

Test report

Product: IVQ-959_070_999
Serial Number: 9590016460
Test result: **PASSED**



Date: January 19, 2023
Operator: agnmar

Test Conditions: Temperature: 24.3 °C
Rel. Humidity: 35.6 %

1. RF-Characteristics

	minimum	result	maximum	passed
Frequency [GHz]	24.100	24.124	24.150	✓
max. Output power EIRP [dBm]	18.000	19.034	20.000	✓

2. DC-Characteristics

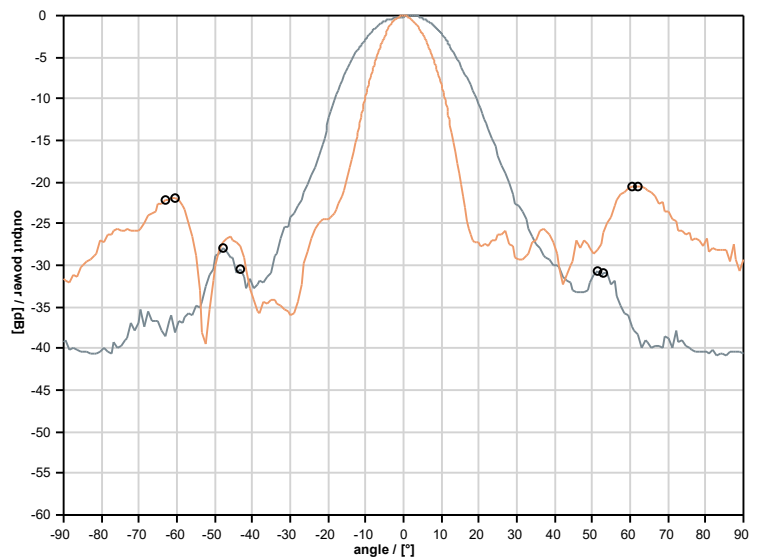
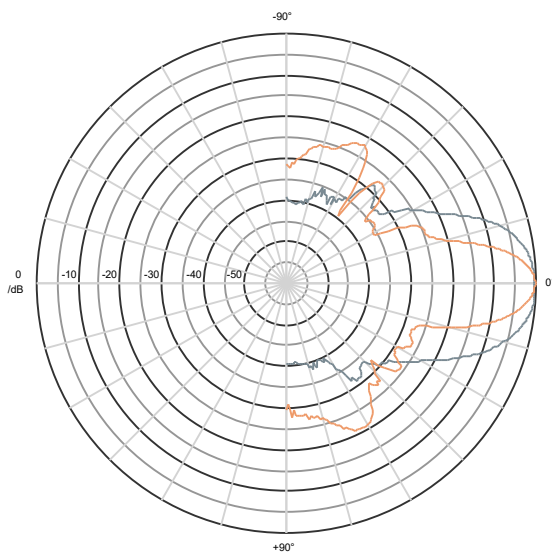
DC-Characteristics measured @ 1.114 kHz doppler frequency

	minimum	result	maximum	passed
Signal_I1 [mV]	4.7	7.41	11.75	✓
Signal_Q1 [mV]	4.7	7.58	11.75	✓
Signal_I2 [mV]	4.7	6.89	11.75	✓
Signal_Q2 [mV]	4.7	6.89	11.75	✓
Noise_I1 [mV]	0.050	0.187	0.500	✓
Noise_Q1 [mV]	0.050	0.182	0.500	✓
Noise_I2 [mV]	0.050	0.170	0.500	✓
Noise_Q2 [mV]	0.050	0.189	0.500	✓
Phase I1 - Q1 [°]	60	97.79	120	✓
Phase I2 - Q2 [°]	60	96.13	120	✓
Phase I1 - I2 [°]		108.72		✓
Offset_I1 [V]	2.3	2.518	2.7	✓
Offset_Q1 [V]	2.3	2.52	2.7	✓
Offset_I2 [V]	2.3	2.522	2.7	✓
Offset_Q2 [V]	2.3	2.52	2.7	✓
Positive supply current [mA]	100	135.06	250	✓

3. Antenna pattern

3.1 Transmit-Diagram

Test Conditions: Transmit Frequency: 24.124 GHz

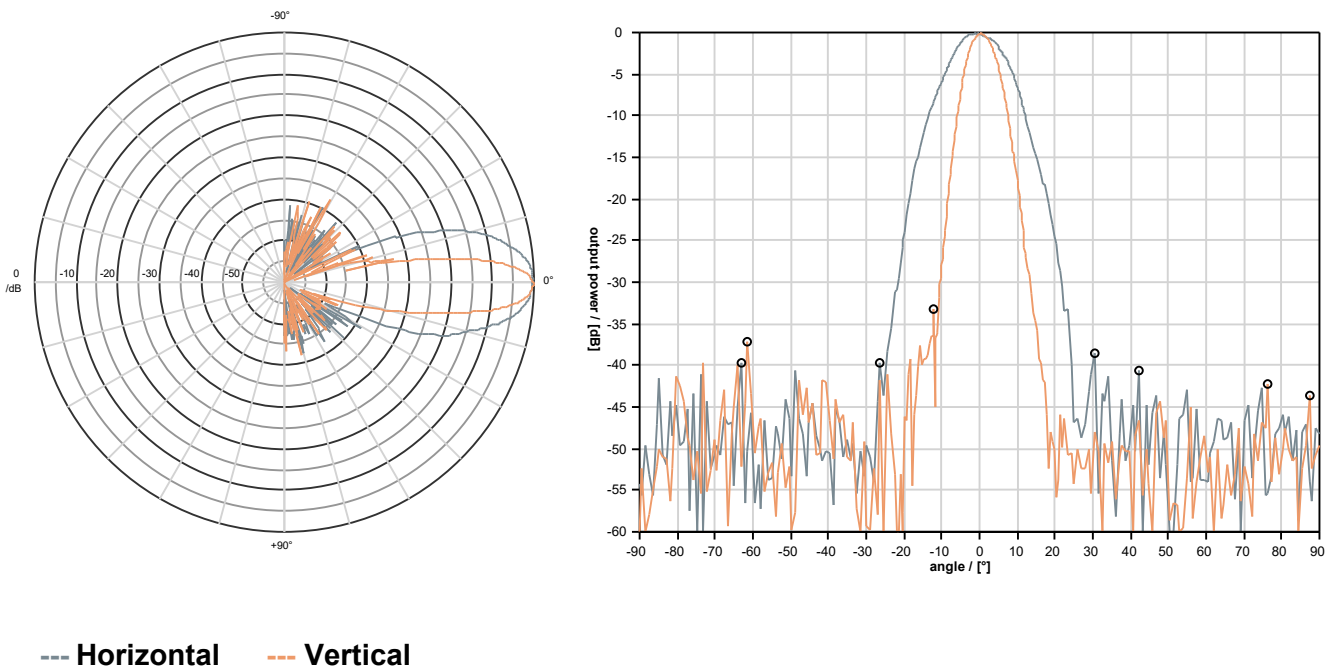


--- Horizontal --- Vertical

	Polarisation Horizontal				Polarisation Vertical			
	min.	result	max.	passed	min.	result	max.	passed
3dB-width [°]	18	21.72	23	✓	10	11.43	13	✓
10dB-width [°]	32.5	37.4	39.5	✓	18.5	21.11	23.5	✓
20dB-width [°]	0	52.73	100	✓	0	30.34	100	✓
SL-suppression 1 left [dB]	-100	-27.9	-20	✓	-100	-21.82	-15	✓
SL-suppression 1 right [dB]	-100	-30.76	-20	✓	-100	-20.55	-15	✓
SL-suppression 2 left [dB]	-100	-30.5	-20	✓	-100	-22.15	-15	✓
SL-suppression 2 right [dB]	-100	-30.98	-20	✓	-100	-20.58	-15	✓
Squinting angle [°]	-3	2.75	3	✓	-3	0	3	✓

3.2 System-Diagram RX1

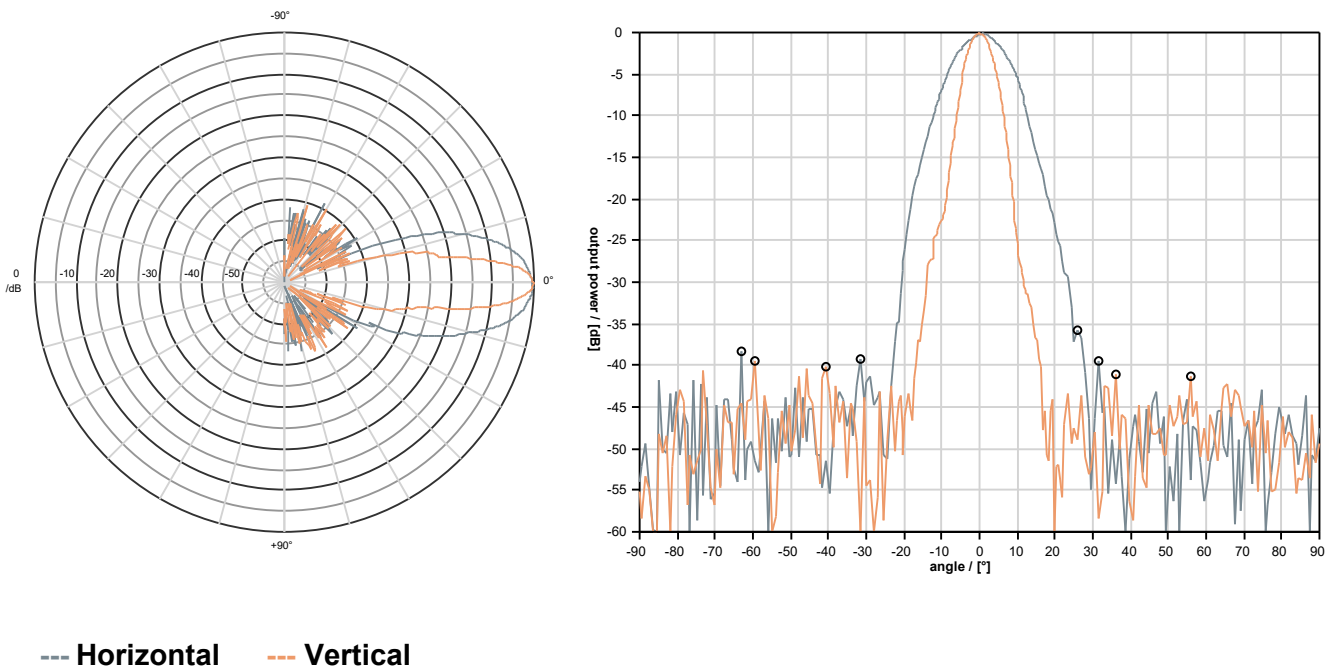
Test Conditions:	Transmit Frequency:	24.124 GHz
	Doppler Frequency:	1.114 kHz



	Polarisation Horizontal				Polarisation Vertical			
	min.	result	max.	passed	min.	result	max.	passed
3dB-width [°]	11	14.44	14.5	✓	6.5	7.48	8.5	✓
10dB-width [°]	22	25.71	27	✓	11.5	13.59	16	✓
20dB-width [°]	0	36.59	100	✓	0	18.98	100	✓
SL-suppression 1 left [dB]	-100	-39.58	-28	✓	-100	-33.05	-23	✓
SL-suppression 1 right [dB]	-100	-38.4	-28	✓	-100	-42.17	-23	✓
SL-suppression 2 left [dB]	-100	-39.68	-28	✓	-100	-37.07	-23	✓
SL-suppression 2 right [dB]	-100	-40.54	-28	✓	-100	-43.53	-23	✓
Squinting angle [°]	-3	-0.25	3	✓	-3	0.5	3	✓

3.3 System-Diagram RX2

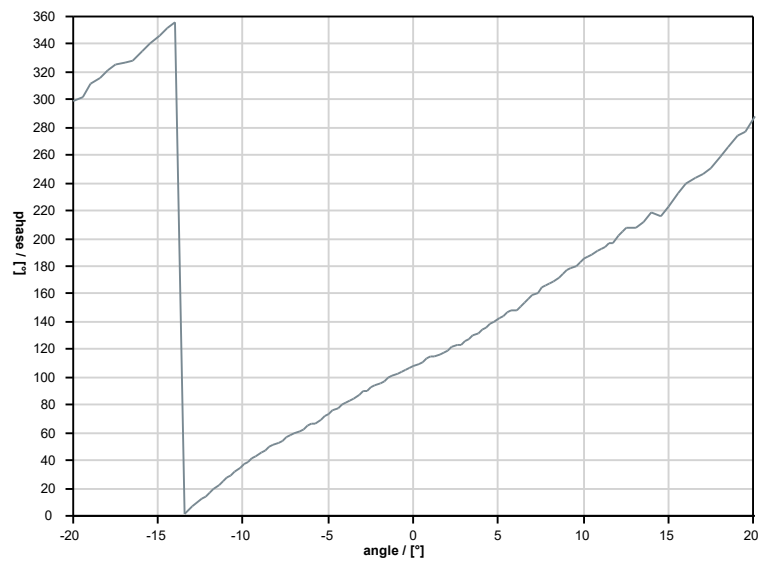
Test Conditions:	Transmit Frequency:	24.124 GHz
	Doppler Frequency:	1.114 kHz



	Polarisation Horizontal				Polarisation Vertical			
	min.	result	max.	passed	min.	result	max.	passed
3dB-width [°]	11	14	14.5	✓	6.5	7.07	8.5	✓
10dB-width [°]	22	25.12	27	✓	11.5	12.55	16	✓
20dB-width [°]	0	36.2	100	✓	0	17.72	100	✓
SL-suppression 1 left [dB]	-100	-38.33	-28	✓	-100	-39.34	-23	✓
SL-suppression 1 right [dB]	-100	-35.79	-28	✓	-100	-41.05	-23	✓
SL-suppression 2 left [dB]	-100	-39.1	-28	✓	-100	-40.13	-23	✓
SL-suppression 2 right [dB]	-100	-39.31	-28	✓	-100	-41.31	-23	✓
Squinting angle [°]	-3	1	3	✓	-3	0	3	✓

3.4 Angle-Diagram

Test Conditions:	Transmit Frequency:	24.124 GHz
	Doppler Frequency:	1.114 kHz



	minimum	result	maximum	passed
Phase [°]	0	323.6	360	✓

