	Doc name	Revision	Page	First revision creator
	ANTENNA SPEC XPI	a.00	1 of 3	HSPU 2017-03-17
	Doc Type, Product Number, Doc Description		Scale	First revision checked 1
			N/A	First revision checked 2
	Technical information MRX21AWS6 Antenna specs WS Alert XPI			First revision checked 3
				First revision approved

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

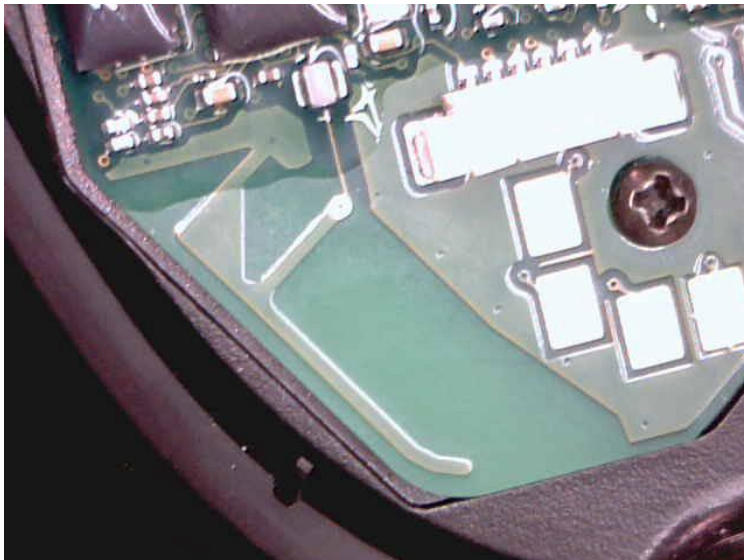
1 Revision History


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.

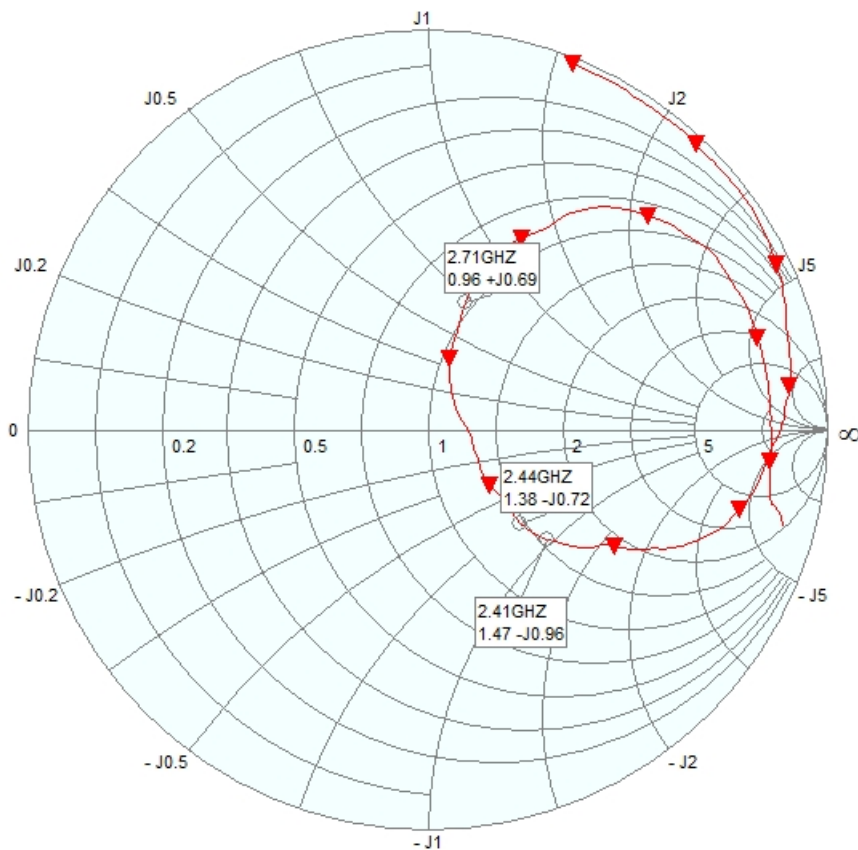
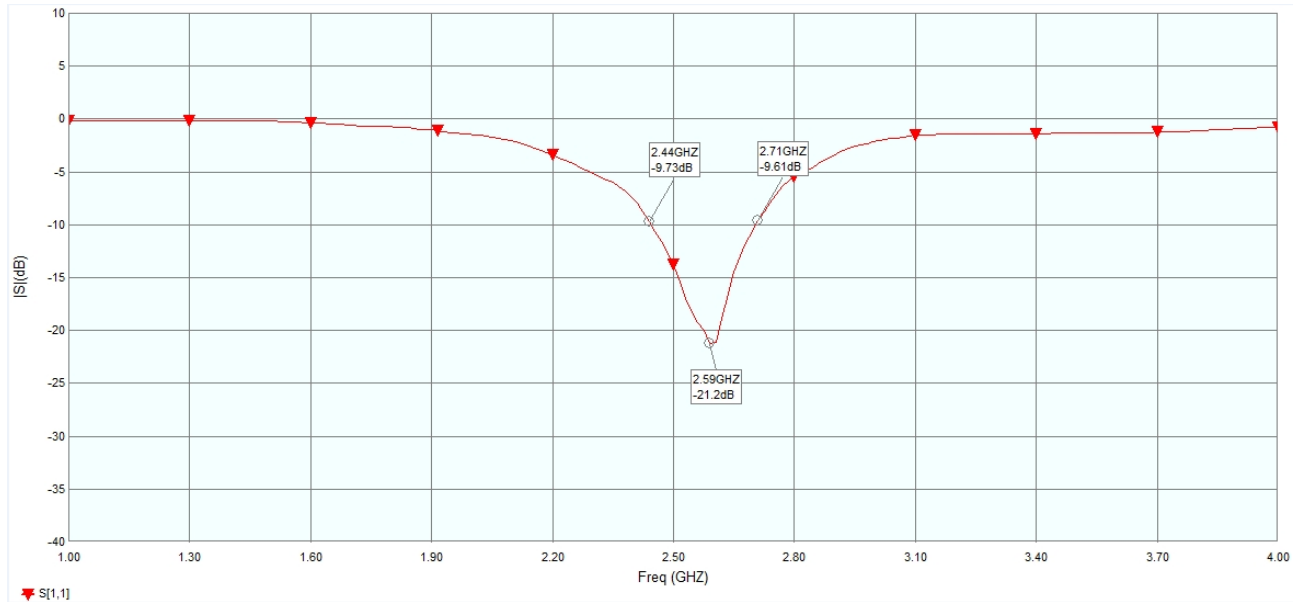
Finished antenna design:




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	ANTENNA SPEC XPI	a.00	2 of 3	HSPU 2017-03-17
	Doc Type, Product Number, Doc Description	Changed		
	Technical information	HSPU 2017-03-17		
	MRX21AWS6			
	Antenna specs WS Alert XPI			

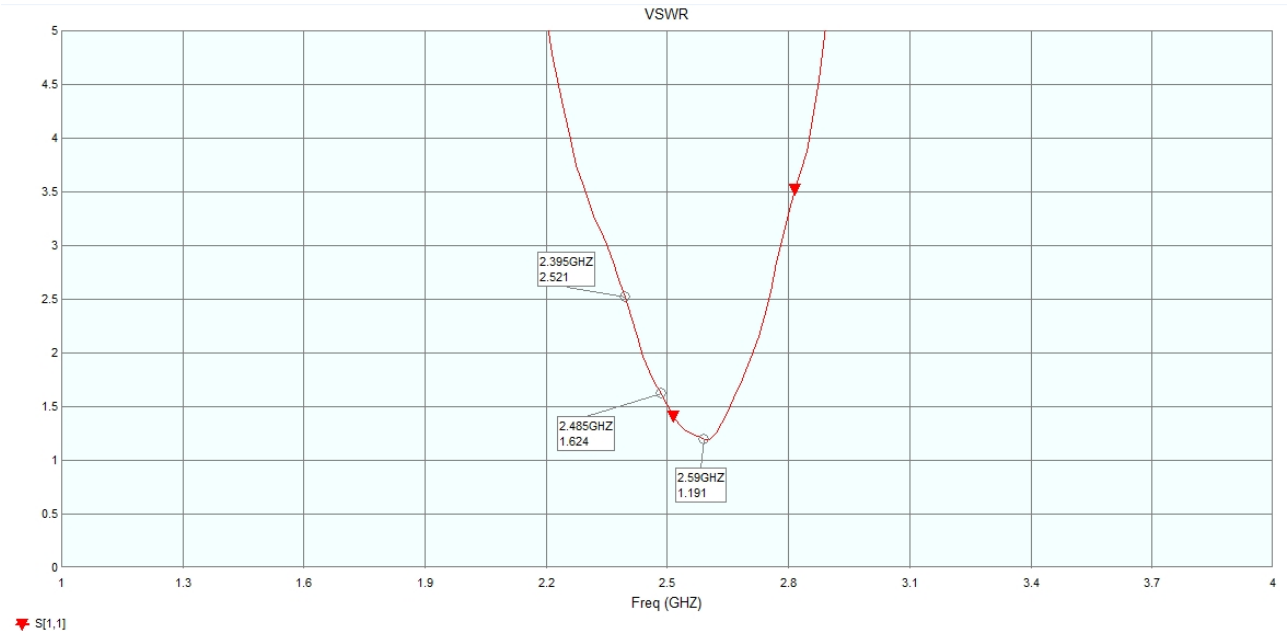
3 Measurements

3.1 S11 plots



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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