No	Rev	ECR	Changed	Checked	Approved
	a.00		HSPU 2017-03-17		

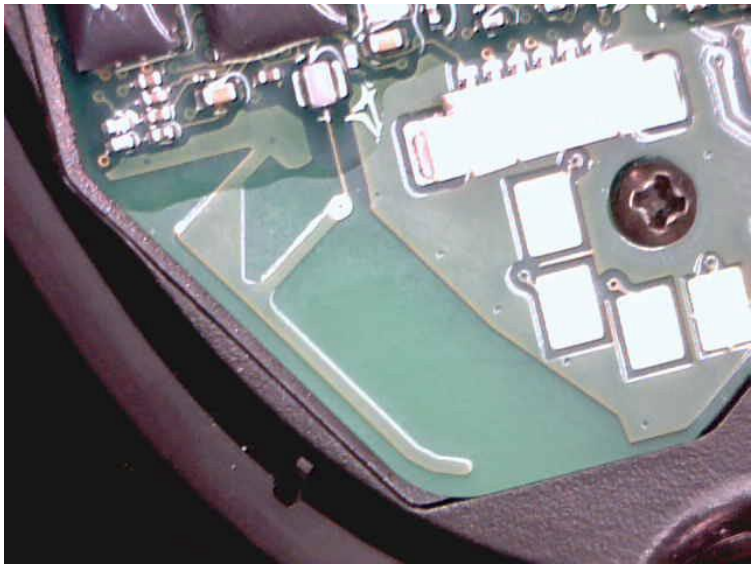
1 Revision History

a.00 HSPU Creation of document.

2 Technical information of the K388A PCB antenna

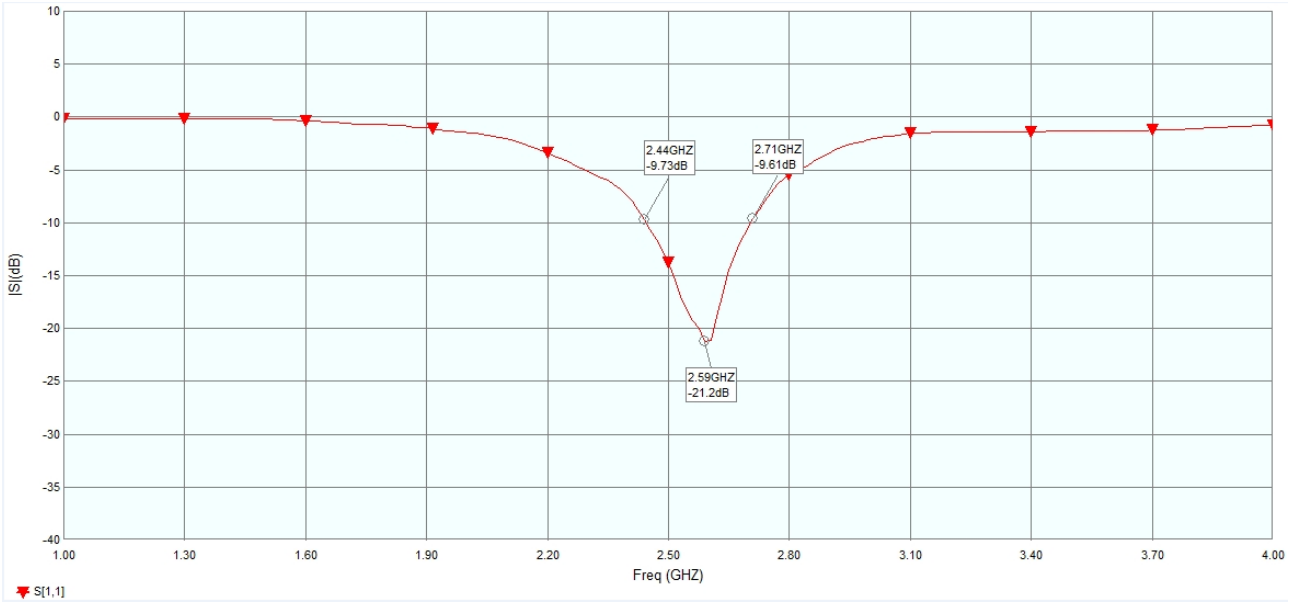
The antenna was tuned in the 3M RnD lab on a prototype and after receiving new PCBAs with the new antenna it was measured at Shortlink Compliance Lab.

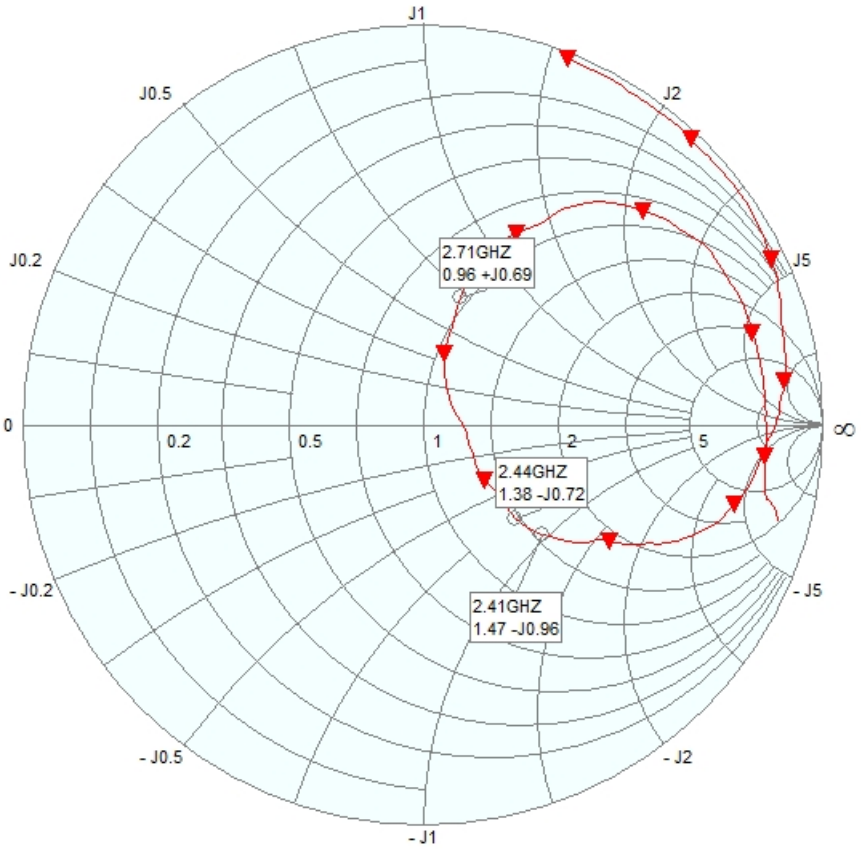
Finished antenna design:



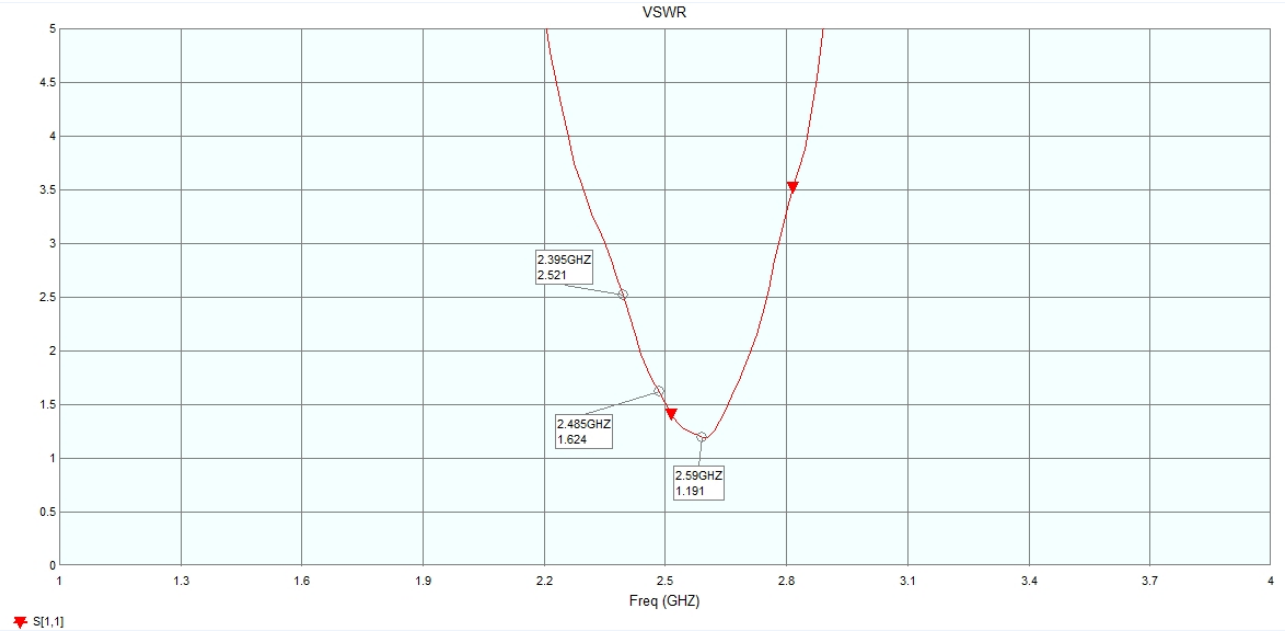
3 Measurements

3.1 S11 plots





3.1.1 VSWR



3.2 Maximum gain

The measurement below were done in the X-plane, which is the scenario in which the product is used. The maximum gain was measured to 2.70dBi at 2483MHz.

AziChart_MinMax_Eval

Frequency (MHz)	Max. Value (dB)	Azimuth max. (deg)	Pol max.	Min. Value (dB)	Azimuth min. (deg)	Pol min.
2400.000000	1.82	15	V	-13.64	125	H
2441.500000	2.08	325	V	-11.90	130	H
2483.000000	2.70	325	V	-15.30	130	H

AziChart_hor_Eval

Frequency (MHz)	Max. value (dB)	Azimuth (deg)	Min. value (dB)	Azimuth (deg)	Average (dB)
2400.000000	0.73	295	-13.64	125	-4.69
2441.500000	1.88	65	-11.90	130	-3.70
2483.000000	2.11	65	-15.30	130	-4.01

AziChart_ver_Eval

Frequency (MHz)	Max. value (dB)	Azimuth (deg)	Min. value (dB)	Azimuth (deg)	Average (dB)
2400.000000	1.82	15	-11.53	220	-2.75
2441.500000	2.08	325	-11.36	225	-2.96
2483.000000	2.70	325	-12.74	220	-3.28