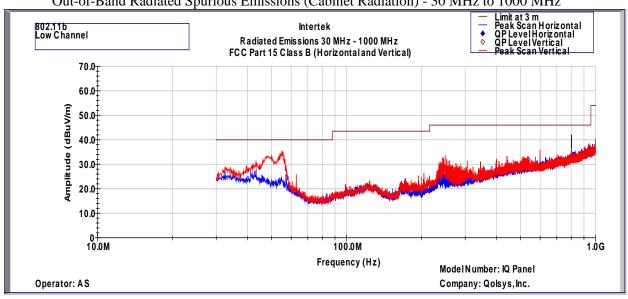


#### **Out-of-Band Radiated Spurious Emissions (Cabinet Radiation)**

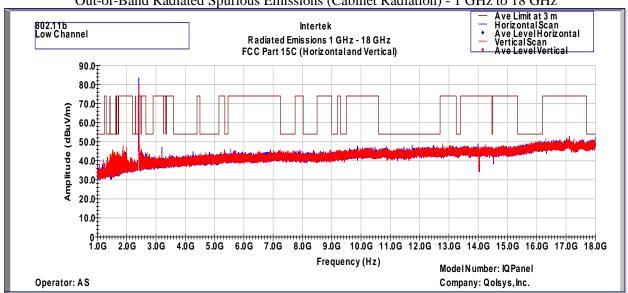
Test Date: February 10 - 17, 2016

## Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2412MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

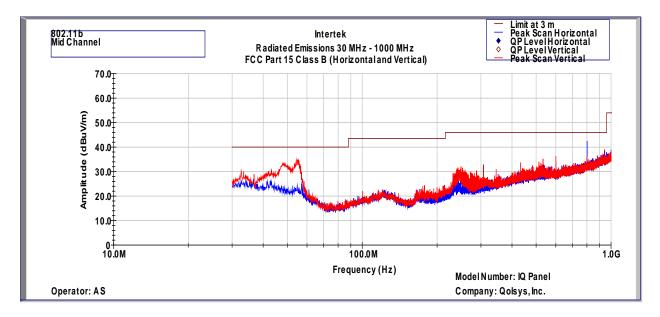
Note: FS@3m = RA + AF + CF - Preamp, (Peak) Corrected Peak Scans are under the Average Limit of 54.

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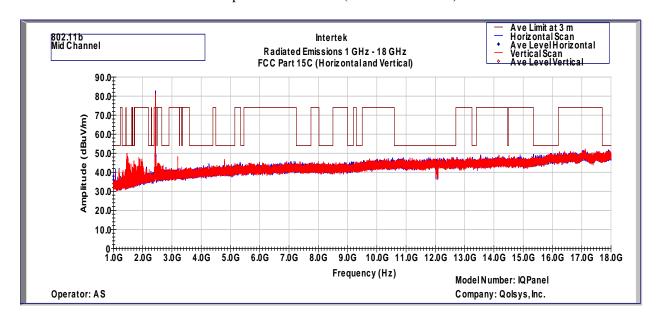


#### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2437MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz

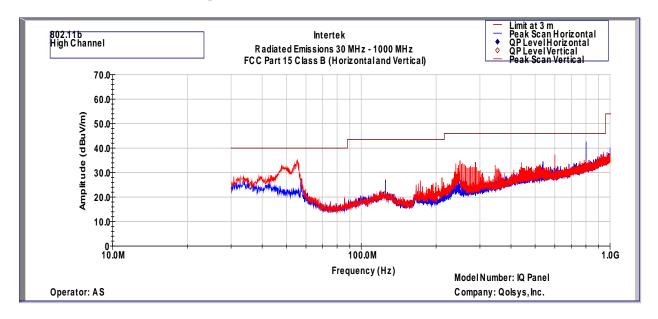


Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

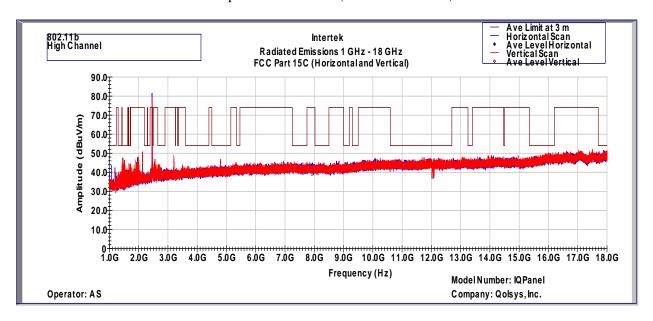


#### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2462MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

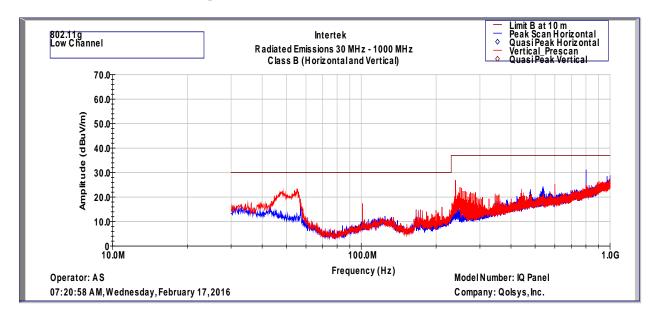
Note: FS@3m = RA + AF + CF - Preamp, (Peak) Corrected Peak Scans are under the Average Limit of 54.

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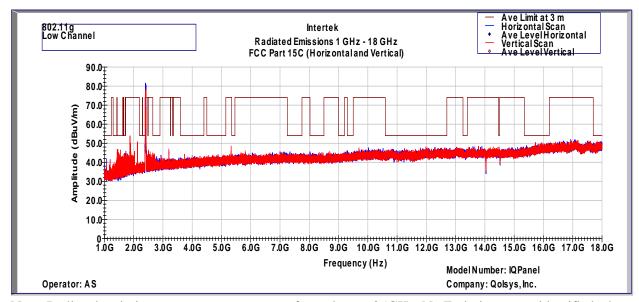


#### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2412MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

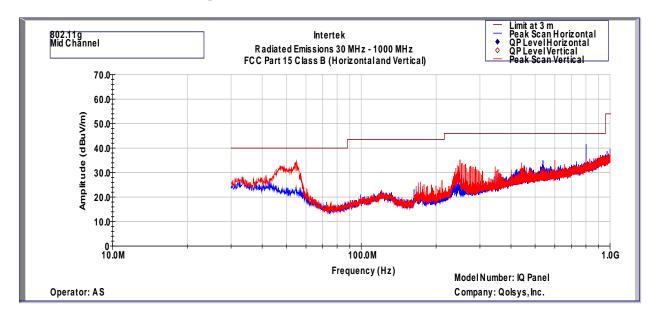
Note: FS@3m = RA + AF + CF - Preamp, (Peak) Corrected Peak Scans are under the Average Limit of 54.

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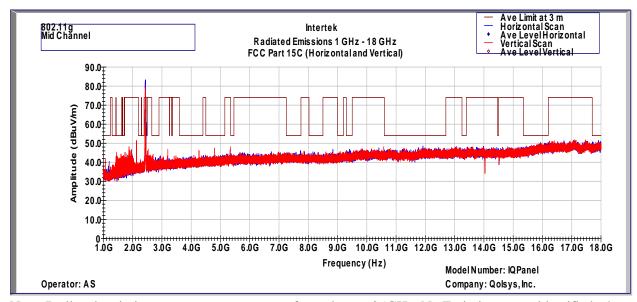


### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2437MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz

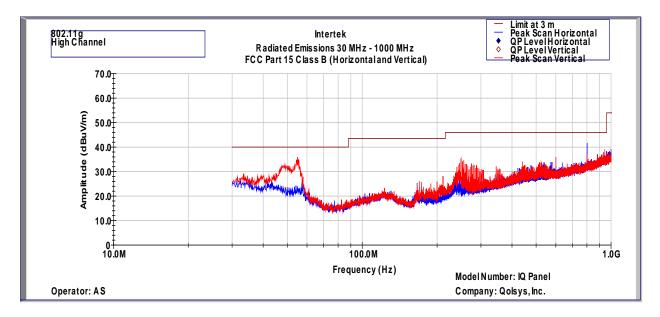


Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

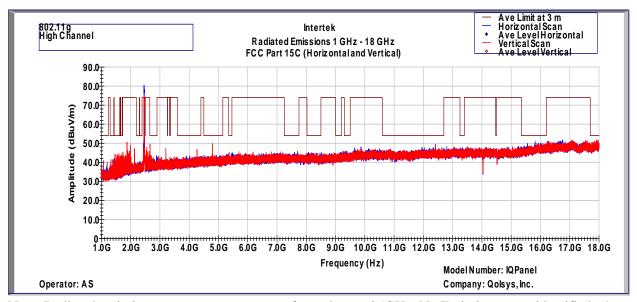


#### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2462MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz

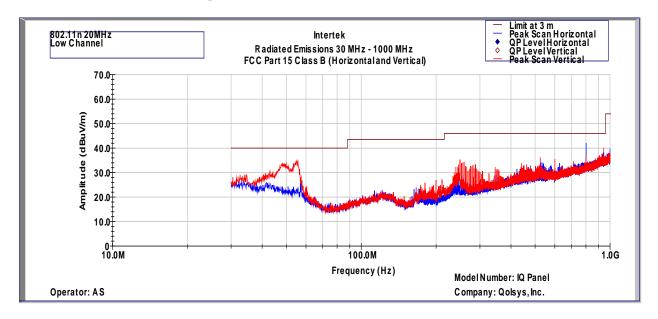


Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

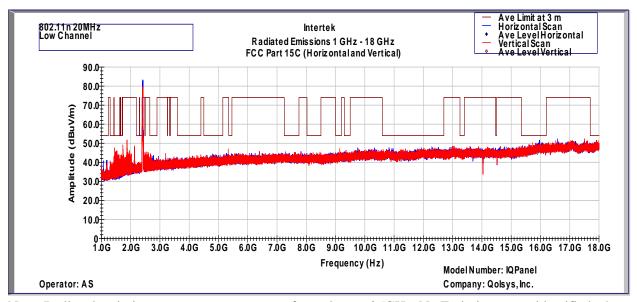


#### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 20MHz 2412MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

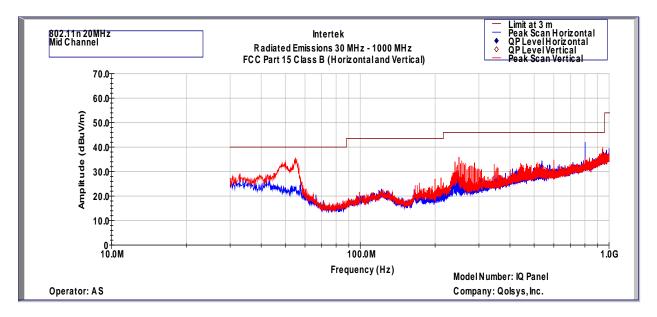
Note: FS@3m = RA + AF + CF - Preamp, (Peak) Corrected Peak Scans are under the Average Limit of 54.

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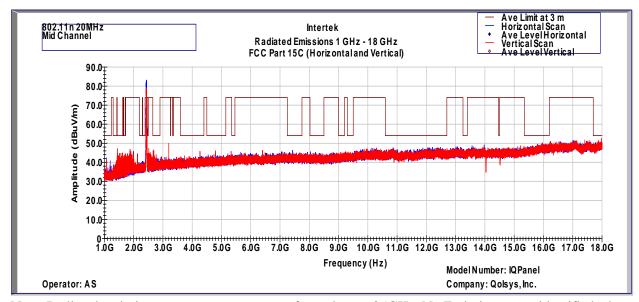


#### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 20MHz 2437MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

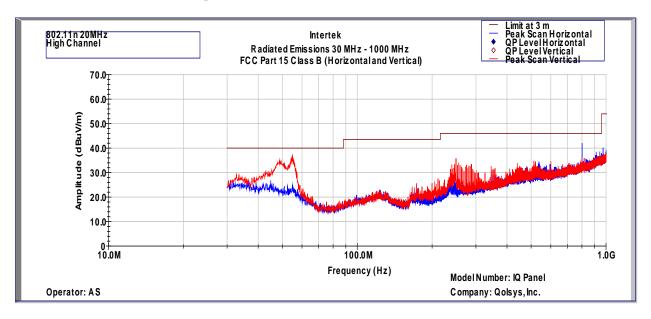
Note: FS@3m = RA + AF + CF - Preamp, (Peak) Corrected Peak Scans are under the Average Limit of 54.

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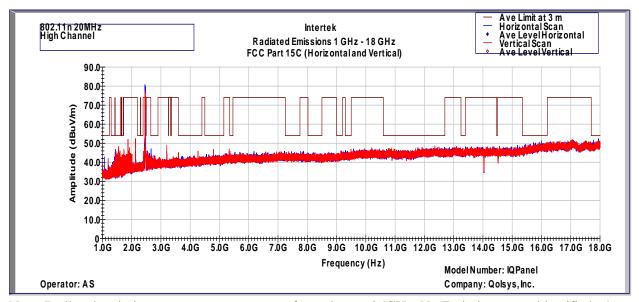


### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 20MHz 2462MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz

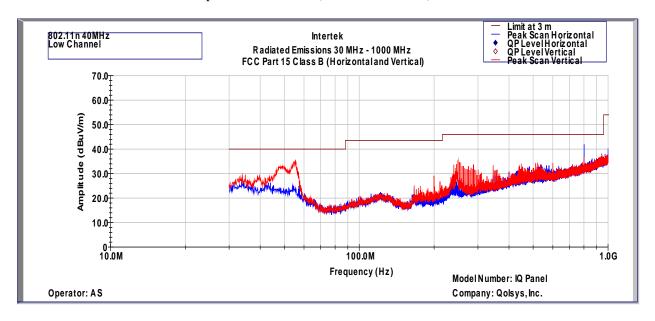


Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

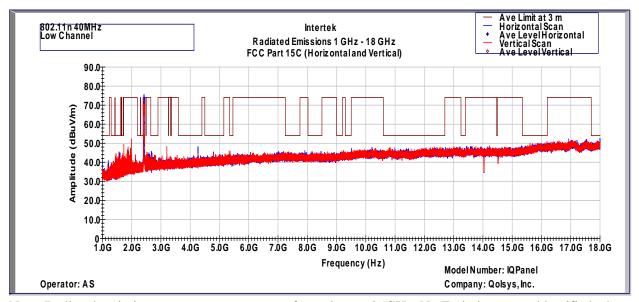


#### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 40MHz 2422MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

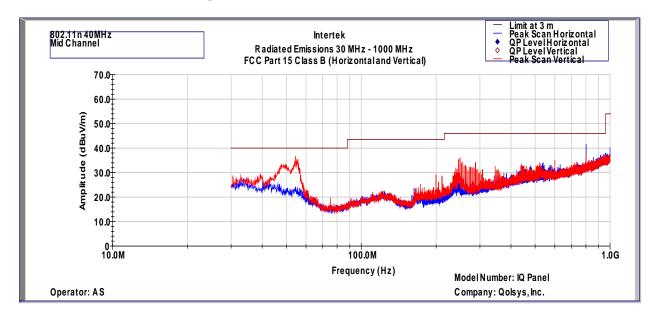
Note: FS@3m = RA + AF + CF - Preamp, (Peak) Corrected Peak Scans are under the Average Limit of 54.

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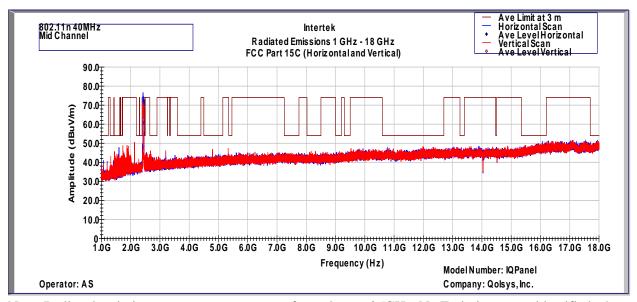


### Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 40MHz 2437MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

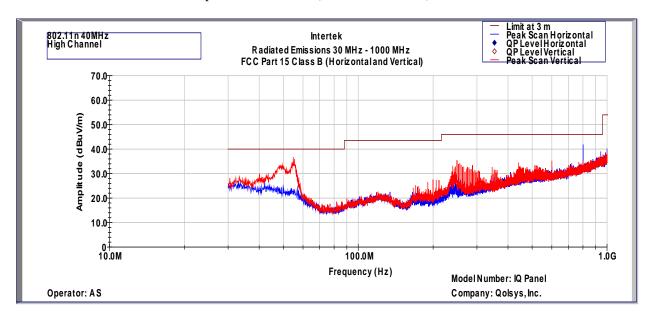
Note: FS@3m = RA + AF + CF - Preamp, (Peak) Corrected Peak Scans are under the Average Limit of 54.

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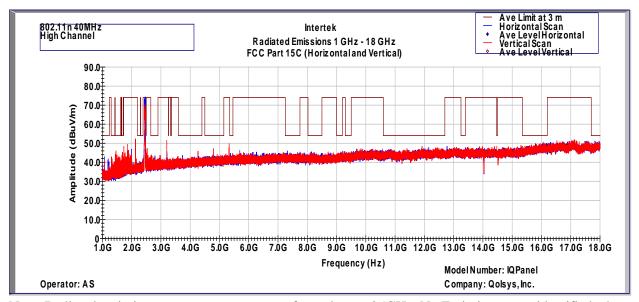


#### Test Results: 15,209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 40MHz 2452MHz

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 30 MHz to 1000 MHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz

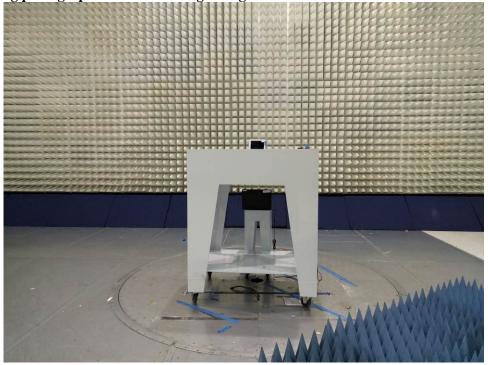


Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz



# 4.5.8 Test Setup Photographs

The following photographs show the testing configurations used.





EMC Report for Qolsys, Inc. on the IQ Panel 2 Home Security Panel File: 102374971MPK-002

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# 5.0 List of Test Equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

Equipment	Manufacturer	Model/Type	Asset #	Cal Int	Cal Due
EMI Receiver	Rohde and Schwarz	ESU	ITS 00961	12	06/02/16
Spectrum Analyzer	Rohde and Schwarz	FSU	ITS 00913	12	01/05/17
BI-Log Antenna	Antenna Research	LPB-2513	ITS 00355	12	08/11/16
Pyramidal Horn Antenna	EMCO	3160-09	ITS 00571	#	#
Pre-Amplifier	Sonoma Instrument	310	ITS 00942	12	01/07/17
Pre-Amplifier (18-40GHz)	Miteq	JSD44-18004000-305P	ITS 00921	12	06/18/16
Horn Antenna/Preamp	EMCO	3117PA	ITS 01325	12	11/23/16

<sup>#</sup> No Calibration required



# **6.0** Document History

Revision/ Job Number	Writer Initials	Reviewers Initials	Date	Change
1.0 / G102374971	AS	KV	March 25, 2016	Original document

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