Company:	Kenall Manufacturing
Model Tested:	L-3805
Certification Exhibit:	RF Exposure

FCC Code of Federal Regulations 47 Part 1.1307(b) (1)

RF Exposure Statement of Compliance

THE FOLLOWING **MEETS** THE ABOVE TEST SPECIFICATION

Formal Name: Kenall TekLink 915 MHz Radio Transceiver Module

Kind of Equipment: IEEE 802.15.4 Radio Transceiver module

Frequency Range: 906-924 MHz

Test Configuration: DC powered transceiver module

Model Number(s):   L-3805

Model(s) Tested: L-3805

Serial Number(s):   0001

Date of Tests: November 15th, 2016

Test Conducted For: Kenall Manufacturing
10200 55th Street
Kenosha, WI 53144-4601, USA

	Company:	Kenall Manufacturing
	Model Tested:	L-3805
	Certification Exhibit:	RF Exposure

166 South Carter, Genoa City, WI 53128

Transmitter Information:

Maximum Conducted Output Power:	24.09 dBm (256 mW)
Maximum Effective Isotropic Radiated Power	25.89 dBm
Frequency:	906 MHz
Antenna Type:	Quarter wave with counterpoise – or – PCB quarter wave
Antenna Gain:	1.8 dBi (same for both antenna options)

Exposure Limit:

Maximum Permissible Exposure (MPE) limit for <u>General Population / Uncontrolled Exposure</u> in the frequency range 300 – 1,500 MHz (ref: 47 CFR Part 1.1310 Table 1(b))

Limit: (S) (mW/cm^2) =   f/1500 mW/cm^2, where f = frequency in MHz
Limit = (906/1500) mW/cm^2 = **0.604** mW/cm^2

MPE Calculation:

Power Density (mW/cm^2):

$$S = \frac{PG}{4\pi R^2}$$

S = Power Density (mW/cm^2)
P = Power Input to the antenna (mW)
G = Numeric Power Gain of the antenna
R = Distance to the center of the radiation of the antenna (cm)

Company: Kenall Manufacturing
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Results:

RF Exposure Calculation

	Input	
Frequency =	906	MHz
P =	24.09	dBm
G =	1.8	dBi
R =	20	cm
π	3.14159	

Transmit Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Power Density (mW/cm²)	Power Density Limit (mW/cm²)	Margin
906	24.09	256.44840	1.8	1.51356	20	0.0772	0.6	0.527

Summary of Results:

With a minimum separation distance of 20 centimeters as defined by FCC 2.1091(b), for a mobile device, the Kenall Manufacturing Kenall TekLink 915 MHz Radio Transceiver Module **meets** the RF exposure evaluation requirements for maximum permissible exposure to any radiating structure and the general population / uncontrolled exposure.

Conclusion:

The Kenall Manufacturing Kenall TekLink 915 MHz Radio Transceiver Module operating under FCC part 15.247 complies with the requirements of FCC Part 1.1307(b)(1) for RF Exposure Evaluation.

Supporting data to follow…

DLS ELECTRONIC SYSTEMS, INC.

Company: Kenall Manufacturing
Model Tested: L-3805
Certification Exhibit: RF Exposure

166 South Carter, Genoa City, WI 53128

Test Date: 11-15-2016
Company: Kenall
EUT: Link900G1
Test: Fundamental Emission Output Power - Conducted
Operator: Craig B

Comment: Method AVGSA-1 – maximum conducted (average) output power
               SPAN 1.5 x OBW
               RBW = 1% to 5% OBW
               VBW ≥ 3 x RBW
               Sweep = auto couple
               Detector = RMS
               Trace = average 200 traces
               Integrate power over OBW

Comment: Low channel: Frequency – 906 MHz
               Output power setting 21

Fundamental Emission Output Power = 24.09 dBm = **256 mW**

Max/Ref Lvl	Marker 1 [T1]		RBW	30 kHz	RF Att	40 dB
35 dBm		13.29 dBm	VBW	100 kHz		
25 dBm		906.08767535 MHz	SWT	7 ms	Unit	dBm

▼1 [T1]   13.29 dBm
               906.08767535 MHz
CH PWR   24.09 dBm
CH BW   1.16000000 MHz

Center 906 MHz   250 kHz/   Span 2.5 MHz

Date: 15.NOV.2016   11:21:11

![DLS Electronic Systems, Inc. logo]

Company: Kenall Manufacturing
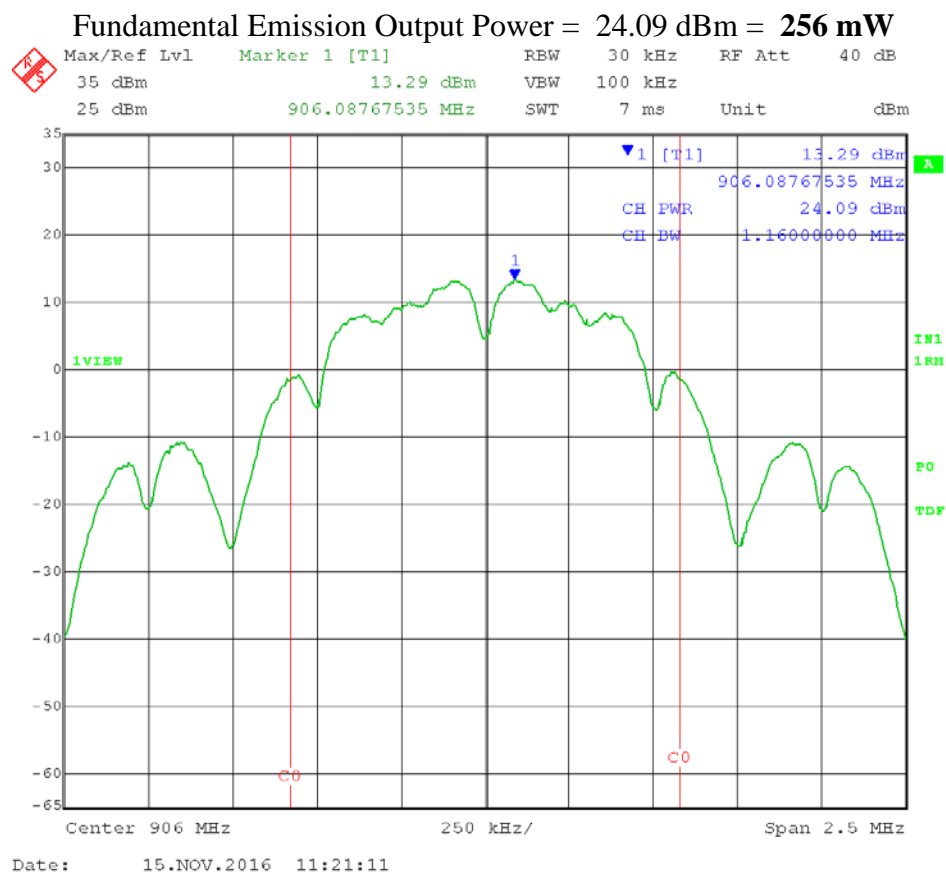Model Tested: L-3805
Certification Exhibit: RF Exposure

166 South Carter, Genoa City, WI 53128

Test Date: 11-15-2016
Company: Kenall
EUT: Link900G1
Test: Fundamental Emission Output Power - Conducted
Operator: Craig B

Comment: Method AVGSA-1 – maximum conducted (average) output power
            SPAN 1.5 x OBW
            RBW = 1% to 5% OBW
            VBW ≥ 3 x RBW
            Sweep = auto couple
            Detector = RMS
            Trace = average 200 traces
            Integrate power over OBW

Comment: Mid channel: Frequency – 914 MHz
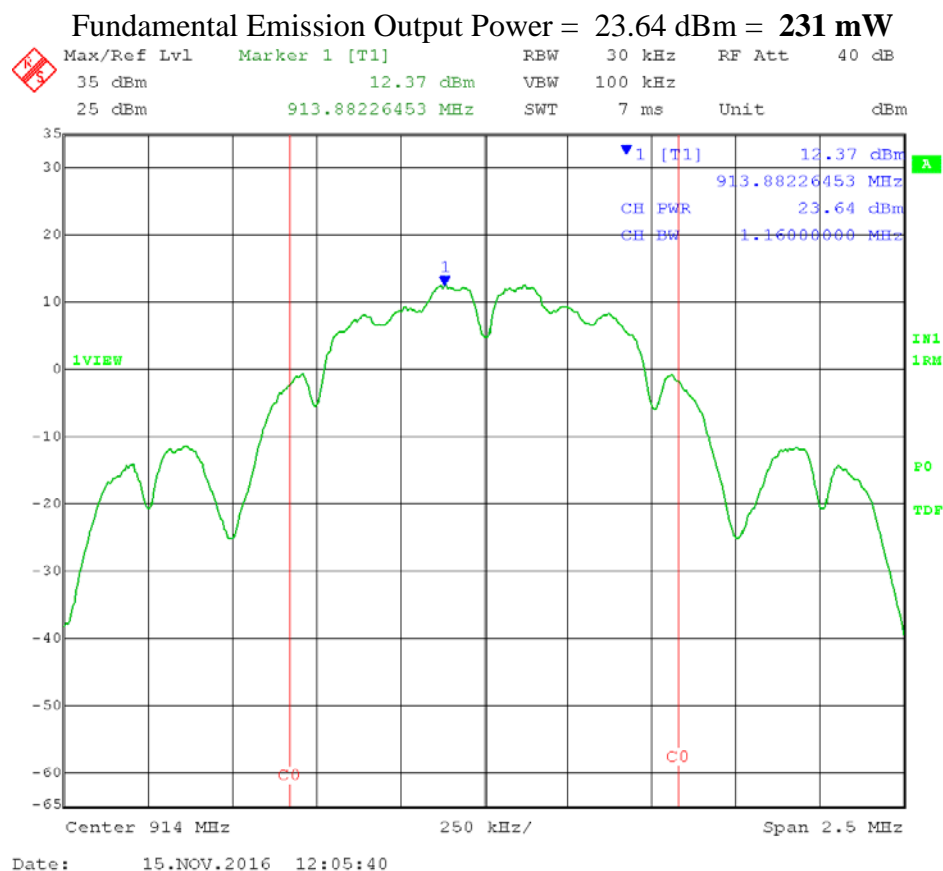   Output power setting 21

Fundamental Emission Output Power = 23.64 dBm = **231 mW**

Max/Ref Lvl	Marker 1 [T1]		RBW	30 kHz	RF Att	40 dB
35 dBm		12.37 dBm	VBW	100 kHz		
25 dBm		913.88226453 MHz	SWT	7 ms	Unit	dBm

▼1 [T1]   12.37 dBm
                         913.88226453 MHz
CH PWR   23.64 dBm
CH BW   1.16000000 MHz

1VIEW
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PO
TDF

Center 914 MHz   250 kHz/   Span 2.5 MHz

Date: 15.NOV.2016 12:05:40

DLS
ELECTRONIC SYSTEMS, INC.

Company: Kenall Manufacturing
Model Tested: L-3805
Certification Exhibit: RF Exposure

166 South Carter, Genoa City, WI 53128

Test Date: 11-15-2016
Company: Kenall
EUT: Link900G1
Test: Fundamental Emission Output Power - Conducted
Operator: Craig B

Comment: Method AVGSA-1 – maximum conducted (average) output power
              SPAN 1.5 x OBW
              RBW = 1% to 5% OBW
              VBW ≥ 3 x RBW
              Sweep = auto couple
              Detector = RMS
              Trace = average 200 traces
              Integrate power over OBW

Comment: High channel: Frequency – 924 MHz
              Output power setting 21

Fundamental Emission Output Power = 22.74 dBm = **188 mW**