	10 dB	54.1°	53.2°	1.68	0.65	0.50
				15 dB	23.1°	40.8°	2.67	1.07	0.82
				20 dB	17.0°	17.4°	4.13	1.86	1.40
PE9852/2F-10 PE9852/2F-15 PE9852/2F-20	WR42 Standard Gain Horn with 2.92mm Female Connector 10, 15 & 20 dB Gain	WR42	18.00-26.50	10 dB	58.0°	57.0°	1.94	0.69	0.52
				15 dB	31.3°	31.5°	3.06	1.22	0.92
				20 dB	17.5°	17.8°	4.72	2.26	1.77
PE9853/SF-10 PE9853/SF-15 PE9853/SF-20	WR51 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR51	15.00-22.00	10 dB	55.1°	54.2°	2.07	0.89	0.70
				15 dB	32.0°	31.8°	8.30	1.60	1.16
				20 dB	16.9°	18.0°	5.65	2.60	2.04
PE9854/SF-10 PE9854/SF-15 PE9854/SF-20	WR62 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR62	12.40-18.00	10 dB	55.3°	50.9°	2.00	1.15	0.82
				15 dB	30.1°	31.2°	3.48	1.88	1.47
				20 dB	18.8°	18.9°	6.80	3.00	2.24
PE9855/SF-10 PE9855/SF-15 PE9855/SF-20	WR75 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR75	10.00-15.00	10 dB	50.2°	49.2°	2.88	1.39	1.04
				15 dB	35.4°	28.5°	5.70	2.36	1.45
				20 dB	16.3°	17.2°	8.85	4.00	3.10
PE9856/SF-10 PE9856/SF-15 PE9856/SF-20	WR90 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR90	8.20-12.40	10 dB	48.5°	47.4°	2.82	1.70	1.27
				15 dB	29.3°	29.0°	6.45	2.80	2.05
				20 dB	16.1°	16.5°	11.06	5.00	3.70
PE9857/SF-10 PE9857/SF-15 PE9857/SF-20	WR102 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR102	7.00-11.00	10 dB	55.5°	54.1°	4.13	1.69	1.27
				15 dB	29.6°	29.3°	7.28	2.40	3.15
				20 dB	17.0°	16.7°	12.28	5.68	4.04
PE9858/SF-10 PE9858/SF-15 PE9858/SF-20	WR112 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR112	7.05-10.00	10 dB	56.8°	55.2°	4.02	1.75	1.30
				15 dB	32.4°	32.0°	7.79	3.05	2.25
				20 dB	19.3°	19.3°	12.27	5.10	3.77
PE9859/SF-10 PE9859/SF-15 PE9859/SF-20	WR137 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR137	5.85-8.20	10 dB	55.1°	54.2°	4.41	2.15	1.60
				15 dB	33.7°	33.2°	7.80	3.53	2.60
				20 dB	18.7°	18.8°	13.45	6.45	4.65
PE9860/SF-10 PE9860/SF-15 PE9860/SF-20	WR159 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR159	4.90-7.05	10 dB	59.8°	48.3°	6.04	2.80	1.70
				15 dB	31.3°	30.8°	9.66	4.43	3.27
				20 dB	14.3°	16.9°	13.38	10.00	7.80
PE9861/SF-10 PE9861/SF-15 PE9861/SF-20	WR187 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR187	3.95-5.85	10 dB	55.0°	54.1°	17.51	3.29	2.19
				15 dB	33.8°	33.3°	11.28	4.98	3.67
				20 dB	18.9°	19.2°	16.88	9.08	6.70
PE9862/SF-10 PE9862/SF-15 PE9862/SF-20	WR229 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR229	3.30-4.90	10 dB	58.6°	51.9°	17.98	3.71	2.73
				15 dB	32.7°	32.4°	7.05	6.63	6.00
				20 dB	17.1°	16.7°	25.63	12.40	8.75
PE9863/SF-10 PE9863/SF-15 PE9863/SF-20	WR284 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR284	2.60-3.95	10 dB	50.8°	54.1°	9.90	4.40	3.58
				15 dB	31.0°	30.6°	23.15	9.00	5.60
				20 dB	17.2°	16.5°	32.15	15.70	10.80
PE9864/SF-10 PE9864/SF-15 PE9864/SF-20	WR430 Standard Gain Horn with SMA Female Connector 10, 15 & 20 dB Gain	WR430	1.70-2.60	10 dB	64.8°	45.4°	14.00	8.15	4.14
				15 dB	33.1°	32.0°	26.6	11.85	8.50
				20 dB	17.3°	17.4°	44.00	22.25	16.20



— Typical Pattern, E-Plane  
— Typical Pattern, H-Plane  
10 dBi



— Typical Pattern, E-Plane  
— Typical Pattern, H-Plane  
15 dBi



— Typical Pattern, E-Plane  
— Typical Pattern, H-Plane  
20 dBi

(1) Pasternack reserves the right to change specifications or information without notice.

(2) All Specifications "typical"

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