

## Copper Wire Antenna Data Sheet

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Antenna Part Number	E-AL-Z-C-78-908
Antenna Description	Xt & Xti Panel _ Z-Wave Antenna (US Frequency)
Antenna Frequency	908MHz

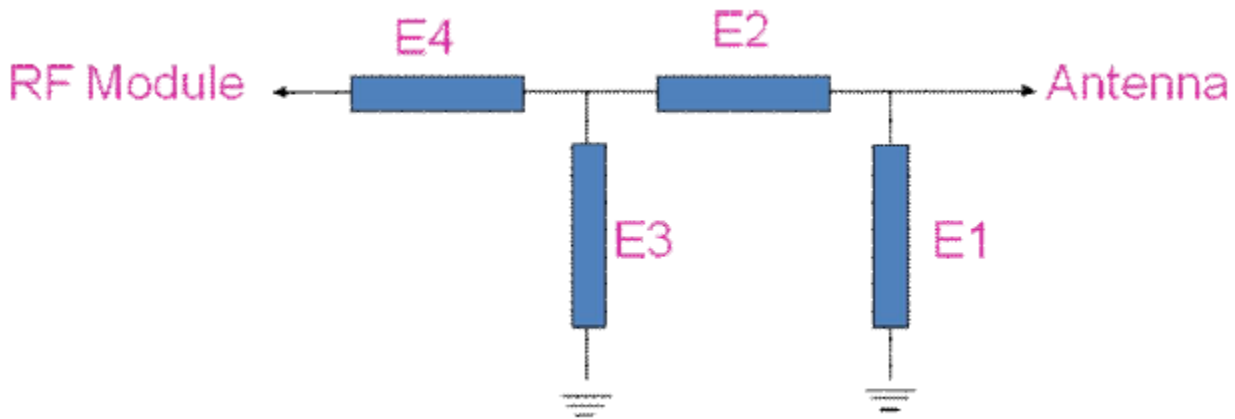
Approved by	Mason Lin
Check by	Jim Yang
PM	Matthew Lin



## A. Description

The content of this data sheet is to provide the testing measurements for the Z-wave antenna put inside the Xt and Xti panels. The antenna is tuned for 908MHz US Z-Wave frequency. The antenna can be used for both Xt and Xti Panels. The antenna is designed by copper wire and monopole antenna design method.

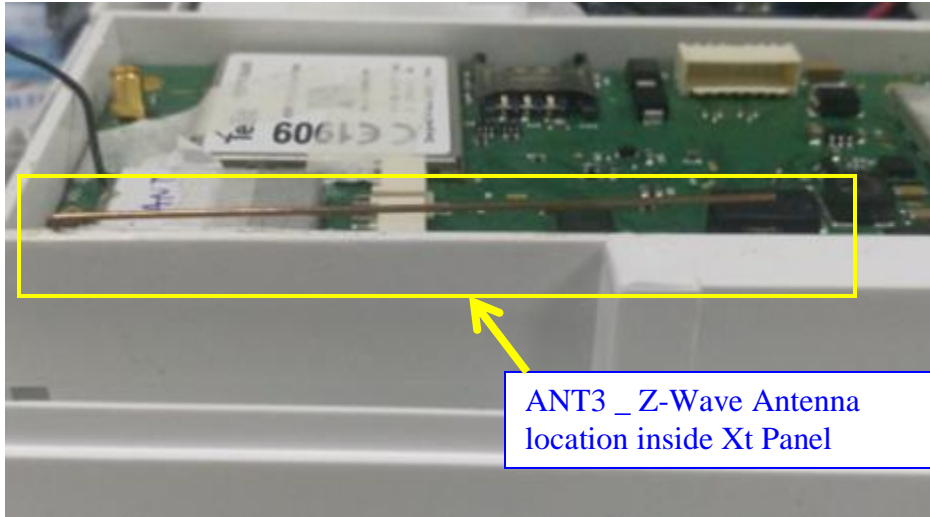
## B. Antenna Matching Circuit



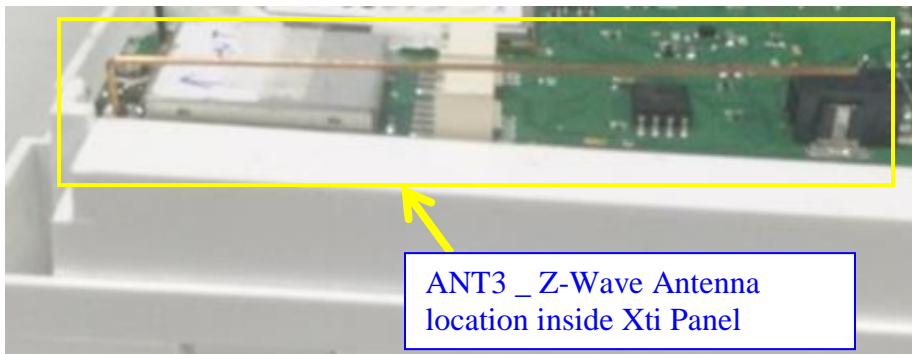
Element	Value
E1(0402)	5.6NF
E2(0402)	0Ω
E3(0402)	NA
E4(0402)	0Ω



## C. Antenna Installation on PCB Inside The Xt Panel

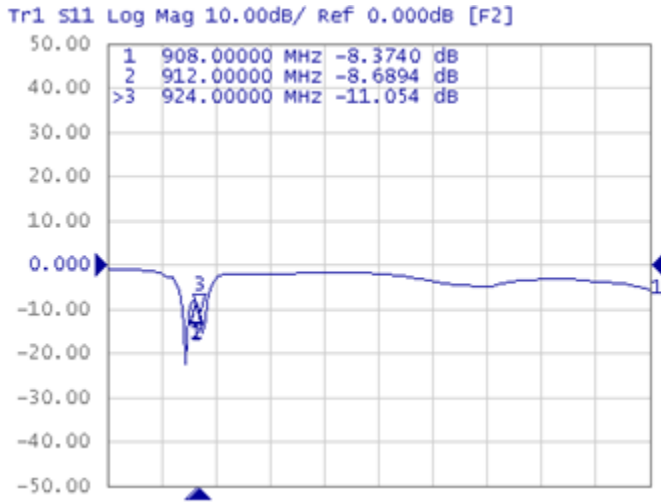


## Antenna Installation on PCB Inside The Xti Panel

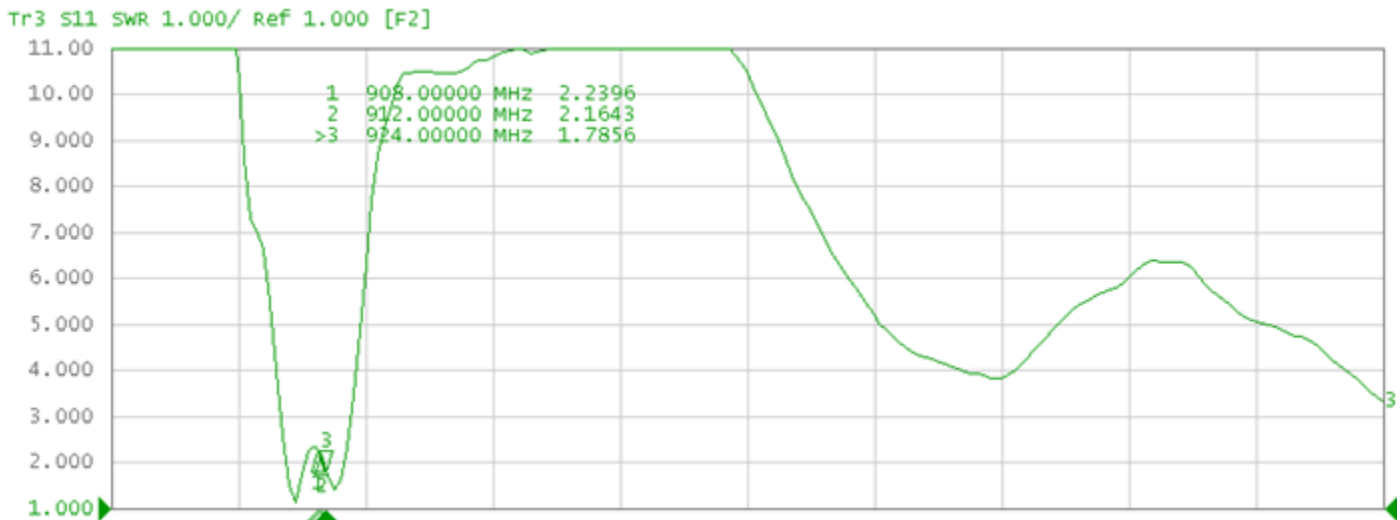




## D.Return Loss & VSWR Curve \_ Xt Panel \_ Z-Wave Antenna



Return Loss Curve



VSWR Curve



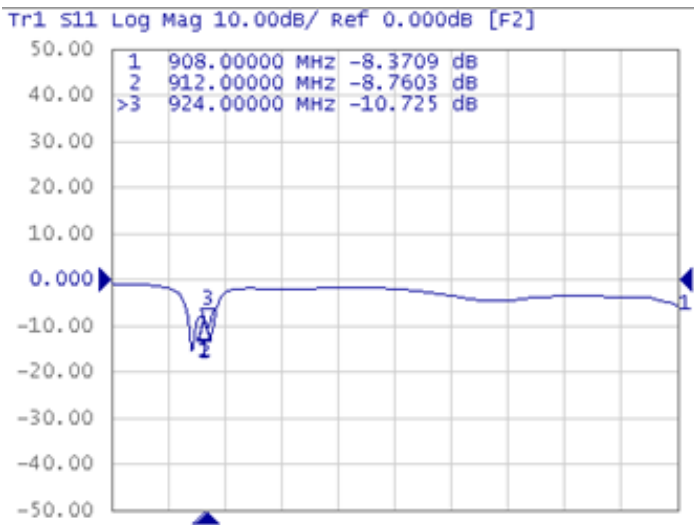
## E. Antenna Efficiency & Gain Table \_ Xt Panel \_ Z-Wave Antenna

Frequency(MHZ)	Efficiency	Efficiency . dB	Peak _ Gain(dBi)
900	32.16%	-4.93	-0.65
905	32.70%	-4.85	-0.74
910	33.11%	-4.80	-0.84
915	33.01%	-4.81	-0.99

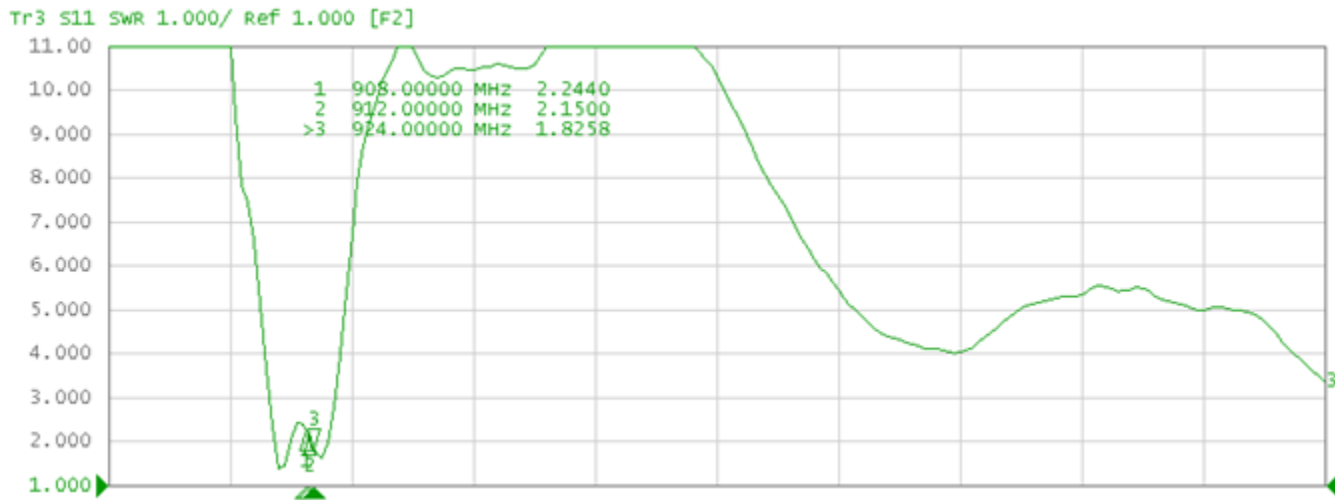
\*\* Antenna is tested inside the Satimo Starlab Anechoic Chamber



## F. Return Loss & VSWR Curve \_ Xti Panel \_ Z-Wave Antenna



Return Loss Curve



VSWR Curve



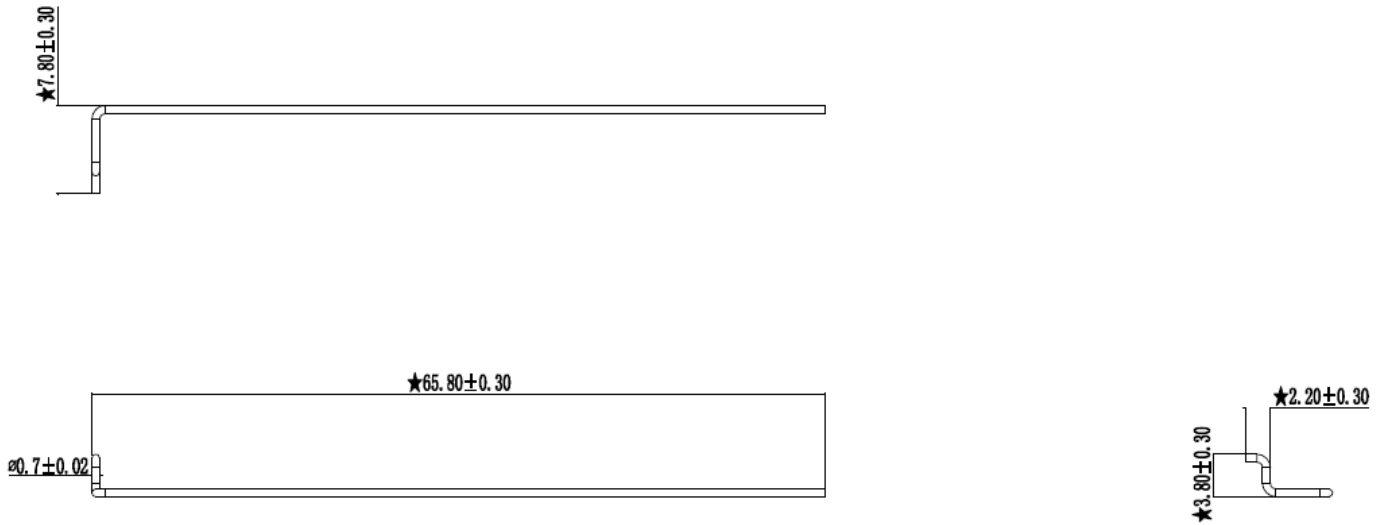
## G.Antenna Efficiency & Gain Table \_ Xti Panel \_ Z-Wave Antenna

Frequency(MHZ)	Efficiency	Efficiency . dB	Peak_Gain(dBi)
900	28.32%	-5.48	-0.96
905	28.52%	-5.45	-0.76
910	29.02%	-5.37	-0.54
915	29.72%	-5.27	-0.32

\*\* Antenna is tested inside the Satimo Starlab Anechoic Chamber



## K. Antenna Drawing \_ Z-Wave Antenna \_ Xt & Xti Panels



Xt & Xti Panel – Z-Wave Antenna\_908MHz  
 Part Number: E-AL-Z-C-78-908

Part Number	Description
E	Custom Embedded
AL	Alarm.com
Z	Z-Wave Application
C	Copper Wire
78	7: Xt Panel 8: Xti Panel
908	Frequency: 908MHz