



## WR-51 Standard Gain Horn Antenna Operates From 15 GHz to 22 GHz With a Nominal 10 dB Gain SMA Female Input Connector

### TECHNICAL DATA SHEET

PE9853/SF-10

#### WR-51 Standard Gain Horn Antenna Operates From 15 GHz to 22 GHz With a Nominal 10 dB Gain SMA Female Input Connector

##### Configuration

|                      |                          |
|----------------------|--------------------------|
| Design               | WR-51 Standard Gain Horn |
| Frequency Range, GHz | 15 to 22                 |
| Polarization         | Linear                   |
| Interface 1          | SMA Female               |

##### Electrical Specifications

|                    |        |
|--------------------|--------|
| Impedance, Ohms    | 50     |
| Nominal Gain, dB   | 10     |
| Maximum Input VSWR | 1.25:1 |

##### Mechanical Specifications

###### Size

|                 |               |
|-----------------|---------------|
| Length, in [mm] | 2.07 [52.58]  |
| Width, in [mm]  | 1.325 [33.66] |
| Height, in [mm] | 1.325 [33.66] |

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

##### Plotted and Other Data

|                           |                            |
|---------------------------|----------------------------|
| 2 Dimensional OML Drawing | PE9853/SF                  |
| Notes:                    | Values at 25 °C, sea level |

WR-51 Standard Gain Horn Antenna Operates From 15 GHz to 22 GHz With a Nominal 10 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-51 Standard Gain Horn Antenna Operates From 15 GHz to 22 GHz With a Nominal 10 dB Gain SMA Female Input Connector PE9853/SF-10](http://www.pasternack.com/standard-gain-horn-waveguide-size-wr51-10-db-gain-sma-female-pe9853sf-10-p.aspx)

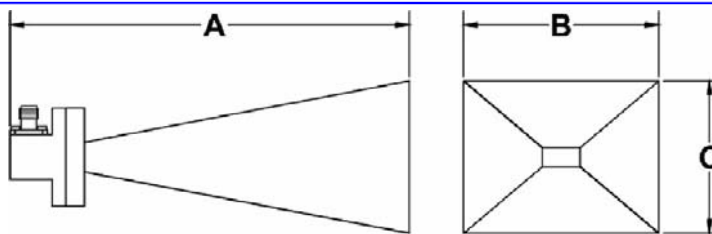
URL: <http://www.pasternack.com/standard-gain-horn-waveguide-size-wr51-10-db-gain-sma-female-pe9853sf-10-p.aspx>

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.



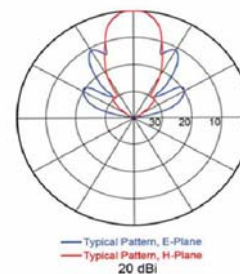
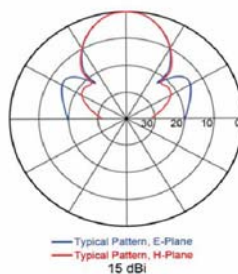
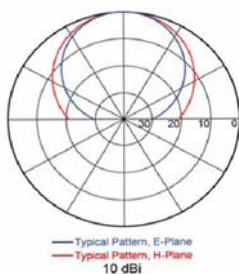
# PE9853/SF-10 CAD Drawing

WR-51 Standard Gain Horn Antenna Operates From 15 GHz to 22 GHz  
With a Nominal 10 dB Gain SMA Female Input Connector



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

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



- (1) Pasternack reserves the right to change specifications or information without notice.  
(2) All Specifications "typical"

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