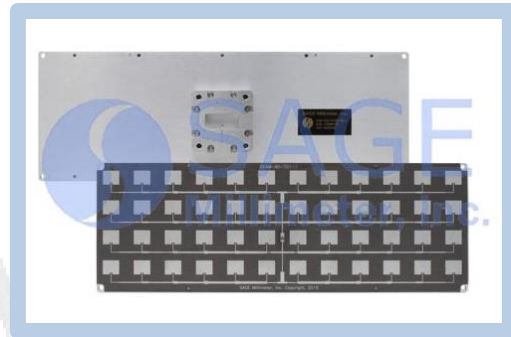




## X Band Microstrip Patch Array Antenna

### Description:

**Model SAM-1031131607-90-L1** is a linear polarized, 10.5 GHz microstrip patch array antenna. The antenna implements a series-fed power distribution to achieve low sidelobe levels. The gain of the antenna is 16 dBi and its beamwidth is 25° vertically and 7° horizontally, with a better than -20 dB sidelobe suppression level. The antenna is constructed with a high performing, low loss soft microwave substrate to achieve the best performance in the class. The RF interface is a standard WR-90 waveguide with a UG-39/U flange. The RF interface with SMA (F) connector is available under a separate model number.



### Features:

- Compact Size and Center Fed
- Low Side Lobes
- Low Cost in Volume

### Applications:

- Radar Systems
- Communication Systems
- Sensor Heads

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	10.35 GHz	10.50 GHz	10.65 GHz
Gain		16.0 dBi	
3 dB Beamwidth	25° (Vertical) x 7° (Horizontal)		
Sidelobe Level		-20 dB	
Polarization	Linear		
Return Loss		9 dB	
Specification Temperature		+25°C	
Operating Temperature	-45°C		+85°C

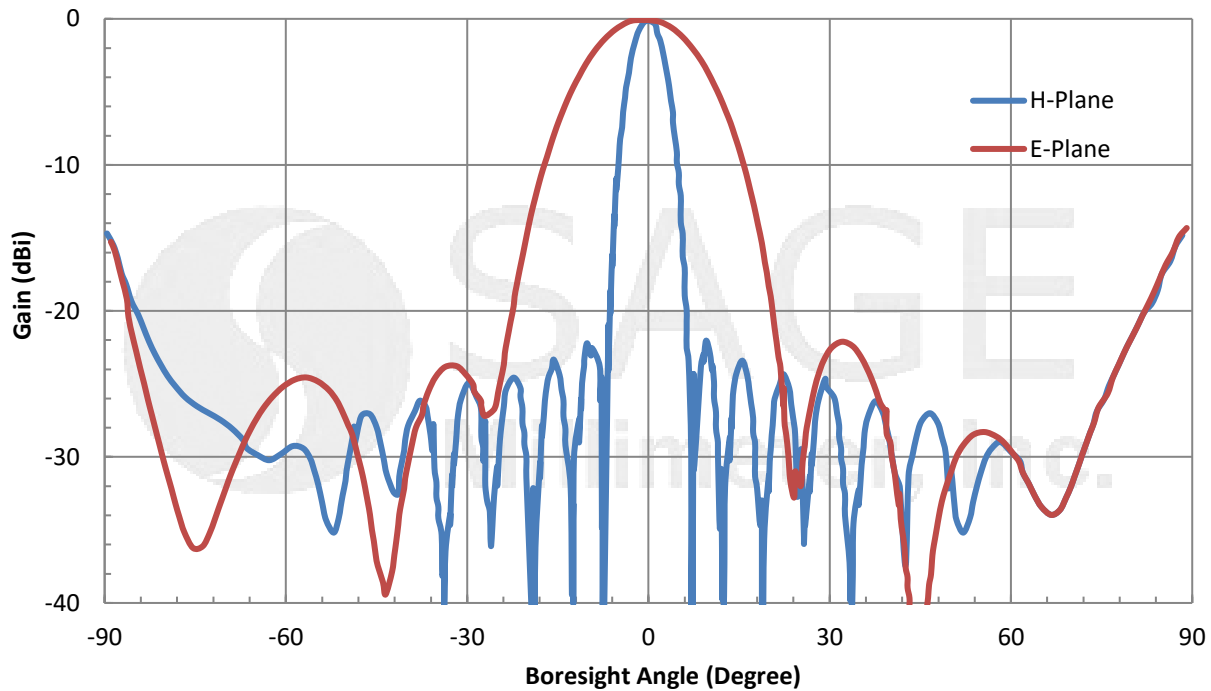
### Mechanical Specifications:

Parameter	Connector
Antenna Port	WR-90 Waveguide
Flange Type	UG-39/U Threaded Flange
Number of Elements	12 (H) x 4 (V)
Baseplate Material	Aluminum
Patch Finish	Immersion Tin
Size	10.00" (W) x 3.50" (H) x 0.64" (T)
Weight	9.4 Oz
Outline	AM-RX-0725

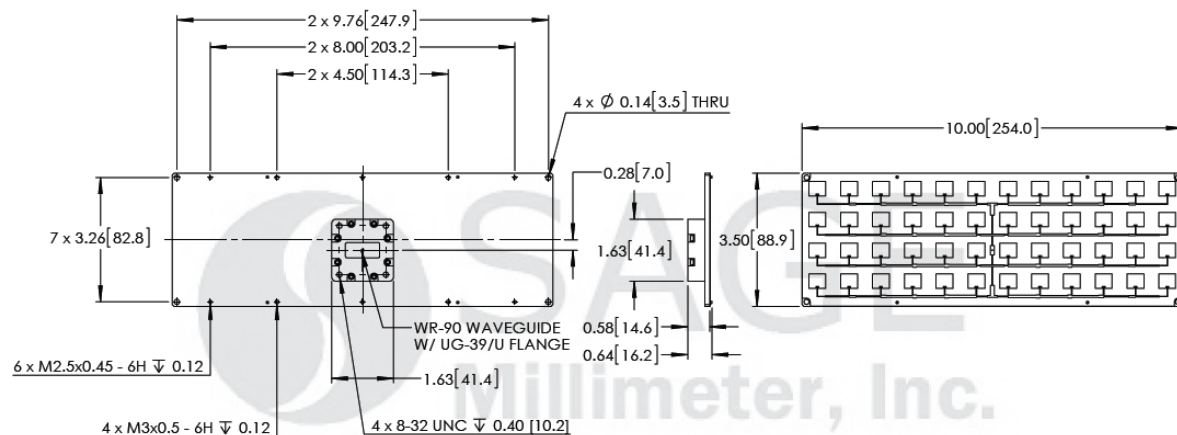


## X Band Microstrip Patch Array Antenna

### Simulated Antenna Pattern @ 10.5 GHz



### Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



#### Note:

- All data presented are simulated. Actual data may vary unit to unit.
- All testing was performed under +25°C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

#### Caution:

- Foreign objects in the waveguide will affect device performance and may damage the antenna.