Certification Exhibit

Contains FCC IDs: SK9ITR9002, SK9NIC, SK9WF111, N7NEM7455

FCC Rule Part: 2.1091

Project Number: 72148094

Manufacturer: Itron Inc
Model: PMR

RF Exposure

General Information:

Applicant: Itron Inc
Device Category: Fixed
Environment: General Population/Uncontrolled Exposure
Exposure Conditions: Greater than 20 centimeters

Technical Information: SK9ITR9002

Antenna Type: External Omnidirectional (Laird, P/N: TRA9023P)
Antenna Gain: 3dBi
Maximum Transmitter Conducted Power: 26.39 dBm, 435.51 mW
Maximum System EIRP: 28.385 dBm, 868.96 mW

Technical Information: SK9NIC

Antenna Type: External Omnidirectional (Laird, P/N: TRA9023P)
Antenna Gain: 3dBi
Maximum Transmitter Conducted Power: 27.0 dBm, 501.19 mW
Maximum System EIRP: 30.0 dBm, 1000 mW
Note: Conducted output power reduced from original certification in order to meet the 1W aggregate power limit for two co-located 900MHz radios.

Technical Information: SK9WF111

Antenna Type: Monopole (Taoglas, P/N GW26.0112)
Antenna Gain: 1.8dBi
Maximum Transmitter Conducted Power: 19.15 dBm, 82.22 mW
Maximum System EIRP: 20.95dBm, 124.45 mW

Technical Information: N7NEM7455

Antenna Type: External Omnidirectional (Laird, P/N: TRA6927M3PWN-001)

LTE Band 2 (1850-1910MHz)
Antenna Gain: 5.5dBi
Maximum Transmitter Conducted Power: 24 dBm, 251.19 mW
Maximum System EIRP: 29.9 dBm, 891.25 mW

LTE Band 4 (1710-1755MHz)
Antenna Gain: 5.5dBi
Maximum Transmitter Conducted Power: 24 dBm, 251.19 mW
Maximum System EIRP: 29.9 dBm, 891.25 mW

LTE Band 5 (824-849MHz)
Antenna Gain: 3.5dBi
Maximum Transmitter Conducted Power: 24 dBm, 251.19 mW
Maximum System EIRP: 27.5 dBm, 562.34 mW

LTE Band 12 (699-716MHz)
Antenna Gain: 3.5dBi
Maximum Transmitter Conducted Power: 24 dBm, 251.19 mW
Maximum System EIRP: 27.5 dBm, 562.34 mW

LTE Band 13 (777-787MHz)
Antenna Gain: 3.5dBi
Maximum Transmitter Conducted Power: 24 dBm, 251.19 mW
Maximum System EIRP: 27.5 dBm, 562.34 mW

MPE Calculation

The Power Density (mW/cm^2) is calculated as follows:

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

Where:
S = power density (in appropriate units, e.g. mW/cm²)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Table 1: MPE Calculation

Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/cm^2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)
902	26.39	0.60	435.51	3	1.995	20	0.173
902	27	0.60	501.19	3	1.995	20	0.199
2400	19.15	1.00	82.22	1.8	1.514	20	0.025
1850	24	1.00	251.19	5.5	3.548	20	0.177
1710	24	1.00	251.19	5.5	3.548	20	0.177
824	24	0.55	251.19	3.5	2.239	20	0.112
699	24	0.47	251.19	3.5	2.239	20	0.112
777	24	0.52	251.19	3.5	2.239	20	0.112

Table 2: Simultaneous Transmissions Calculations

Technology	Transmit Frequency (MHz)	Power Density Limit (mW/m^2)	Power Density (mW/m^2)	MPE Ratio to Limit (%)	Sum of MPE Ratios (%)	Limit (%)
LTE B2	1850	1.00	0.177	17.7	82.0	100
ITR9002	902	0.60	0.173	28.7		
NIC	902	0.60	0.199	33.1		
WiFi	2400	1.00	0.025	2.5		
LTE B4	1710	1.00	0.177	17.7	82.0	100
ITR9002	902	0.60	0.173	28.7		
NIC	902	0.60	0.199	33.1		
WiFi	2400	1.00	0.025	2.5		
LTE B5	824	0.55	0.112	21.6	85.9	100
ITR9002	902	0.60	0.173	28.7		
NIC	902	0.60	0.199	33.1		
WiFi	2400	1.00	0.025	2.5		
LTE B12	699	0.47	0.112	34.2	98.5	100
ITR9002	902	0.60	0.173	28.7		
NIC	902	0.60	0.199	33.1		
WiFi	2400	1.00	0.025	2.5		
LTE B13	777	0.52	0.112	20.4	84.7	100
ITR9002	902	0.60	0.173	28.7		
NIC	902	0.60	0.199	33.1		
WiFi	2400	1.00	0.025	2.5		