

## MAXIMUM PERMISSIBLE EXPOSURE

KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

## **EUT Specification**

FCC ID	2A4KN-PL80E					
EUT	Bluetooth Thermal Label Printer					
Frequency band (Operating)	BT: 2.402GHz ~ 2.480GHz					
	⊠ BLE: 2.402GHz ~ 2.480GHz					
	🗌 WLAN: 2.412GHz ~ 2.462GHz					
	🗌 RLAN: 5.180GHz ~ 5.240GHz					
	🗌 RLAN: 5.260GHz ~ 5.320GHz					
	🗌 RLAN: 5.500GHz ~ 5.700GHz					
	🗌 RLAN: 5.745GHz ~ 5.825GHz					
	Others:					
Device category	Portable (<20cm separation)					
	⊠ Mobile (>20cm separation)					
	Others					
Exposure classification	Occupational/Controlled exposure					
	General Population/Uncontrolled exposure					
Antenna diversity	⊠ Single antenna					
	☐ Multiple antennas					
	□ Tx diversity					
	□ Rx diversity					
	□ Tx/Rx diversity					
Antenna gain (Max)	-0.93dBi					
Evaluation applied	⊠ MPE Evaluation					
	□ SAR Evaluation					

### Limits for Maximum Permissible Exposure(MPE)

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	Frequency	Electric Field	Magnetic Field	Power	Average Time				
	Range(MHz)	Strength(V/m)	Strength(A/m)	Density(mW/cm <sup>2</sup> )					
	(A) Limits for Occupational/Control Exposures								
	300-1500			F/300	6				
	1500-100000			5	6				
	(B) Limits for General Population/Uncontrol Exposures								
	300-1500			F/1500	30				
	1500-100000			1	30				
Shenzhen									

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# Friis transmission formula: Pd=(Pout\*G)\(4\*pi\*R2)

### Where

reached.

Pd= Power density in mW/cm<sup>2</sup> Pout=output power to antenna in Mw G= gain of antenna in linear scale Pi=3.1416 R= distance between observation point and center of the radiator in cm Pd the limit of MPE. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is

## **Measurement Result**

Operating Mode	Maximum output power (dBm)	Tune tolerar (dBn	up าce า)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Power density at 20cm (mW/cm <sup>2</sup> )	Power density Limits (mW/cm <sup>2</sup> )
BLE	-0.37	-0.37	±1	0.63	-0.93	0.0002	1

Result: No Standalone SAR test is required.

#### Shenzhen Anbotek Compliance Laboratory Limited

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