

RF Exposure Evaluation Report

1 RF EXPOSURE

Product Name: Card Reader

Model No.: A02-C, PT160, PT180, PT200, PT280, PT289LF, DWELL-BLE01, RPD-180, RPD-190, RPD-200, RPD-201, RPD-202, RPD-A03, RPD-A04, RPD-A06, DW90A

FCC ID: 2BM3K-A02-C

2. RF Exposure Evaluation

FCC KDB447498 D01 General RF Exposure Guidance v06: Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures.

FCC CFR 47 part1 1.1310: Radiofrequency radiation exposure limits.

FCC CFR 47 part2 2.1093 Radiofrequency radiation exposure evaluation: portable devices.

2.1 LIMITS

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ 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

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2.2 EUT RF EXPOSURE EVALUATION

Worst Mode:						
Channel	Conducted Power (dBm)	Tune up Tolerance (dBm)	Maximum tune-up Power		Calculated value	Limit
			(dBm)	(mW)		
BLE-2480MHz	5.29	5.0 ± 1.0	6.0	3.981	1.254	3.0
SRD-134.2KHz	2.02	2.0 ± 1.0	3.0	1.995	0.1462	3.0

dbm=dbuv/m-95.2, so the SRD power is $97.22-95.2=2.02\text{dBm}$

Calculated value is 1.254&0.1462 both less than limit 3.0, So there is no require SAR test.