RF EXPOSURE INFORMATION:

No SAR Report is required due to the total maximum source-based time-averaged radiated power being less than the FCC's low power threshold for general population exposure category.

DUT Description: IMD/SV (Intelligent Mail Device/Surface Visibili) handheld data terminal with Bluetooth 2.402-2.48GHz, ERP 2.19mW and WLAN 2.412-2.462GHz, ERP 162mW.

EIRP

Transmitter	Module max pwr (mW)	Ant. Gain (dBi)	Max Radiated pwr (mW)
Bluetooth	1.05	3.2	2.19
WLAN	100	2.1	162

WLAN maximum transmission duty cycle and ERP rationale
    This device can scan up to 3000 barcodes in a 10 hour shift.
    Typical 1D (1 Dimension) barcode contains 100 to 300 bits of data while a 2D barcode contains 31,160 bits of data.
    Therefore the maximum theoretical case for 2D barcode is 31,160 bits of data (Data Matrix symbology).
    The IMD embedded imager scans the barcode labels and the data is transmitted to the applicable computing infrastructure, using WLAN. The WLAN overhead protocol is 100%.
    The WLAN channel rate is 1Mbits/Sec to 11Mbits/Sec.
Calculation
    3000 scans in 10 hours = 3000/10/60/60 = 1 scan each 12 seconds
    For each 12 seconds:
        Max data size is 31160 bits
        Max transmission size (including protocols overhead) is
        31160 * 2 = 62320 bits
    Max transmission time each 12 seconds is:
        At best case (11 Mbps), the transmission time is
        62320 /11Mbps = 5.66 mSec.
        At worst case, (1 Mbps), the transmission time is
        62320 /1M = 62.32 mSec.
    At worst case, the WLAN is operating at (62.32msec/12)*100 = **0.52%**

    WLAN Maximum EIRP with sourced-based time-averaged output
    $0.52\% * 162mW = 0.84mW$

Bluetooth maximum transmission duty cycle rationale
    This device can scan up to 3000 barcodes in a 10 hours shift.
    Typical 1D (1 Dimension) barcode contains 100 to 300 bits of data while a 2D barcode contain 31,160 bits of data. The Hands Free Imager scans the barcode labels and the data is transmitted to the IMD using Bluetooth. The use of the Hands Free Imager presents the only condition where simultaneous transmissions between Bluetooth and WLAN occur. This condition also presents the highest duty cycle for Bluetooth. This condition is considered for the calculations presented below. The Bluetooth's duty cycle overhead protocol is 50%. The Bluetooth channel rate is 1Mbits/Sec.
    Calculation
    3000 scans in 10 hours = 3000/10/60/60 = 1 scan each 12 seconds
    For each 12 seconds:
        Max data size is 31160 bits
        Max transmission size (including protocols overhead) is
        31160 * 1.5 = 46740 bits
        Max transmission time each 12 seconds is 46740 /1M = 46.74 mSec.
    The BT is operating at 46.74 msec/12*100 = **0.39%**
    BT Maximum EIRP with sourced-based time-averaged output
    $0.39\% * 2.19mW = 0.01mW$

TCB Low Power Exclusion

Exposure category	low threshold
general population	$(60/f_{GHz})$ mW, $d < 2.5$ cm $(120/f_{GHz})$ mW, $d \geq 2.5$ cm

Low threshold for WLAN at 2.437GHz

$$\frac{60}{2.437GHz} = 24.6mW$$

$0.84mW < 24.6mW$ and therefore meets the low power threshold criteria in the TCB exclusion list.

Low threshold for Bluetooth at 2.441GHz

$$\frac{60}{2.441} = 24.6mW$$

$0.01mW < 24.6mW$ and therefore meets the low power threshold criteria in the TCB exclusion list.

Low threshold for simultaneous transmission of WLAN and BT

$$0.84mW + 0.01mW = 0.85mW$$

$0.85mW < 24.6mW$ and therefore meets the low power threshold criteria in the TCB exclusion list.

The User does not have the capability to change the duty cycle to increase the average radiated power of the device.

Exhibit 11