



LadyBug Technologies, LLC

Preliminary

Option 4KZ

4khz Supplemental Data Sheet

For

LB59XXL

True-RMS Power Sensors

LB59XXL Option 4KZ Specifications

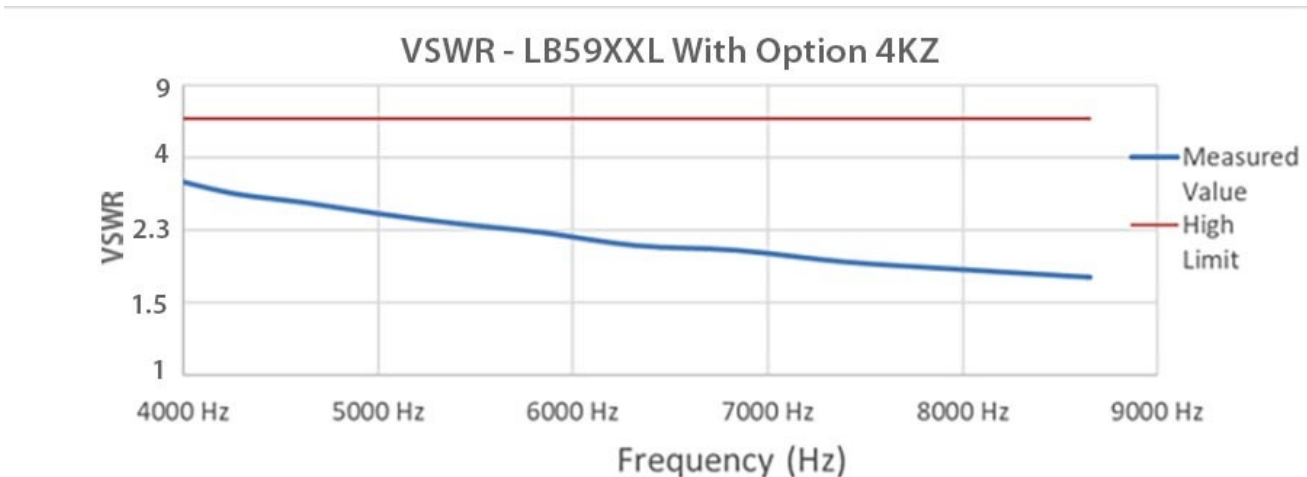


Option 4KZ General Description

The LB59XXL are high accuracy True-RMS Power Sensors for general purpose, automated testing, laboratory, defense and satellite use. This document details Option 4KZ, which extends the lower calibrated frequency range to 4kHz. The option can only be applied to “L” versions of LadyBug LB5900 series power sensors, such as the LB5954L shown above.

This option includes calibration, plus test data for Reference Level and Test Data for Reflection Coefficient. A certificate of Traceable Calibration is not provided for the portion of the calibration that extends below 9kHz.

Parameter	Option 4KZ Specification (supplemental to the LB59xxL Data Sheet)	
Dynamic Range (Calibrated Measurement Range)	Average Mode: -60 dBm to +26 dBm	
Parameter	Specification	Typical
Match 4kHz to 9kHz	5.85 VSWR	See plot below
Calibration Factor Unc. 4kHz to 9kHz	3.88% K=2 (K is coverage factor)	TBD



LB59XXL Option 4KZ Specifications

RF & Microwave Power Measurements



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Calibration Data Report

Certificate Number: 4kz210121

Model
LB5926L

Serial Number
210121

Calibration Date
20-Jul-2023

Reflection Coefficient:

Frequency	Nominal	Low Limit	Measured Value	High Limit	Uncertainty (K=2)	Units	Result
4000 Hz	0	0	0.534	0.708	0.059	Linear	Pass
4271 Hz	0	0	0.501	0.708	0.059	Linear	Pass
4620 Hz	0	0	0.477	0.708	0.059	Linear	Pass
4997 Hz	0	0	0.446	0.708	0.059	Linear	Pass
5405 Hz	0	0	0.419	0.708	0.059	Linear	Pass
5846 Hz	0	0	0.394	0.708	0.059	Linear	Pass
6323 Hz	0	0	0.369	0.708	0.059	Linear	Pass
6839 Hz	0	0	0.345	0.708	0.059	Linear	Pass
7397 Hz	0	0	0.313	0.708	0.059	Linear	Pass
8001 Hz	0	0	0.291	0.708	0.059	Linear	Pass
8653 Hz	0	0	0.270	0.708	0.059	Linear	Pass

Sample Data Report

Reference Level (measured at -20 dBm):

Frequency	Nominal	Low Limit	Measured Value	High Limit	Uncertainty (K=2)	Units	Result
4000 Hz	0	-0.260	+0.072	+0.260	-0.066 / +0.066	dB	Pass
4271 Hz	0	-0.260	+0.066	+0.260	-0.066 / +0.066	dB	Pass
4620 Hz	0	-0.260	+0.111	+0.260	-0.066 / +0.066	dB	Pass
4997 Hz	0	-0.260	+0.119	+0.260	-0.066 / +0.066	dB	Pass
5405 Hz	0	-0.260	+0.120	+0.260	-0.066 / +0.066	dB	Pass
5846 Hz	0	-0.260	+0.133	+0.260	-0.066 / +0.066	dB	Pass
6323 Hz	0	-0.260	+0.104	+0.260	-0.066 / +0.066	dB	Pass
6839 Hz	0	-0.260	+0.126	+0.260	-0.066 / +0.066	dB	Pass
7397 Hz	0	-0.260	+0.104	+0.260	-0.066 / +0.066	dB	Pass
8001 Hz	0	-0.260	+0.096	+0.260	-0.066 / +0.066	dB	Pass
8653 Hz	0	-0.260	+0.105	+0.260	-0.066 / +0.066	dB	Pass