RF EXPOSURE EVALUATION

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)

FCC ID: WUI-A28PRO

EUT Specification

EUT	A28PROWIFI
Model Number	BT532967
Rating	DC 3.3V
Frequency band (Operating)	☒WLAN: 2.412GHz ~ 2.462GHz ☐WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz ☐WLAN: 5.745GHz ~ 5.825GHz
Device category	☐Portable (<20cm separation) ☒Mobile (>20cm separation)
Exposure classification	☐Occupational/Controlled exposure (S = 5mW/cm2) ☒General Population/Uncontrolled exposure (S=1mW/cm2)
Antenna diversity	☒Single antenna ☐Multiple antennas ☐Tx diversity ☐Rx diversity ☐Tx/Rx diversity
Max. output power（peak power）	IEEE 802.11b: 15.06dBm IEEE 802.11g: 13.74dBm IEEE 802.11n-HT20: 13.44dBm IEEE 802.11n-HT40: 13.82dBm
Antenna gain (Max)	0.52dBi
Evaluation applied	☒MPE Evaluation ☐SAR Evaluation

Limits for Maximum Permissible Exposure(MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm^2)	Average Time
(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**	**6**
1500-100000	**--**	**--**	**1**	**30**

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

Where
Pd= Power density in mW/cm^2, 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=20cm
Pd the limit of MPE, 1mW/cm2. 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 reached.

Measurement Result

2.4GHz WIFI:

Operation Mode	Channel Number	Channel Frequency (MHz)	Measurement Level (dBm)	Limit (dBm)	Verdict
802.11b	1	2412	15.06	30	PASS
	6	2437	15.01	30	PASS
	11	2462	15.04	30	PASS
802.11g	1	2412	13.64	30	PASS
	6	2437	13.74	30	PASS
	11	2462	13.71	30	PASS
802.11n (HT20)	1	2412	13.05	30	PASS
	6	2437	13.31	30	PASS
	11	2462	13.44	30	PASS
802.11n (HT40)	3	2422	13.75	30	PASS
	6	2437	13.79	30	PASS
	9	2452	13.82	30	PASS

Operating Mode	Test Channel	Tune up tolerance (dBm)	Max tune up conducted power(dBm)	Output Peak power (mW)	Ant. Gain (dBi)	Ant. Gain (numeric)	Power density at 20cm (mW/ cm2)	Power density Limits (mW/ cm2)
802.11b	1	15±1	16	39.811	0.52	1.127	0.008927	1
	6	15±1	16	39.811	0.52	1.127	0.008927	1
	11	15±1	16	39.811	0.52	1.127	0.008927	1
802.11g	1	14±1	15	31.623	0.52	1.127	0.007091	1
	6	14±1	15	31.623	0.52	1.127	0.007091	1
	11	14±1	15	31.623	0.52	1.127	0.007091	1
802.11n (HT20)	1	13±1	14	25.119	0.52	1.127	0.005633	1
	6	13±1	14	25.119	0.52	1.127	0.005633	1
	11	13±1	14	25.119	0.52	1.127	0.005633	1
802.11n (HT40)	3	14±1	15	31.623	0.52	1.127	0.007091	1
	6	14±1	15	31.623	0.52	1.127	0.007091	1
	9	14±1	15	31.623	0.52	1.127	0.007091	1

The Product unsupported at the same time to Transmitting. According to KDB 447498, and no simultaneous SAR measurement is required.

Signature:

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