

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	2A2Z5S1PROS1ULTRAS1	
EUT	Dash cam	
Frequency band (Operating)	☒ BT: 2.402GHz ~ 2.480GH ☒ 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	
Max. output power	BLE: 4.84dBm 0.0030W WIFI 2.4G: 13.55dBm 0.0226W WIFI 5.2G: 15.61dBm 0.0364W WIFI 5.3G: 15.68dBm 0.0370W WIFI 5.6G: 16.31dBm 0.0428W WIFI 5.8G: 14.49dBm 0.0281W	
Antenna gain (Max)	BLE: 3.3dBi WiFi 2.4G: 3.3dBi Wi-Fi 5.2G: 3.61dBi Wi-Fi 5.3G: 3.7dBi Wi-Fi 5.6G: 3.7dBi Wi-Fi 5.8G: 2.61dBi	
Evaluation applied	☒ MPE Evaluation ☐ SAR Evaluation	

Shenzhen Anbotek Compliance Laboratory Limited

Address: 1/F., Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.
 Tel: (86) 0755-26066440 Fax: (86) 0755-26014772 Email: service@anbotek.com



Hotline
 400-003-0500
 www.anbotek.com.cn



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	30
1500-100000	--	--	1	30

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in Mw

G = gain of antenna in linear scale

π =3.1416

R = distance between observation point and center of the radiator in cm

P_d 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 reached.

Max Measurement Result

Operating Mode	Measured Power (dBm)	Tune up tolerance (dBm)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Power density at 20cm (mW/cm ²)	Power density Limits (mW/cm ²)
BLE	4.84	4.84 ±1	5.84	3.3	0.0016	1
WIFI 2.4G	13.55	13.55 ±1	14.55	3.3	0.0121	1
WIFI 5.2G	15.61	15.61 ±1	16.61	3.61	0.0209	1
WIFI 5.3G	15.68	15.68 ±1	16.68	3.7	0.0217	1
WIFI 5.6G	16.31	16.31 ±1	17.31	3.7	0.0251	1
WIFI 5.8G	14.49	14.49 ±1	15.49	2.61	0.0129	1

This product feature does not support simultaneous launch.

Result: No Standalone SAR test is required.

