



# Patch Antennas

## Overview

ReliaSat offers a range of Patch Antennas from L to Ka-band. This brochure contains performance graphs and specifications. If you have any questions or would like to request a quote please contact us via [sales@reliasat.com](mailto:sales@reliasat.com).

Available Patch Antenna Options					
Frequency Band	Frequency (GHz)	Antenna	Antenna Array	Wavelength (mm)	Substrate
L-band	1.575	Single	n/a	200	RO4003
S-band	3	Single	4x4	100	RO4003
X-band	9-11	Single	4x4	30	RO4003
Ku-band	13.5-16.5	n/a	4x4 / 8x8	20	RO4003
Ka-band	27-31	n/a	8x8	10	RO3003

**ReliaSat also build custom design Antenna.**

Please contact us with your specifications to receive a quote.

## Contact Information

ReliaSat European Offices  
[sales@reliasat.com](mailto:sales@reliasat.com)  
[www.reliasat.com](http://www.reliasat.com)

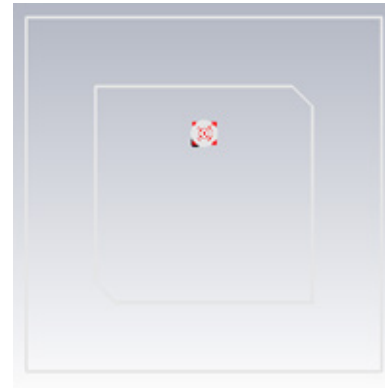
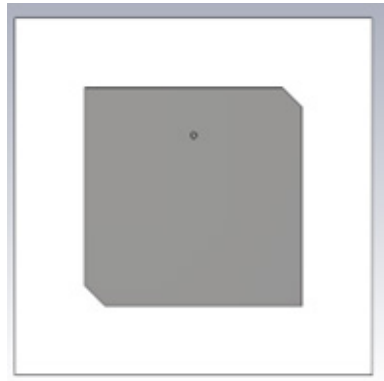
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# L-band Patch Antenna (Single)

## 1.575 GHz



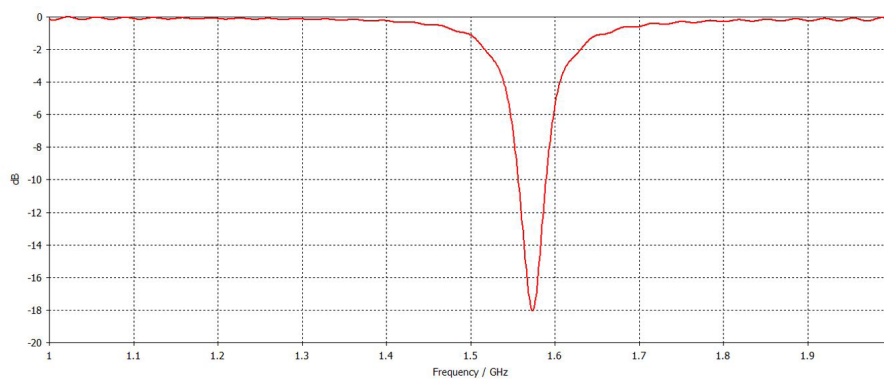
Product Datasheet



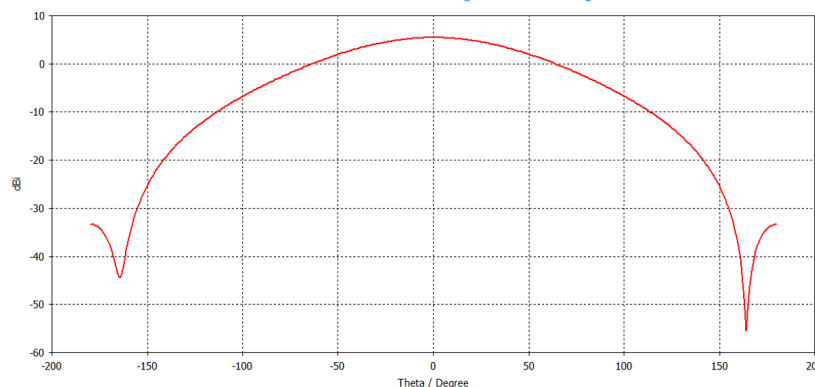
### Specification

Parameter	Value	Unit
Frequency	1.575	GHz
Return Loss	<-15 @1.575 GHz	dB
Gain	5.46	dBi
HPBW	92	Degree
Polarization	RHCP or LHCP	Preconfigurable
Axial Ratio	<1	dB
Dimension (Excluding Connector)	Min 80 x 80	mm

### Return Loss



### Radiation Pattern at 1.575 GHz (Phi=0)

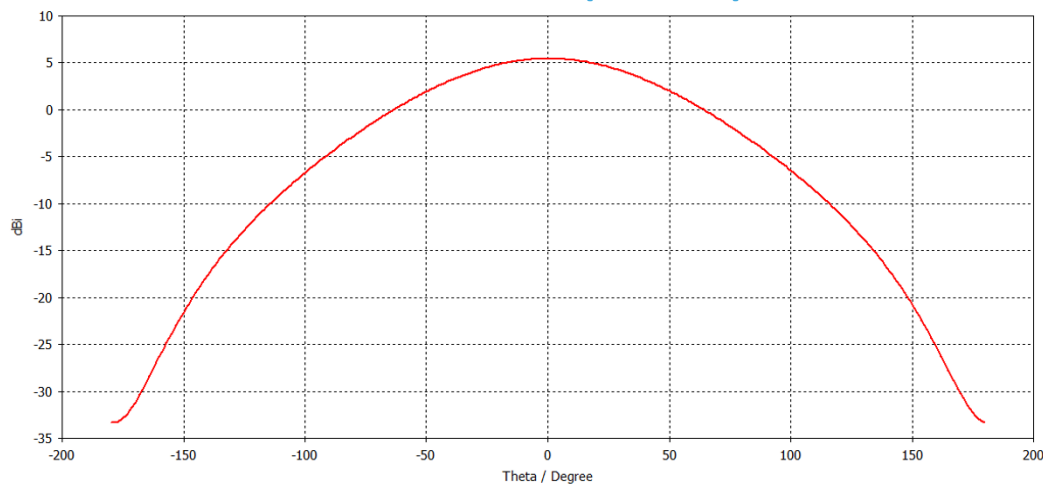


# L-band Patch Antenna (Single) 1.575 GHz

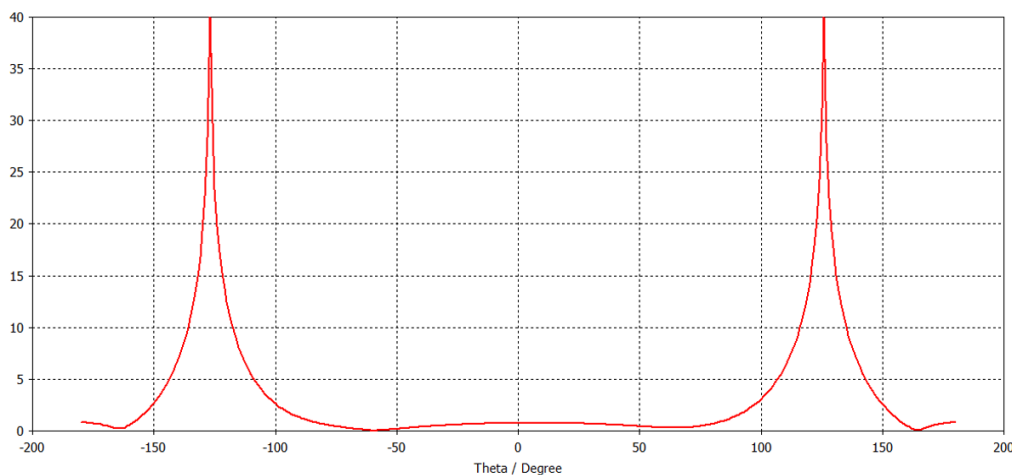


Product Datasheet

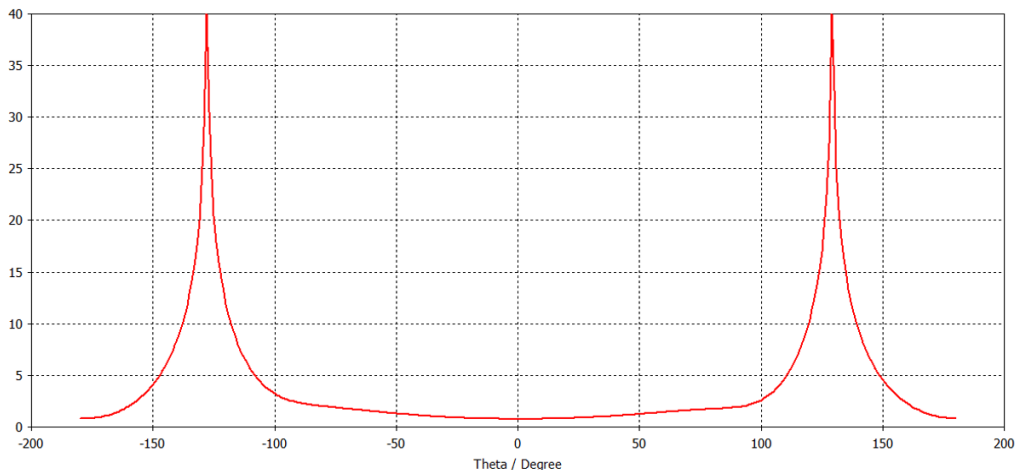
## Radiation Pattern at 1.575 GHz (Phi=90)



## Axial Ratio at 1.575 GHz (Phi=0)



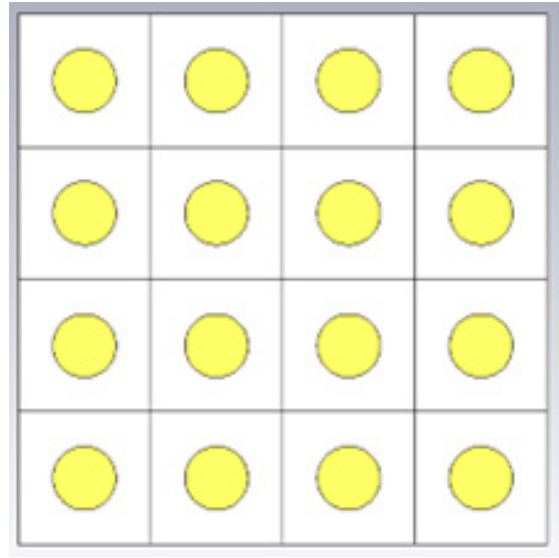
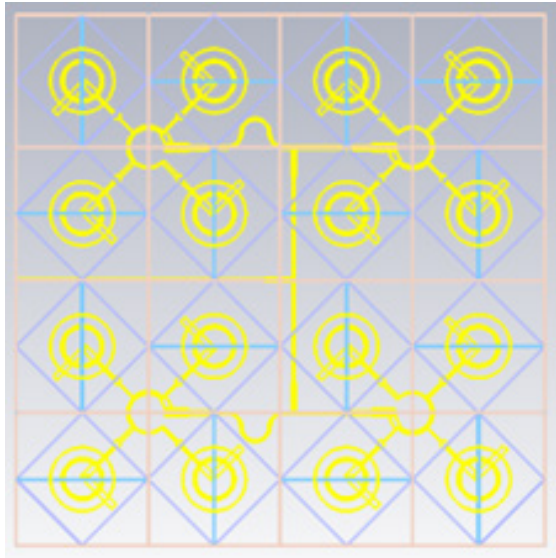
## Axial Ratio at 1.575 GHz (Phi=90)



# S-band Patch Antenna (4x4) 3 GHz



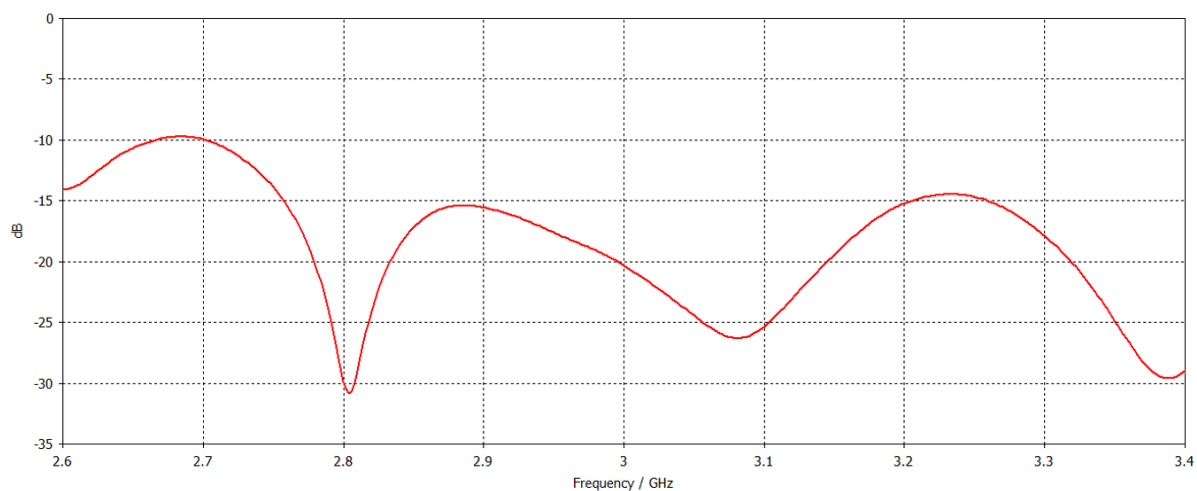
Product Datasheet



## Specification

Parameter	Value	Unit
Frequency	2.6-3.6	GHz
Return Loss	<-10	dB
Gain	>18 @ 3 GHz	dB
HPBW	18 @ 3 GHz	Degree
Polarization	RHCP or LHCP	Preconfigurable
Axial Ratio	<3	dB
Dimension (Excluding Connector)	Min 283 x 283	mm

## Return Loss

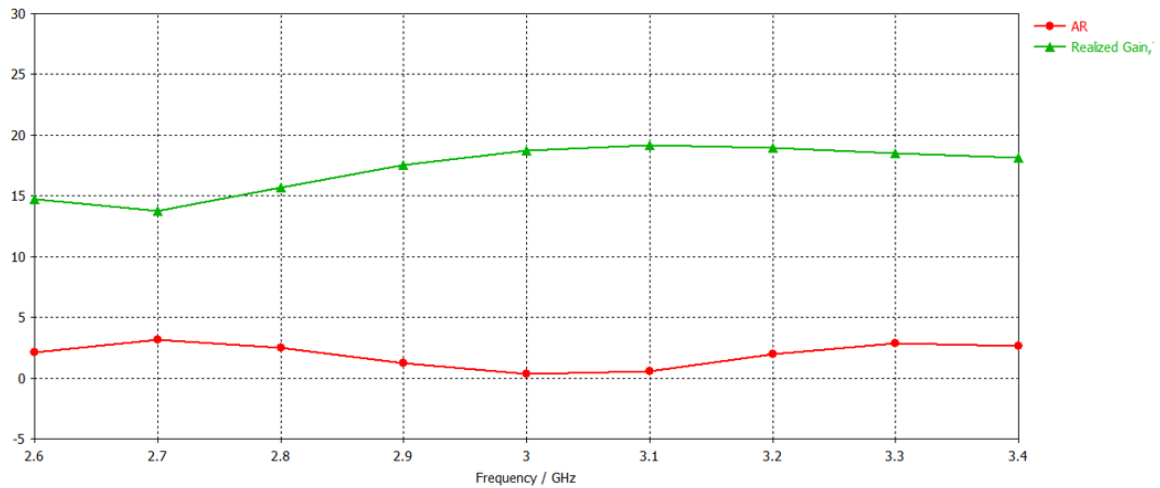


# S-band Patch Antenna (4x4) 3 GHz

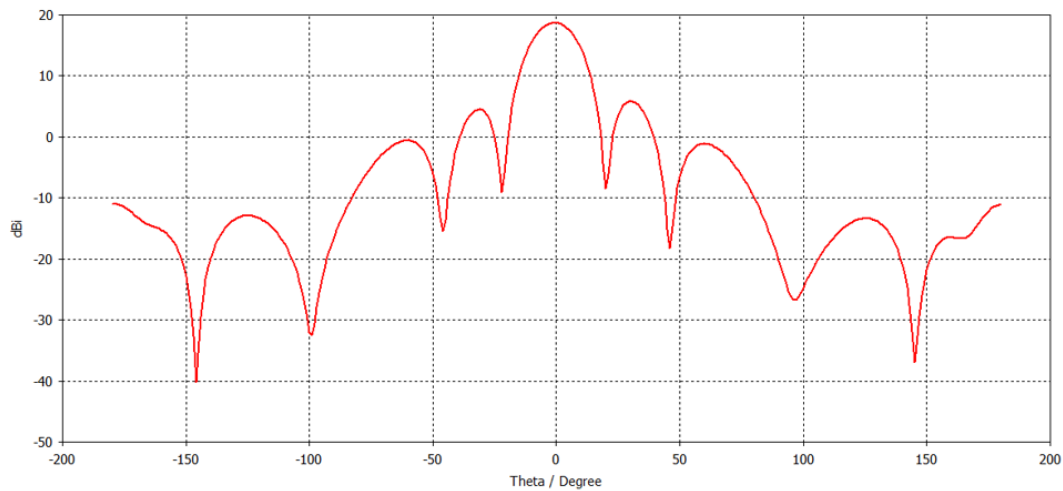


Product Datasheet

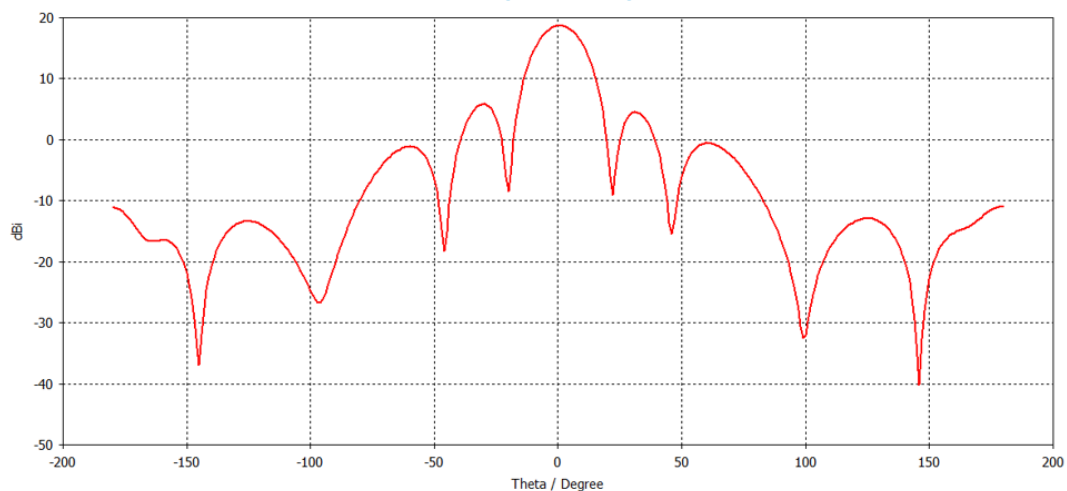
## Realised Gain & Axial Ratio (AR)



## Radiation Pattern at 3 GHz (Phi=0)



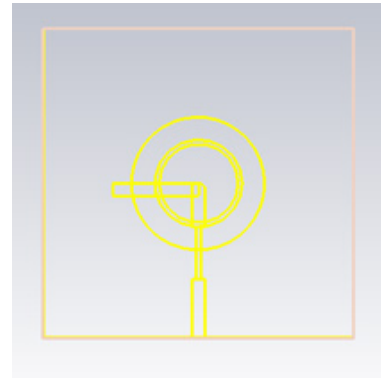
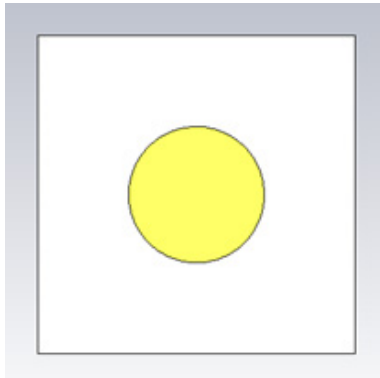
## Radiation Pattern at 3 GHz (Phi=0)



# S-band Patch Antenna (Single) 3 GHz



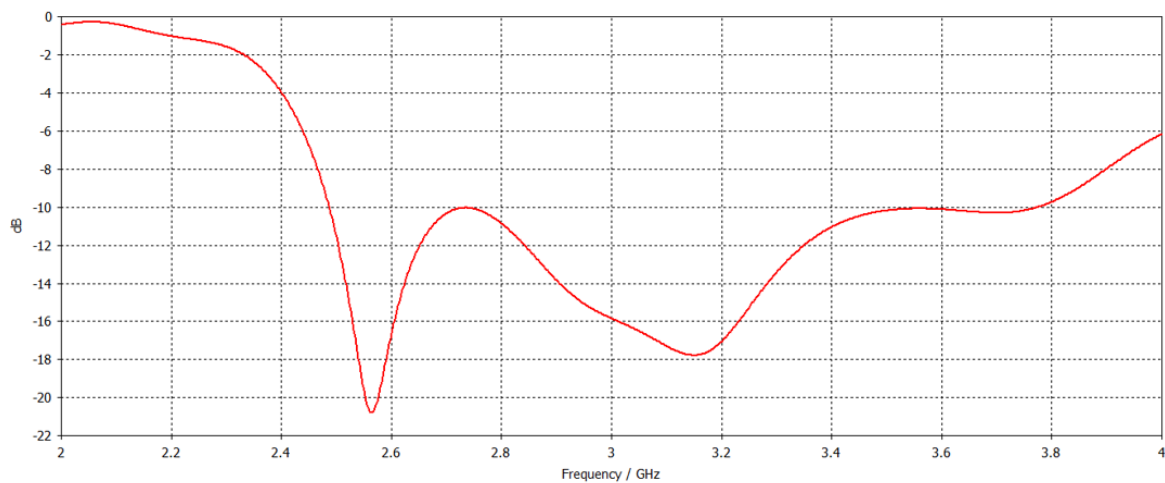
Product Datasheet



## Specification

Parameter	Value	Unit
Frequency	3	GHz
Return Loss	<-10	dB
Gain	>8	dB
HPBW	66	Degree
Polarization	RHCP or LHCP	Preconfigurable
Axial ratio	<1	dB
Dimension (Excluding Connector)	Min 80 x 80	mm

## Return Loss

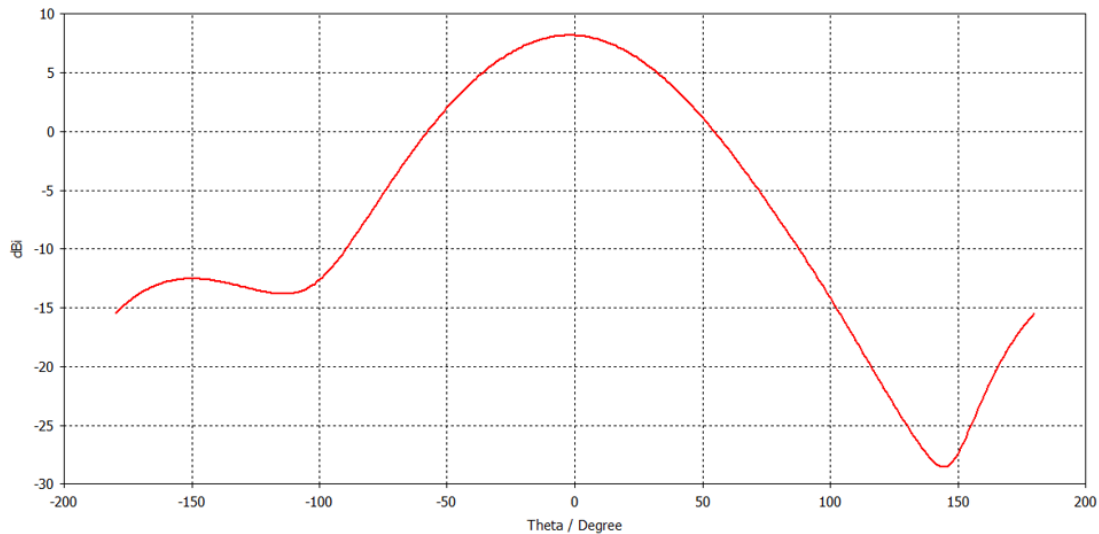


# S-band Patch Antenna (Single) 3 GHz

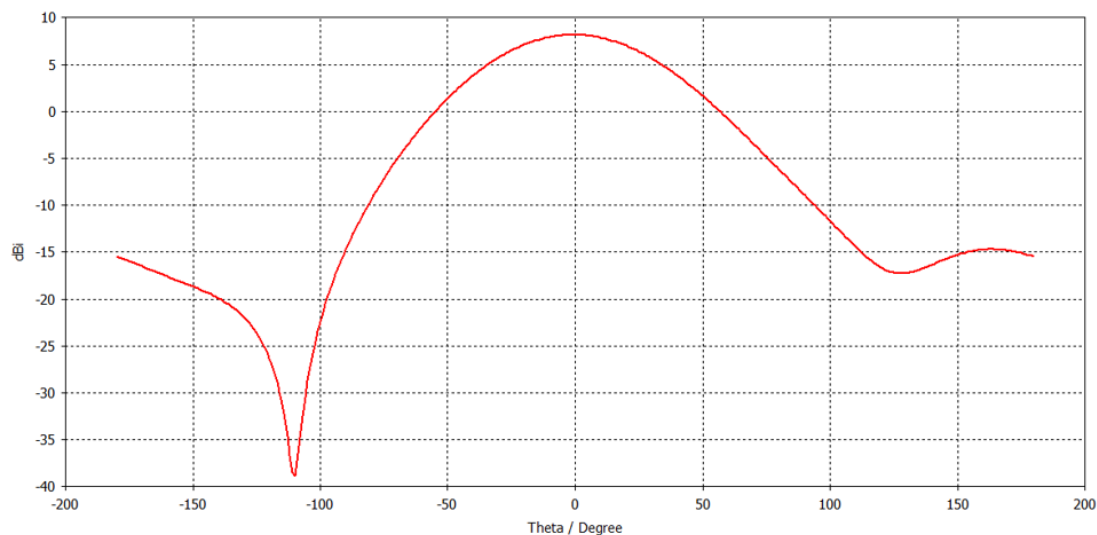


Product Datasheet

## Radiation Pattern at 3 GHz (Phi=0)



## Radiation Pattern at 3 GHz (Phi=90)

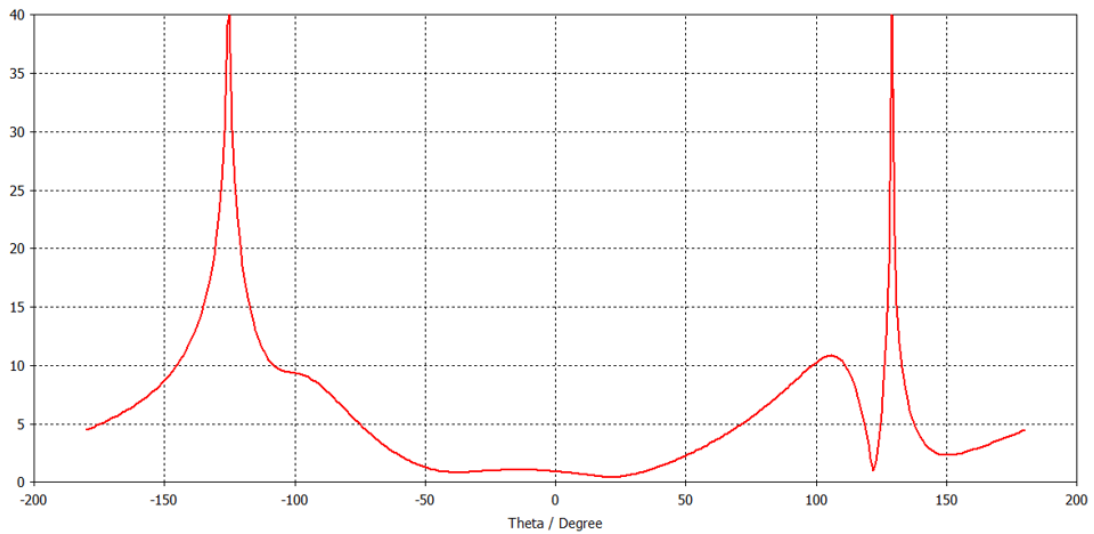


# S-band Patch Antenna (Single) 3 GHz

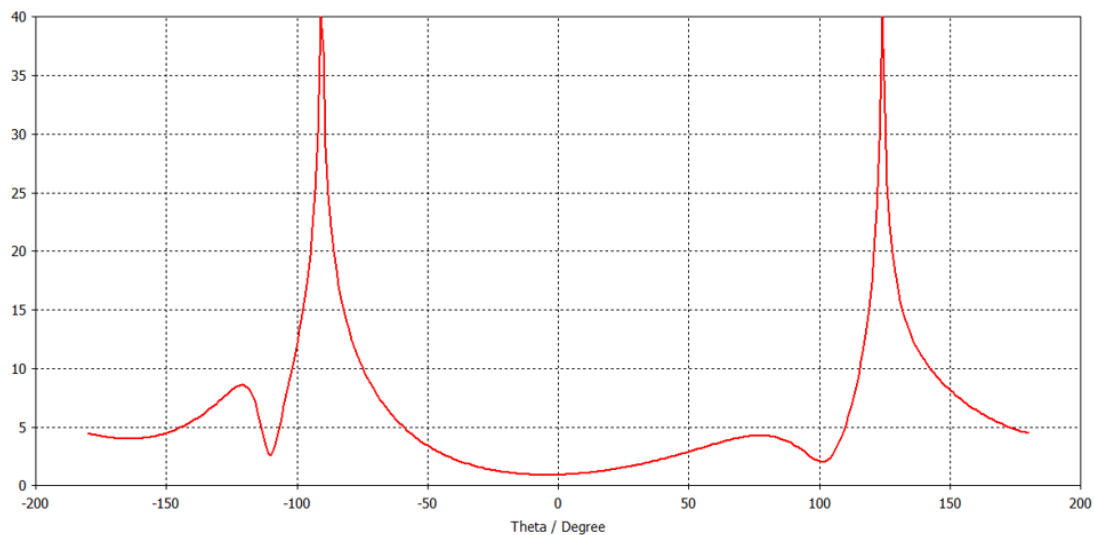


Product Datasheet

## Axial Ratio at 3 GHz (Phi=0)



## Axial Ratio at 3 GHz (Phi=90)

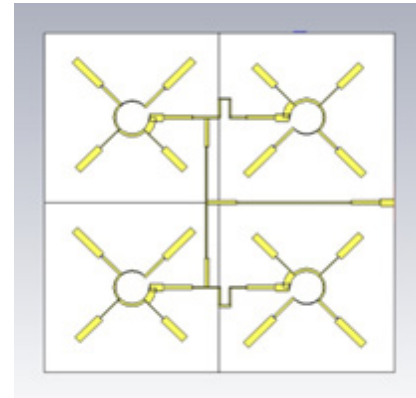
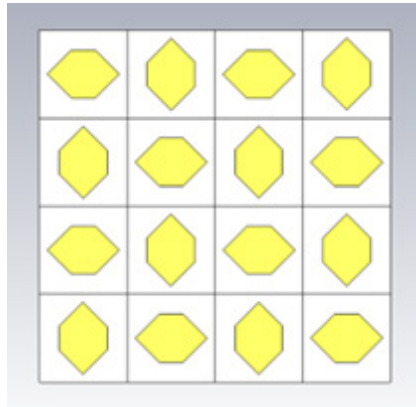




# X-band Patch Antenna (4x4) 9-11 GHz



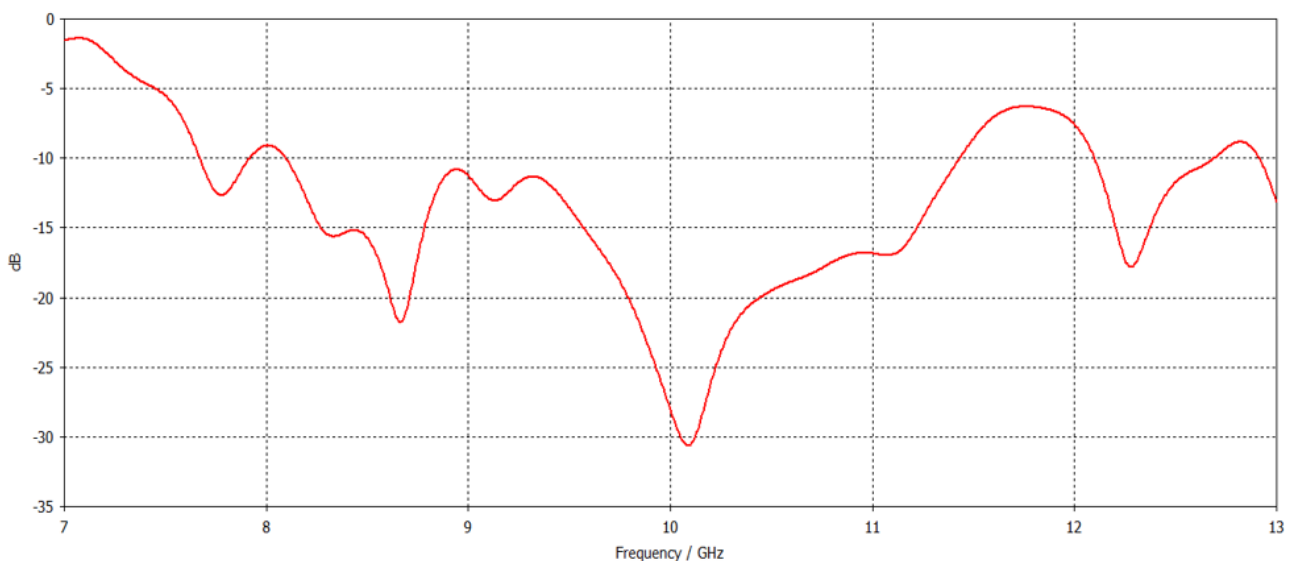
Product Datasheet



## Specification

Parameter	Value	Unit
Frequency	9-11	GHz
Return Loss	<-10	dB
Gain	>14	dB
HPBW	23-24	Degree
Polarization	RHCP or LHCP	Preconfigurable
Axial Ratio	<3	dB
Dimensions (Excluding Connector)	55 x 55	mm

## Return Loss

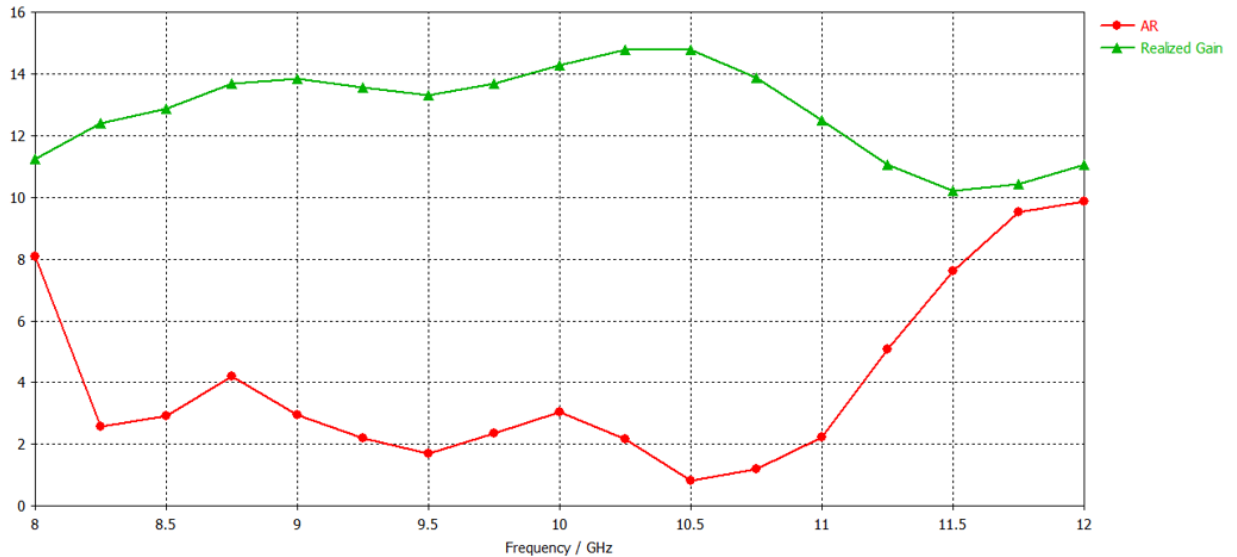


# X-band Patch Antenna (4x4) 9-11 GHz

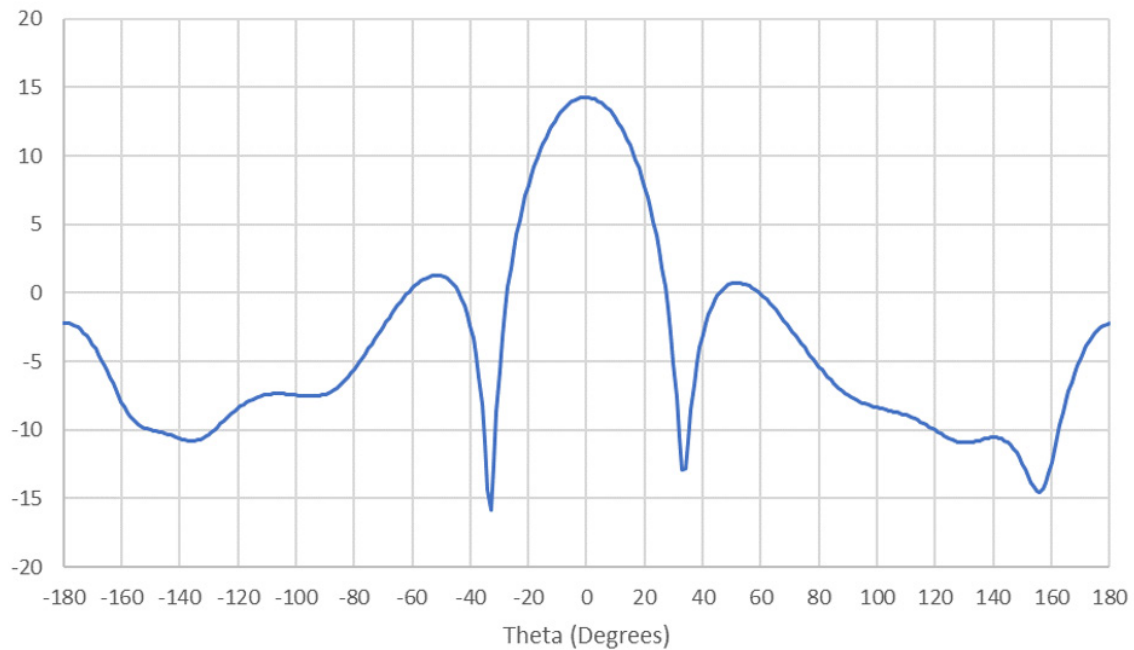


Product Datasheet

## Realised Gain & Axial Ratio (AR)



## Radiation Pattern at 10 GHz (Phi=0)

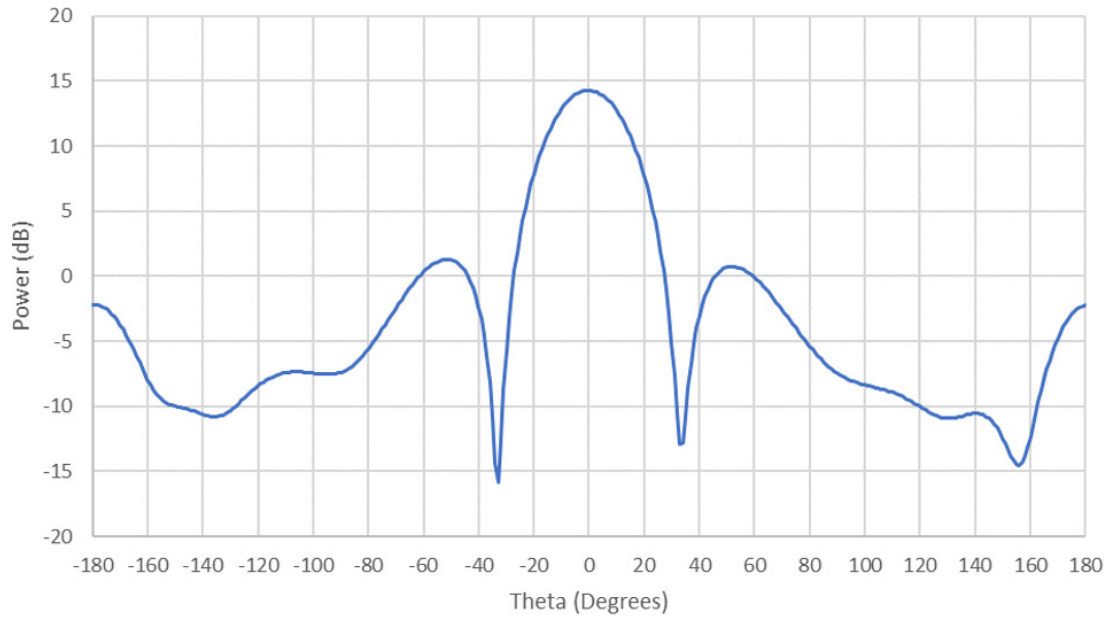


# X-band Patch Antenna (4x4) 9-11 GHz



Product Datasheet

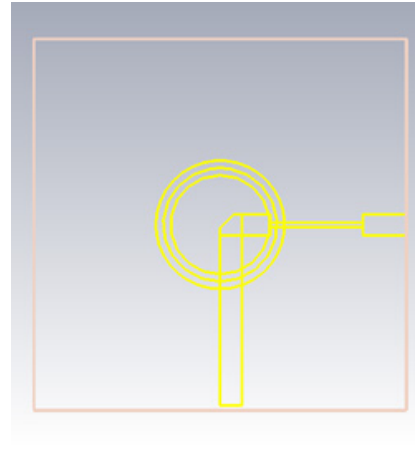
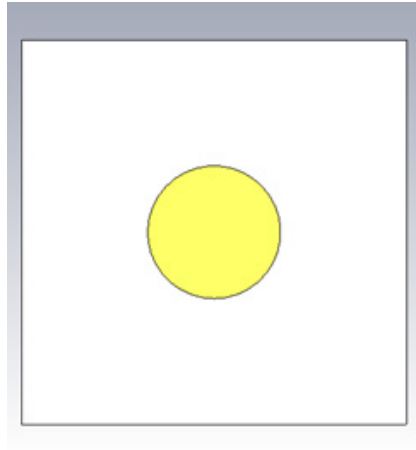
## Radiation Pattern at 10 GHz (Phi=0)



# X-band Patch Antenna (Single) 10 GHz



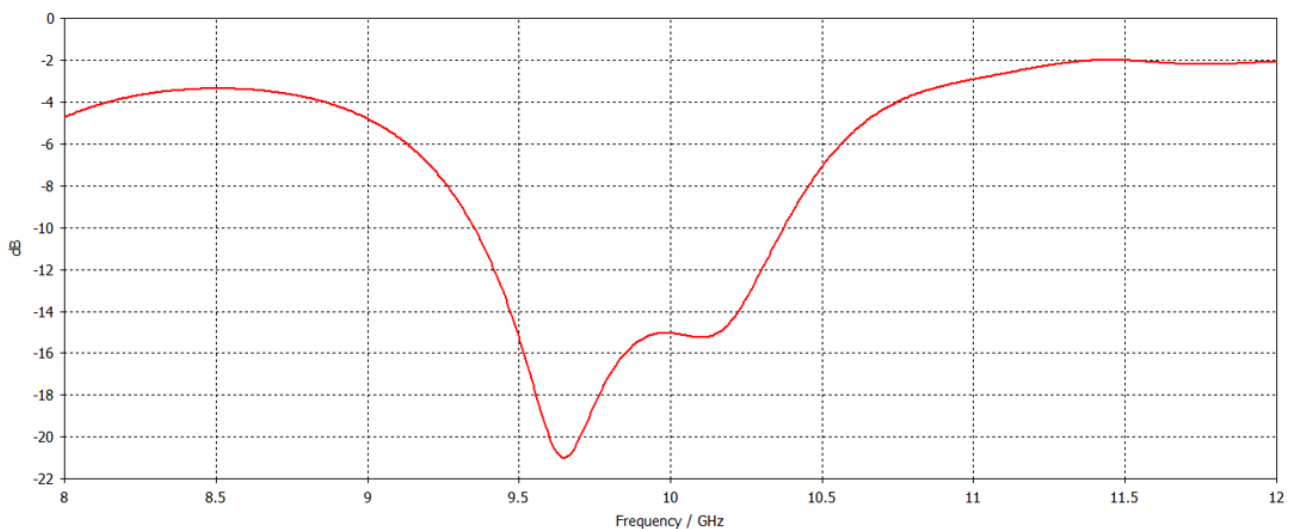
Product Datasheet



## Specification

Parameter	Value	Unit
Frequency	10	GHz
Return Loss	<-10	dB
Gain	>6	dB
HPBW	>80	Degree
Polarization	RHCP or LHCP	Preconfigurable
Axial Ratio	<1	dB
Dimensions (Excluding Connector)	19 x 19	mm

## Return Loss

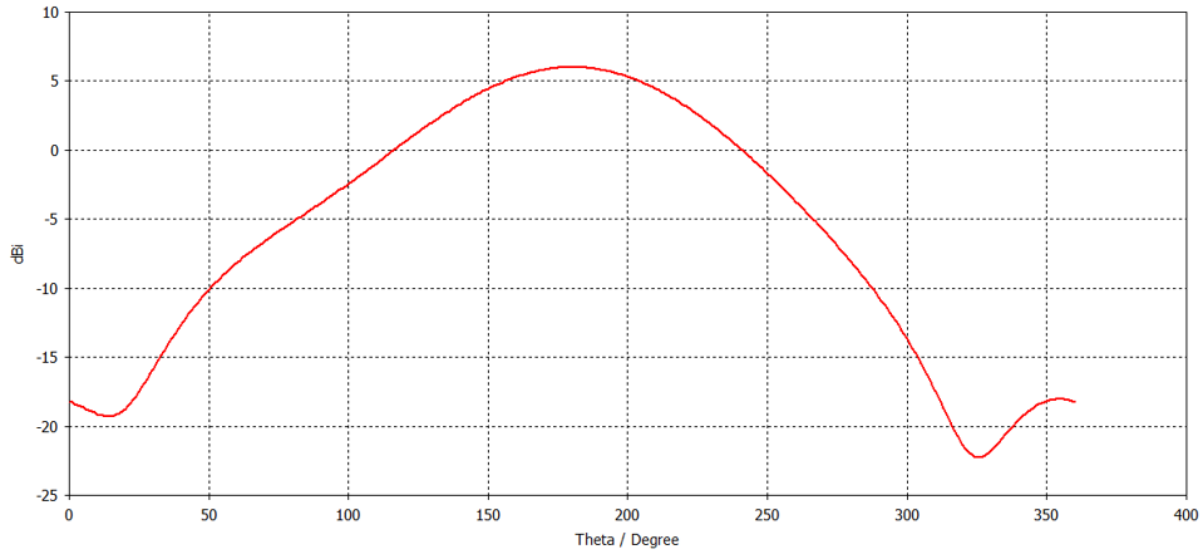


# X-band Patch Antenna (Single) 10 GHz

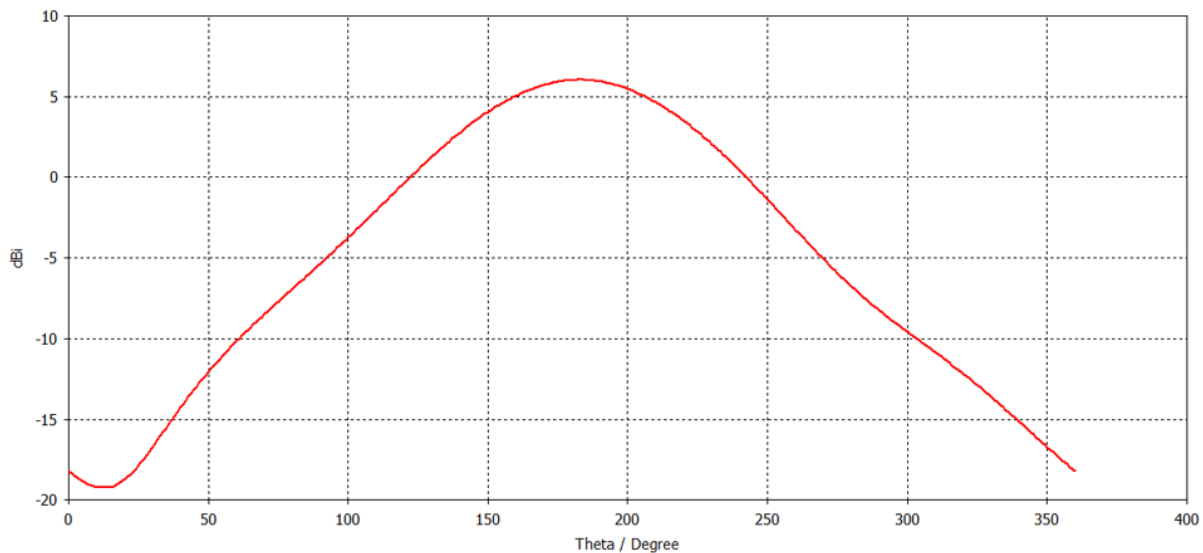


Product Datasheet

## Radiation Pattern at 10 GHz (Phi=0)



## Radiation Pattern at 10 GHz (Phi=90)

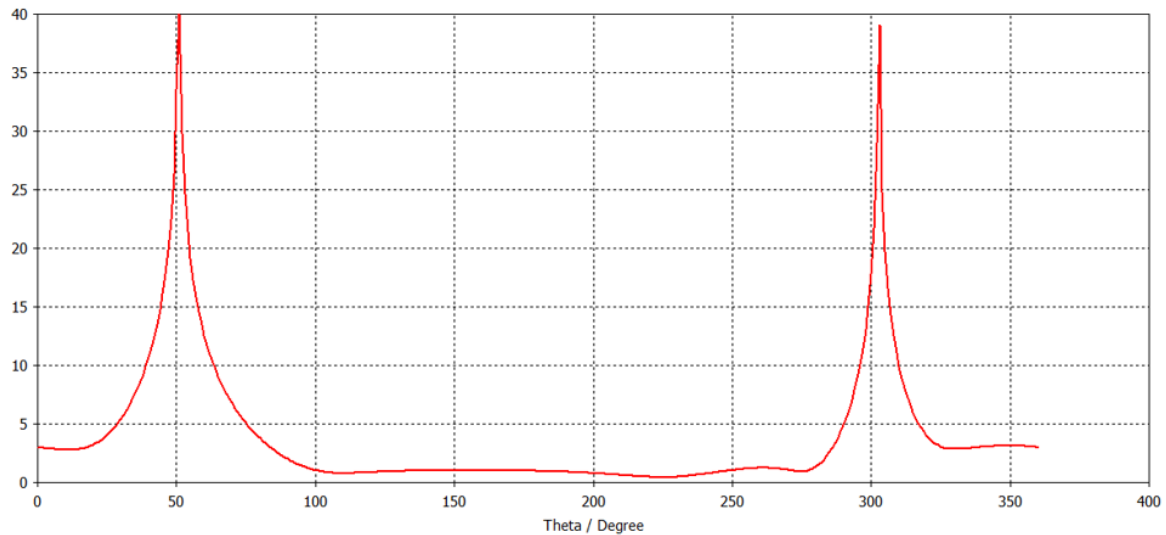


# X-band Patch Antenna (Single) 10 GHz

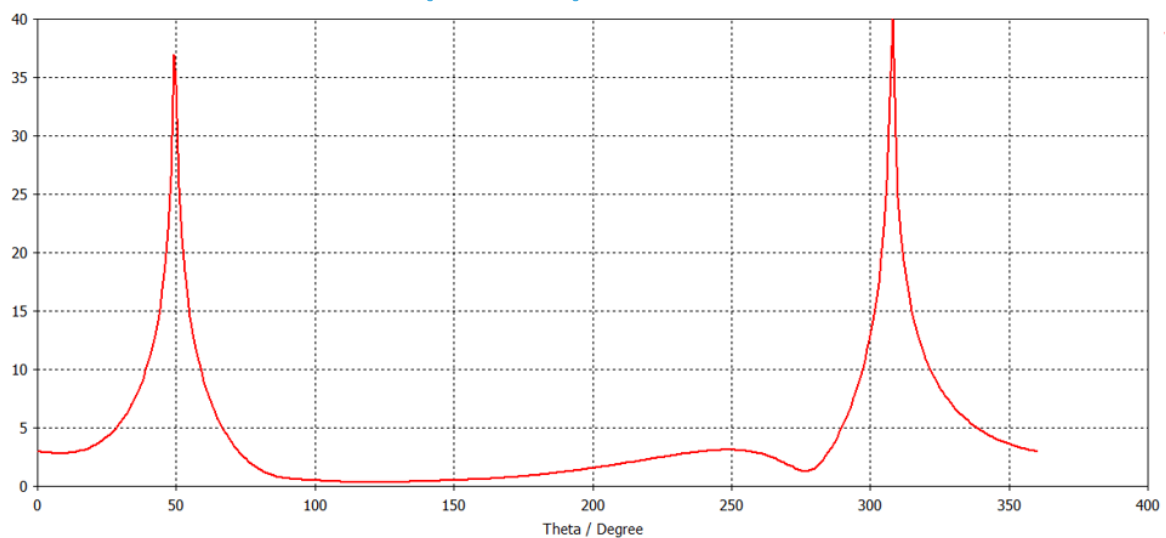


Product Datasheet

## Axial Ratio at 10 GHz (Phi=0)



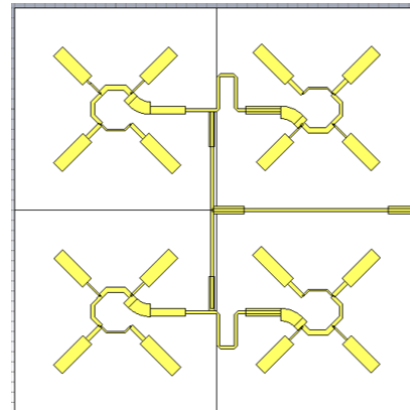
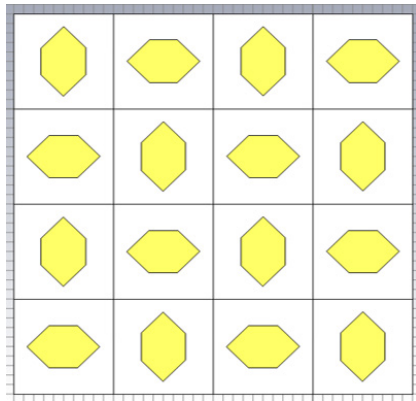
## Axial Ratio at 10 GHz (Phi=90)



# Ku-band Patch Antenna (4x4) 13.5-16.5 GHz



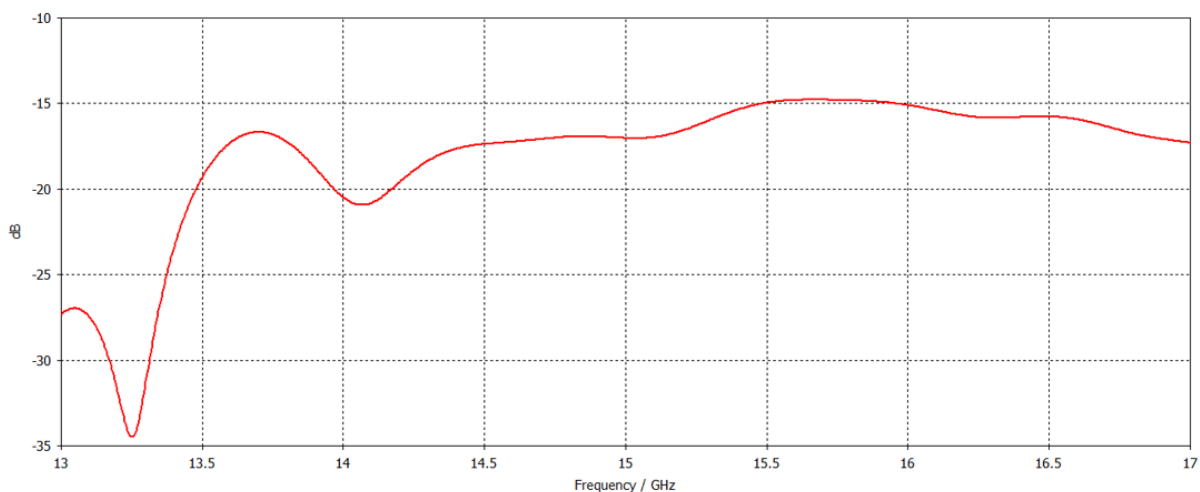
Product Datasheet



## Specification

Parameter	Value	Unit
Frequency	13.5-16.5	GHz
Return Loss	<-10	dB
Gain	>16 @ 15 GHz	dB
HPBW	23-24	Degree
Polarization	RHCP or LHCP	Preconfigurable
Axial Ratio	<3	dB
Dimension (Excluding Connector)	43 x 43	mm

## Return Loss

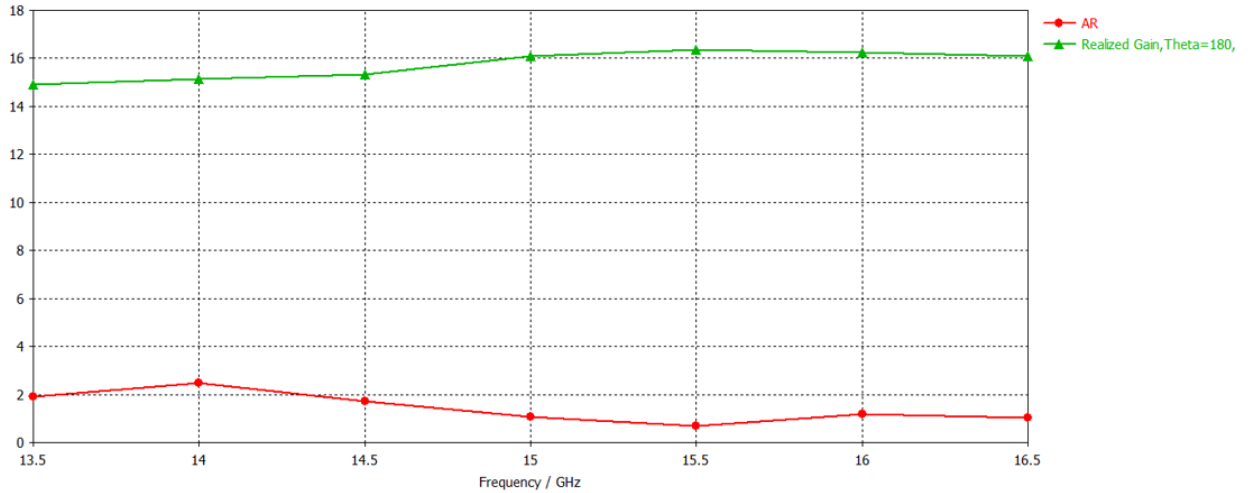


# Ku-band Patch Antenna (4x4) 13.5-16.5 GHz

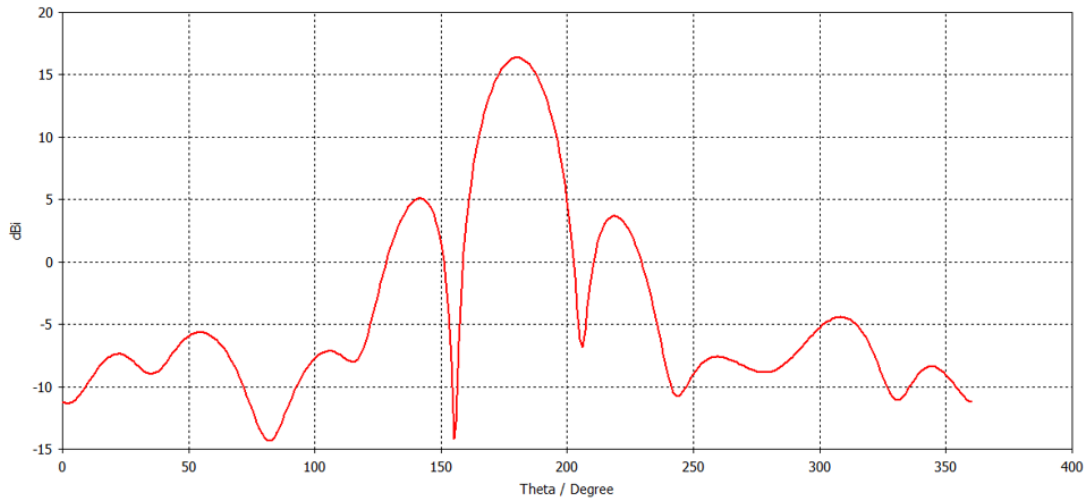


Product Datasheet

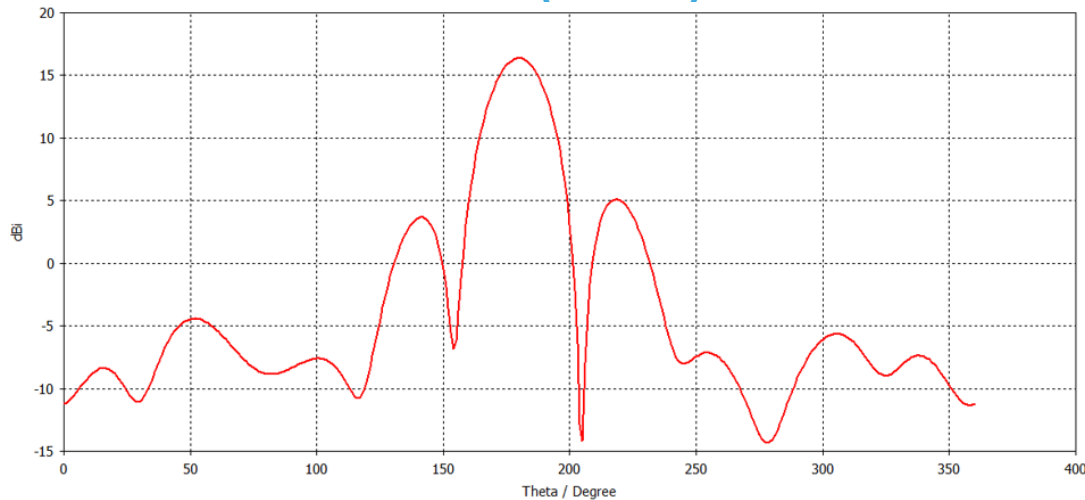
## Realised Gain & Axial Ratio



## Radiation Pattern at 15 GHz (Phi=0)



## Radiation Pattern at 15 GHz (Phi=90)

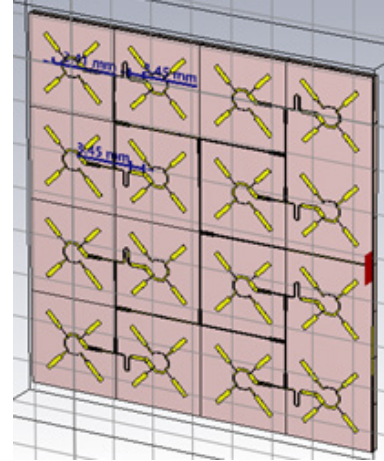
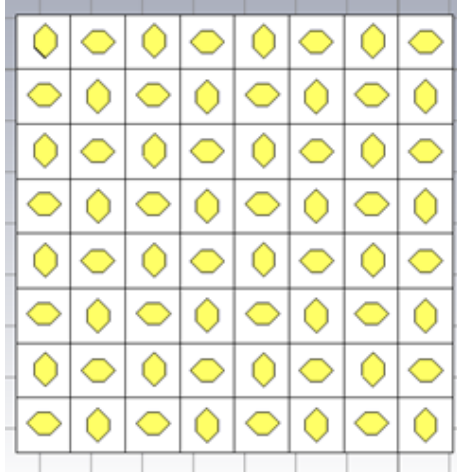




# Ku-band Patch Antenna (8x8) 13.5-16.5 GHz



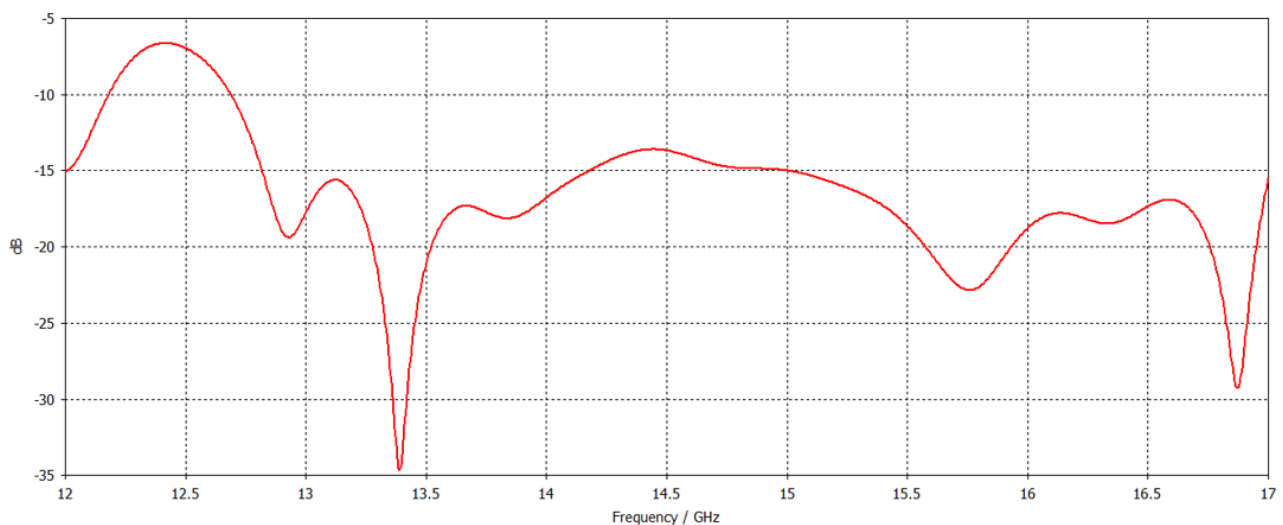
Product Datasheet



## Specification

Parameter	Value	Unit
Frequency	13.5-16.5	GHz
Return Loss	<-10	dB
Gain	>21 @ 15 GHz	dB
HPBW	10-12	Degree
Polarization	RHCP or LHCP	Preconfigurable
Axial Ratio	<3	dB
Dimension (Excluding Connector)	85 x 85	mm

## Return Loss

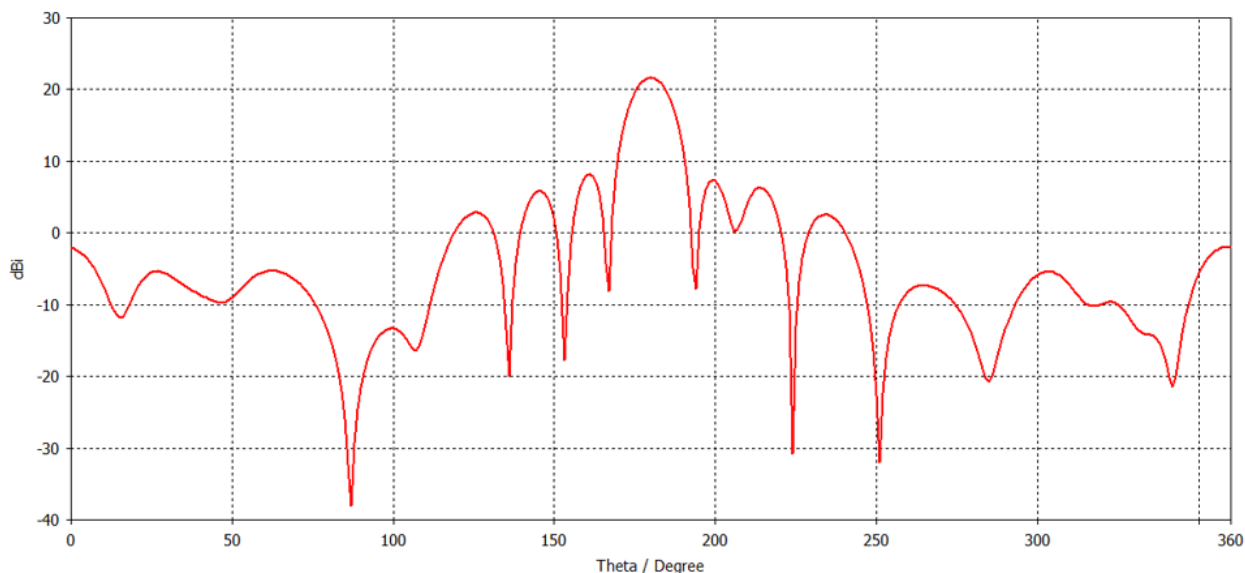


# Ku-band Patch Antenna (8x8) 13.5-16.5 GHz

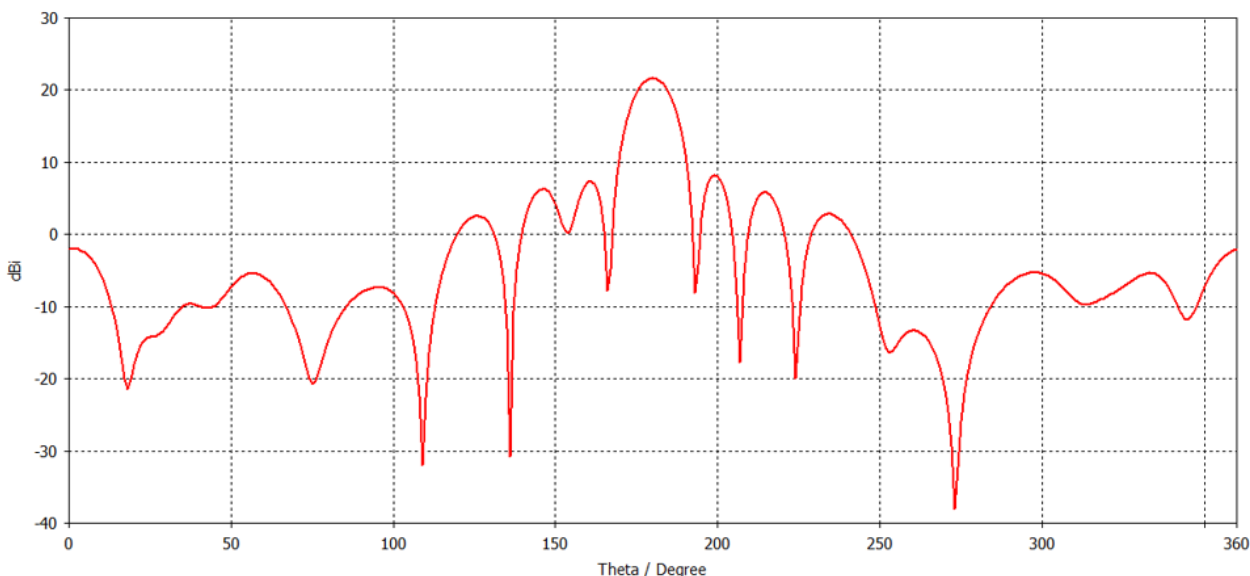


Product Datasheet

## Radiation Pattern At 15 GHz (Phi=0)



## Radiation Pattern At 15 GHz (Phi=90)

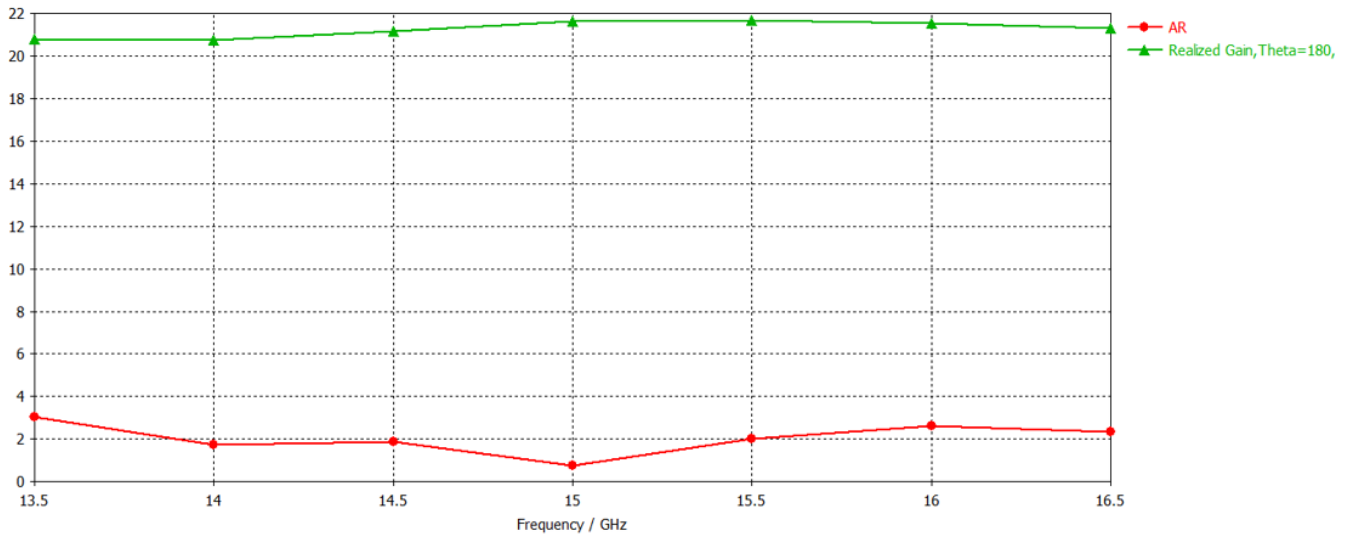


# Ku-band Patch Antenna (8x8) 13.5-16.5 GHz



Product Datasheet

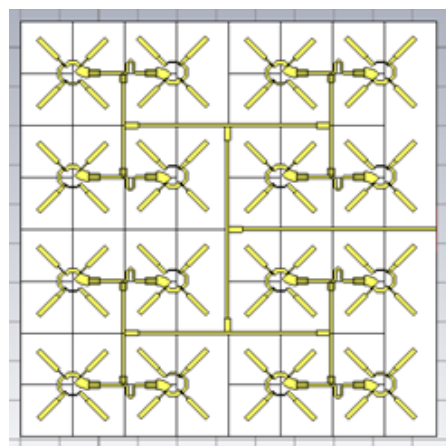
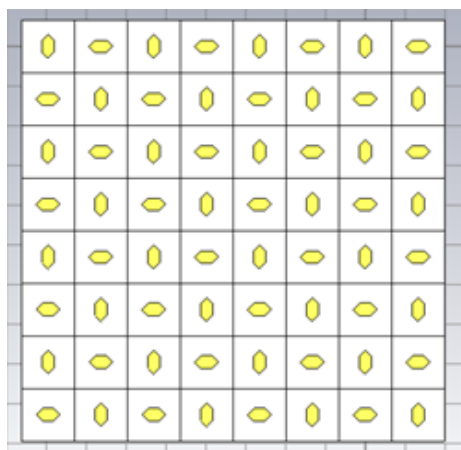
## Realised Gain & AR



# Ka-band Patch Antenna (8x8) 27-31 GHz



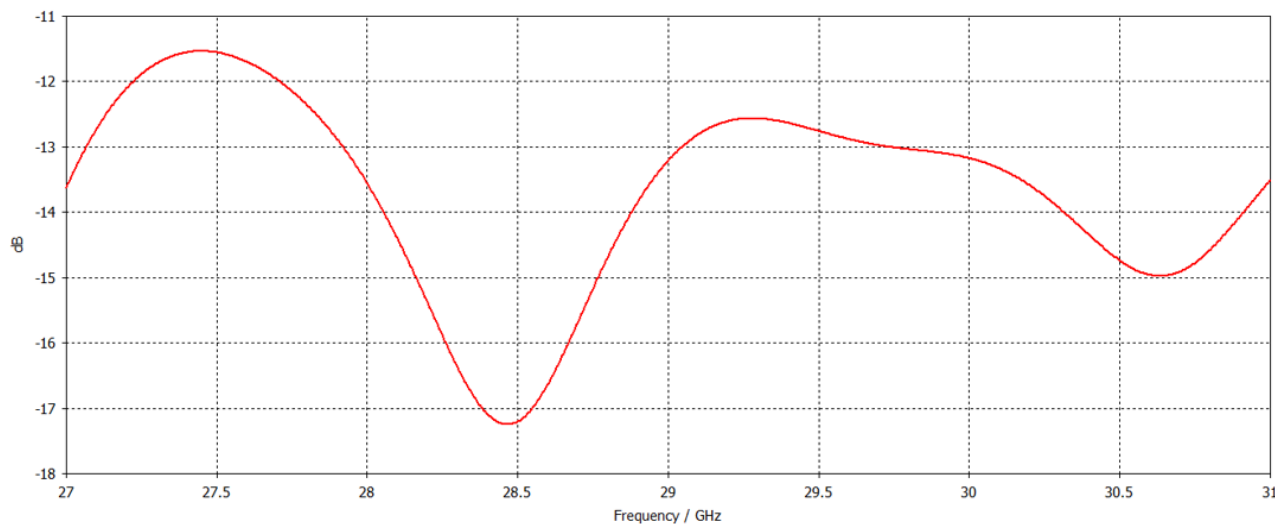
Product Datasheet



## Specification

Parameter	Value	Unit
Frequency	27-31	GHz
Return Loss	<-10	dB
Gain	>20 @ 29 GHz	dB
HPBW	10	Degree
Polarization	RHCP or LHCP	Preconfigurable
Axial Ratio	<3	dB
Dimensions (Excluding Connector)	Min 53 x 53	mm

## Return Loss

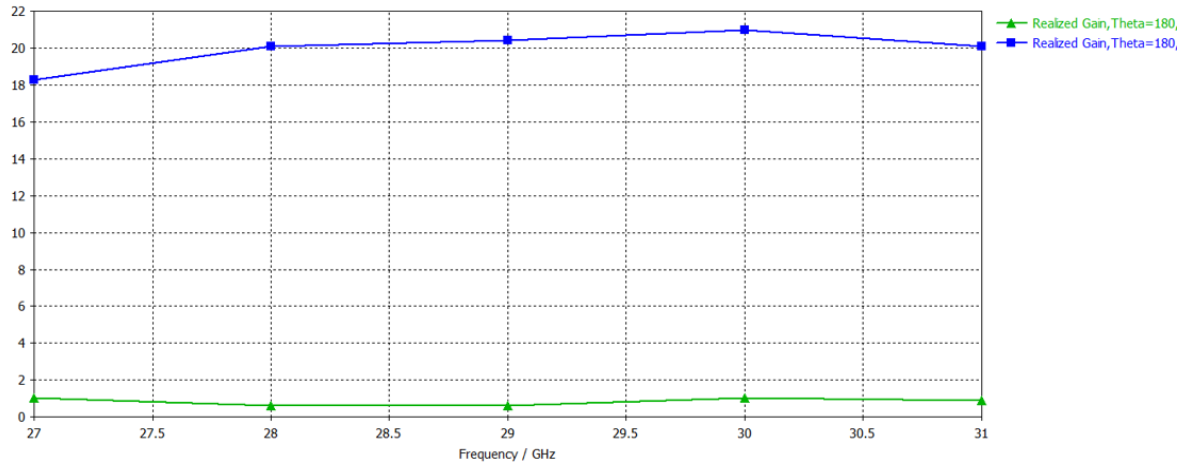


# Ka-band Patch Antenna (8x8) 27-31 GHz

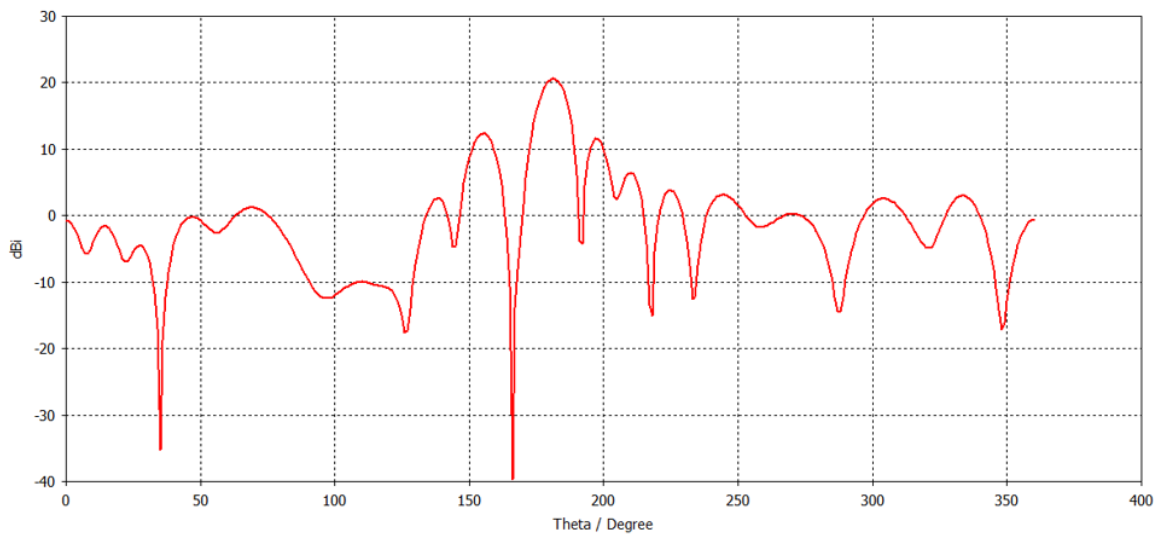


Product Datasheet

## Realised Gain & AR



## Radiation Pattern at 29 GHz (Phi=0)



## Radiation Pattern at 29 GHz (Phi=90)

