

# Conical horn antennas for SAF Spectrum Compact

JOAAxxxxHG0x datasheets



Compact, lightweight and reliable conical horn antenna systems are essential part of the ultimate solution for performing microwave link measurements, performance checks, failure searches and interference detections using SAF Spectrum Compact. It is easy to climb the tower with the small-size and lightweight horn antenna that can be mounted on horizontal or vertical pole by hand without any tools.

The antenna product family consists of four small-size, wideband (3-5 GHz, 5-7.5 GHz, 6-11 GHz, 11-17 GHz, 17-26 GHz, 26-40 GHz) conical horn antennas, a smart mounting system, and optional coaxial-to-waveguide adapters. Water and shock proof case, tripod and riflescope for direction finding are also available upon request.

## Electrical and mechanical specifications

P/N	JOAA0305HG02	JOAA0507HG02	JOAA0610HG02	JOAA1115HG01	JOAA1724HG01	JOAA2640HG03
Operating frequency, GHz	3.000-5.000	5.000-7.500	5.925-11.000	10.700-17.000	17.000-26.500	26.500-40.500
Gain (typical), dBi	12-15.5	14.5-17.5	14.5-18	19.5-20.5	21.0-21.5	20.5-21.5
HPBW	E-plane ~46° @ 3 GHz ~36° @ 3.5 GHz ~31° @ 4 GHz ~29° @ 4.5 GHz ~27° @ 5 GHz  H-plane ~52° @ 3 GHz ~44° @ 3.5 GHz ~40° @ 4 GHz ~36° @ 4.5 GHz ~32° @ 5 GHz	E-plane ~34° @ 5 GHz ~29° @ 5.5 GHz ~27° @ 6 GHz ~25° @ 6.5 GHz ~23° @ 7 GHz ~22° @ 7.5 GHz  H-plane ~39° @ 5 GHz ~34° @ 5.5 GHz ~33° @ 6 GHz ~31° @ 6.5 GHz ~28° @ 7 GHz ~27° @ 7.5 GHz	E-plane ~30° @ 6 GHz ~25° @ 7 GHz ~23° @ 8 GHz ~21° @ 9 GHz ~20° @ 10 GHz  H-plane ~35° @ 6 GHz ~30° @ 7 GHz ~27° @ 8 GHz ~24° @ 9 GHz ~22° @ 10 GHz	E-plane ~15° @ 11 GHz ~14.5° @ 12 GHz ~13.5° @ 13 GHz ~13° @ 14 GHz ~12.2° @ 15 GHz  H-plane ~19° @ 11 GHz ~17.5° @ 12 GHz ~15° @ 14 GHz ~14.5° @ 15 GHz	E-plane ~14° @ 17 GHz ~13.5° @ 18 GHz ~13° @ 19 GHz ~12.5° @ 20 GHz ~12.5° @ 21 GHz ~12° @ 23 GHz ~11.5° @ 24 GHz  H-plane ~17.5° @ 17 GHz ~16.5° @ 18 GHz ~16° @ 19 GHz ~15.5° @ 20 GHz ~15° @ 21 GHz ~14° @ 23 GHz ~13.5° @ 24 GHz	E-plane ~14° @ 26.5 GHz ~13.5° @ 28 GHz ~13° @ 30 GHz ~12.5° @ 32 GHz ~12° @ 36 GHz ~11.5° @ 38 GHz ~11° @ 40 GHz  H-plane ~17.5° @ 26.5 GHz ~16.5° @ 28 GHz ~15.5° @ 30 GHz ~15° @ 32 GHz ~13.5° @ 36 GHz ~13° @ 38 GHz ~12.5° @ 40 GHz
Dimensions, mm/inch	400 x 170 x 150/ 15.8 x 6.7 x 5.9	310 x 150 x 130/ 12.2 x 5.9 x 5.1	300 x 145 x 120/ 11.8 x 5.7 x 4.7	216 x 142 x 120/ 8.5 x 5.6 x 4.7	175 x 107 x 87/ 6.9 x 4.2 x 3.4	120 x 86 x 60/ 4.7 x 3.4 x 2.4
Net weight, kg/lb	2.8/6.2	1.8/4	1.5/3	1.3/2	0.7/1.5	0.4/0.9
Flange (connector)	SMA	SMA	SMA	UBR100/UBR140	UBR220	2.92 mm (K)
Matching Spectrum Compact unit	JOSSAP10	JOSSAP10	JOSSAP11	JOSSAP12	JOSSAP13	JOSSAP14 ; JOSSAP74

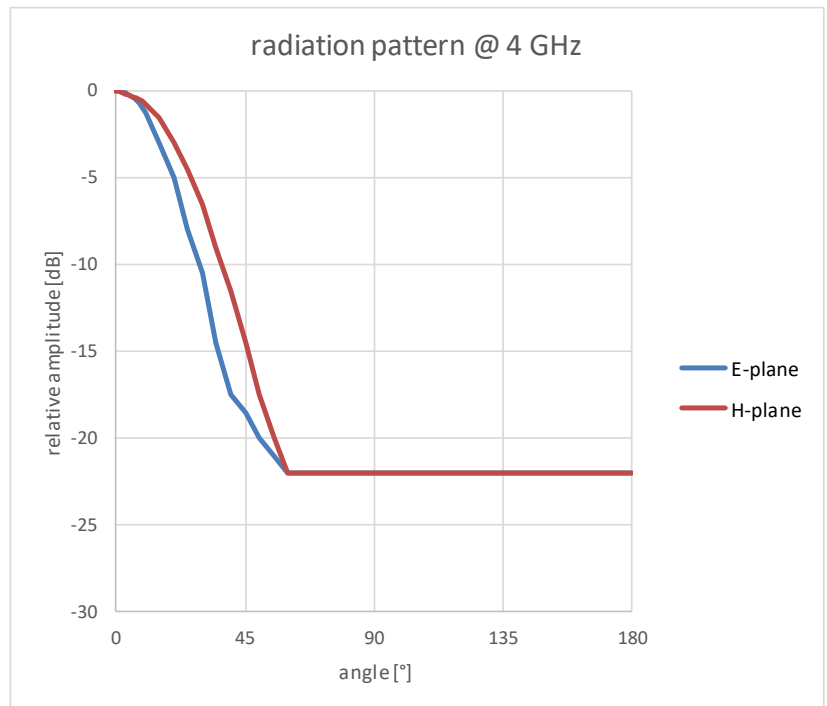
# Conical horn antennas for SAF Spectrum Compact

J0AAxxxxHG0x datasets



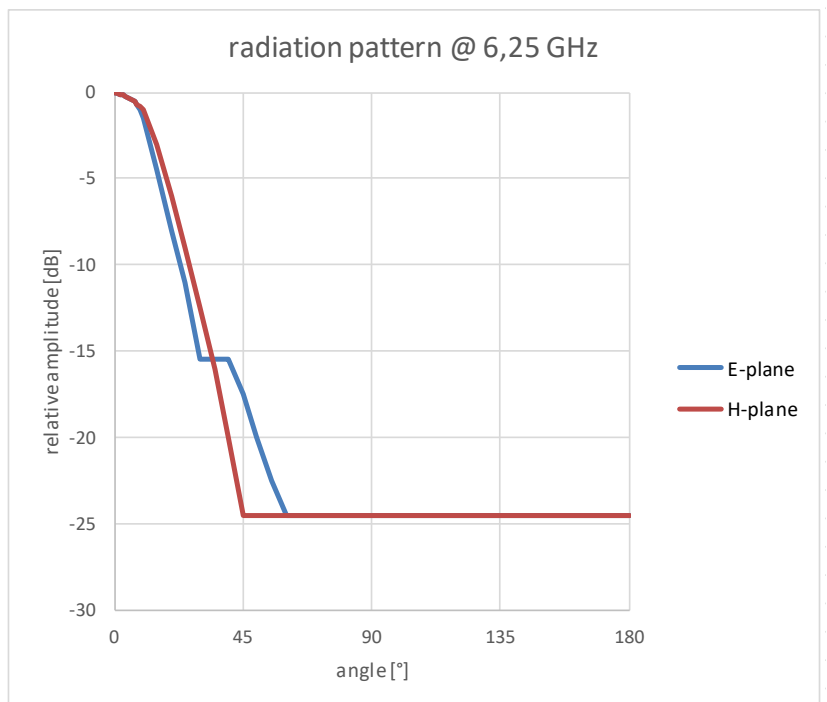
## Radiation pattern 3-5GHz horn antenna J0AA0305HG02

Angle [°]	Radiation pattern @ 4 GHz	
	E-plane [dB]	H-plane [dB]
0	0	0
1	0	0
2	-0.1	-0.1
3	-0.1	-0.2
4	-0.2	-0.2
5	-0.3	-0.3
6	-0.4	-0.35
7	-0.5	-0.35
8	-0.7	-0.5
9	-1	-0.6
10	-1.3	-0.8
15	-3	-1.5
20	-5	-3
25	-8	-4.5
30	-10.5	-6.5
35	-14.5	-9
40	-17.5	-11.5
45	-18.5	-14.5
50	-20	-17.5
55	-21	-20
60	-22	-22
180	-22	-22



## Radiation pattern 5-7.5GHz horn antenna J0AA0507HG02

Angle [°]	Radiation pattern @ 6,25 GHz	
	E-plane [dB]	H-plane [dB]
0	0	0
1	0	0
2	-0.1	-0.1
3	-0.1	-0.1
4	-0.2	-0.2
5	-0.3	-0.3
6	-0.4	-0.4
7	-0.5	-0.5
8	-0.7	-0.7
9	-1	-0.85
10	-1.5	-1
15	-4.5	-3
20	-8	-6
25	-11	-9
30	-15.5	-12.5
35	-15.5	-16
40	-15.5	-20
45	-17.5	-24.5
50	-20	-24.5
55	-22.5	-24.5
60	-24.5	-24.5
180	-24.5	-24.5



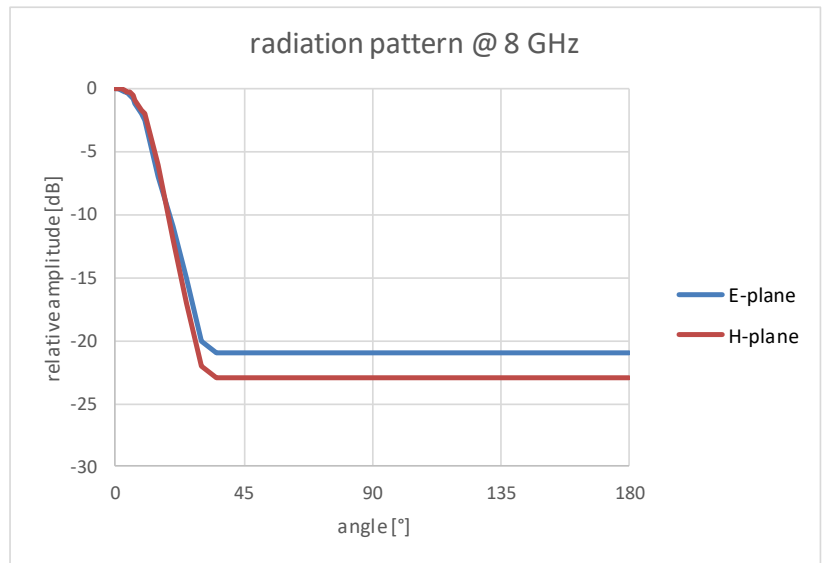
# Conical horn antennas for SAF Spectrum Compact

J0AAxxxxHG0x datasets



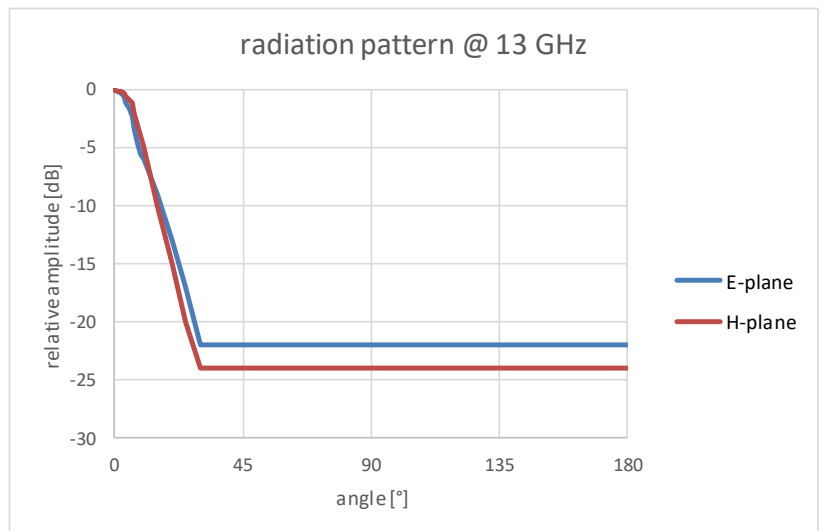
## Radiation pattern 6-11GHz horn antenna J0AA0610HG02

Angle [°]	Radiation pattern @ 8 GHz	
	E-plane [dB]	H-plane [dB]
0	0	0
1	0	0
2	-0.1	0
3	-0.2	-0.1
4	-0.3	-0.2
5	-0.5	-0.3
6	-0.8	-0.5
7	-1.2	-0.9
8	-1.6	-1.3
9	-2	-1.7
10	-2.5	-2
15	-7	-6
20	-11	-12
25	-15	-17
30	-20	-22
35	-21	-23
180	-21	-23



## Radiation pattern 10.7-17GHz horn antenna J0AA1115HG01

Angle [°]	Radiation pattern @ 13 GHz	
	E-plane [dB]	H-plane [dB]
0	0	0
1	-0.1	-0.1
2	-0.3	-0.2
3	-0.6	-0.3
4	-1.1	-0.5
5	-1.6	-0.8
6	-2.3	-1.2
7	-3.2	-2
8	-4.5	-3
9	-5.5	-4
10	-6	-5
15	-9	-10
20	-13	-15
25	-17	-20
30	-22	-24
180	-22	-24



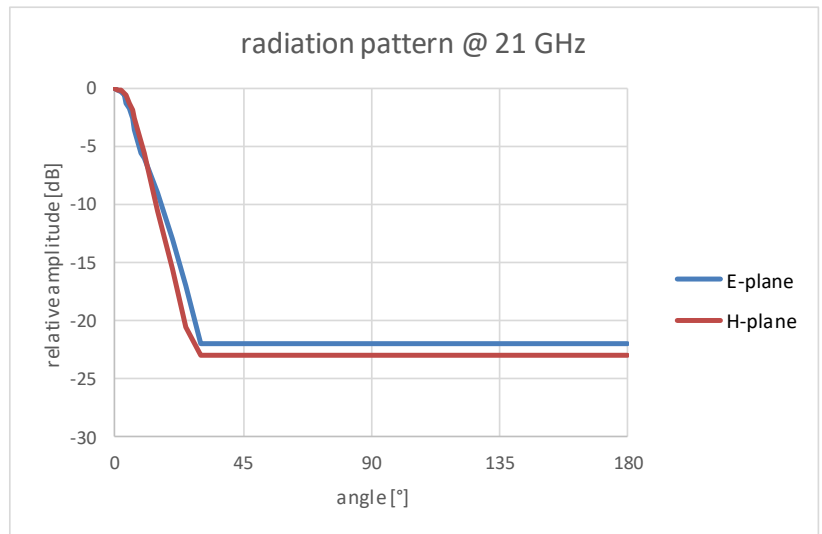
# Conical horn antennas for SAF Spectrum Compact

J0AAxxxxHG0x datashets



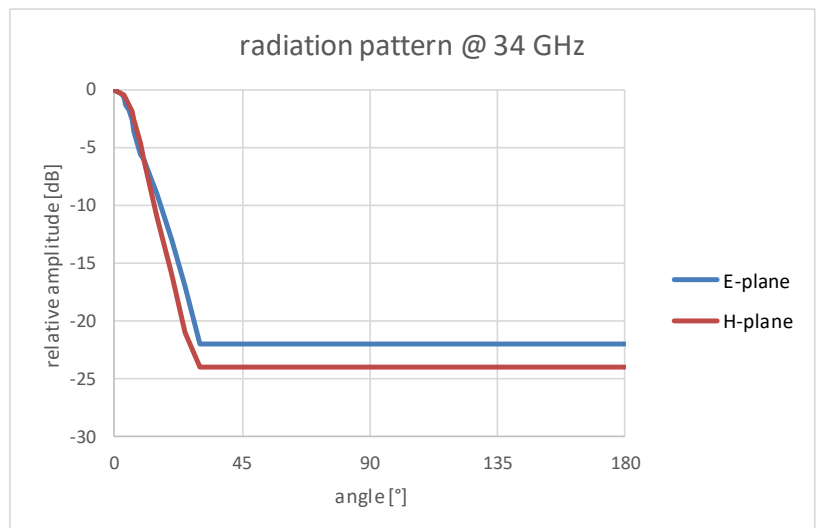
## Radiation pattern 17-26.5GHz horn antenna J0AA1724HG01

Angle [°]	Radiation pattern @ 21 GHz	
	E-plane [dB]	H-plane [dB]
0	0	0
1	-0.1	-0.1
2	-0.3	-0.2
3	-0.6	-0.4
4	-1.2	-0.6
5	-1.7	-1.2
6	-2.5	-1.8
7	-3.5	-2.5
8	-4.5	-3.5
9	-5.5	-4.5
10	-6	-5.5
15	-9	-10.5
20	-13	-15.5
25	-17	-20.5
30	-22	-23
180	-22	-23



## Radiation pattern 24-40GHz horn antenna J0AA2640HG03

Angle [°]	Radiation pattern @ 34 GHz	
	E-plane [dB]	H-plane [dB]
0	0	0
1	-0.1	-0.1
2	-0.3	-0.2
3	-0.6	-0.4
4	-1.2	-0.7
5	-1.7	-1.3
6	-2.5	-1.9
7	-3.5	-2.5
8	-4.5	-3.5
9	-5.5	-4.5
10	-6	-6
15	-9	-11
20	-13	-16
25	-17	-21
30	-22	-24
180	-22	-24



# Conical horn antennas for SAF Spectrum Compact

J0AAxxxxHG0x datashets



## Optional equipment

Riflescope, tripod, Handle mounting kit for SC handheld antennas, water and shock proof case. Please contact [sales@saftehnika.com](mailto:sales@saftehnika.com) for more information.



For more detailed information about SAF products visit [www.saftehnika.com](http://www.saftehnika.com) or contact your SAF representative [info@saftehnika.com](mailto:info@saftehnika.com). Product features may vary between different models and configurations. They are subject to change without prior notice.

SAF Tehnika © 2019