RF Exposure Requirements

Product Description: DUPLEX DS-12
Model No.: DUPLEX DS-12
FCC ID: 2AW4Z-DUPLEXDS12

According to the KDB 447498 D01 v06 section 4.3.1, for 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Calculation Result:

2.4G: SRD
Tx frequency range: 2405MHz - 2480MHz
Min. test separation distance: 5mm
Maximum Conducted Output Power: 7.89dBm
Tune-Up output power: 8dBm
RF channel transmit frequency: 2405MHz
Result: 1.96
Limit: 3.0

900MHz: SRD(F1)
Tx frequency range: 902.5-927.7MHz
Min. test separation distance: 5mm
Maximum Conducted Output Power: 1.78dBm
Tune-Up output power: 2dBm
RF channel transmit frequency: 902.5MHz
Result: 1.20
Limit: 3.0

900MHz: SRD(L1 F7/ L2 SF6)
Tx frequency range: 902.5-927.3MHz
Min. test separation distance: 5mm
Maximum Conducted Output Power: 1.77dBm
Tune-Up output power: 2dBm
RF channel transmit frequency: 902.5MHz
Result: 1.20
Limit: 3.0

SRD: 2.4G and SRD: 900MHz can’t transmit at the same time.so the transmitter complies with the RF exposure requirements and the SAR is not required.