

RF Exposure Evaluation

FCC ID: 2AMQR-X720

1. Client Information

Applicant : Shenzhen Zhixingsheng Electronics Co.,Ltd.
Address : 4/F, Building F.No.8 of East Zone, Shangxue Science Park, Bantian, Jihua Road, Longgang District, Shenzhen, China
Manufacturer : Shenzhen Zhixingsheng Electronics Co.,Ltd.
Address : 4/F, Building F.No.8 of East Zone, Shangxue Science Park, Bantian, Jihua Road, Longgang District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Action Camera
Models No.	:	X720, A720, B720, C720, D720, H720, I720, K720, N720, Q720, S720, T720, V720, W720, Pano720, 360A, 360B, 360C, 360D, 360E, 360F, 360H, 360I, 360K, 360M, 360N, 360Q, 360S, 360T, 360W, Pano360, PanoLive, A7, A7S, A100, A123, A180, A200, A300, A500, A600, A800, A900, A1000, B1, B2, B3, B5, B6, B8, B9, B10, B20, B30, B50, B60, B80, B90, B100, D3, D3S, D3W, D5, D5S, F50, F60, F80, F90, H2, H3, H8, H8R, H8PRO, H8PLUS, H8SE, H9, H9R, H9PRO, H9SE, H9RSE, H16, H20, M1, M2, M3, M5, M6, M8, M10, M20, M30, M50, M60, M80, M90, M100, M200, M300, M500, M600, M800, M900, M1000, N1, N2, N3, N5, N6, N8, N9, N10, N20, N30, N50, N60, N80, N90, N100, N200, N300, N500, N600, N800, N900, N1000, V1, V30, V750, W8, W9, W9R, W9SE, W100, W200, W300, W500, W600, W800, W900, W1000
Model Difference	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is model name for commercial and shape.
Product Description	:	Operation Frequency: 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
		RF Output Power: 802.11b: 9.60dBm 802.11g: 9.21dBm 802.11n (HT20): 7.89dBm 802.11n (HT40): 6.34dBm
		Antenna Gain: 2.11dBi Integral Antenna
Power Supply	:	DC Voltage supplied by AC/DC Adapter. DC Voltage supplied by Li-ion battery.
Power Rating	:	DC 5.0 V from the USB Cable. DC 3.7V by 1500mAh Li-ion battery.
Connecting I/O Port(S)	:	Please refer to the User's Manual

Note: More test information about the EUT please refer the RF Test Report.

TB-RF-074-1.0

SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

- (1) Clause 4.3: General SAR test reduction and exclusion guidance

- Sub clause 4.31: Standalone SAR test exclusion considerations

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance ≤ 5 mm are determined by:

- [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)] * $\sqrt{f_{\text{(GHz)}}} \leq 3.0$ for 1-g SAR

- [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)] * $\sqrt{f_{\text{(GHz)}}} \leq 7.5.0$ for 10-g SAR

2.Calculation:

Test separation: 5mm						
WiFi Mode(802.11b)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	9.60	8 ± 1.6	9.6	9.120	2.833	3.0
2.437	8.88	8 ± 1.6	9.6	9.120	2.847	3.0
2.462	8.17	8 ± 1.6	9.6	9.120	2.862	3.0
WiFi Mode(802.11g)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	8.97	8 ± 1.3	9.3	8.511	2.644	3.0
2.437	9.21	8 ± 1.3	9.3	8.511	2.657	3.0
2.462	8.49	8 ± 1.3	9.3	8.511	2.671	3.0
WiFi Mode(802.11n(HT20))						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	7.50	7 ± 1	8	6.310	1.960	3.0
2.437	7.89	7 ± 1	8	6.310	1.970	3.0
2.462	7.33	7 ± 1	8	6.310	1.980	3.0
WiFi Mode(802.11n(HT40))						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.422	6.31	6 ± 1	7	5.012	1.557	3.0
2.437	6.34	6 ± 1	7	5.012	1.565	3.0
2.452	6.17	6 ± 1	7	5.012	1.573	3.0

So standalone SAR measurements are not required.

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