FCC ID: 2AOWK-5021

The tune up procedures of product is not open to end user. The end user is not allowed to perform final tune.

All the power and frequency set up were finished at the manufacturer stage.

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

Mode	GSM850	GSM1900
GSM (GMSK, 1Tx-slot)	34.5	31.0
GPRS (GMSK, 1Tx-slot)	34.0	31.0
GPRS (GMSK, 2Tx-slot)	33.5	30.5
GPRS (GMSK, 3Tx-slot)	31.5	28.5
GPRS (GMSK, 4Tx-slot)	30.5	27.5
EDGE (8PSK, 1Tx-slot)	28.0	28.0
EDGE (8PSK, 2Tx-slot)	27.0	26.5
EDGE (8PSK, 3Tx-slot)	25.0	24.5
EDGE (8PSK, 4Tx-slot)	24.0	23.0

Mode	WCDMA Band II	WCDMA Band IV	WCDMA Band V
RMC 12.2K	24.0	23.0	24.0
HSDPA	23.5	22.5	23.5
HSUPA	23.5	22.5	23.5

Mode	LTE 2	LTE 4	LTE5
QPSK / 16QAM	21.0	20.0	25.0

Mode	LTE 12	LTE 17	LTE 41
QPSK / 16QAM	24.5	24.5	21.0

Mode	LTE 66	LTE 71
QPSK / 16QAM	20.0	24.5

Mode	N 71
QPSK / BPSK	24.5

<WLAN 2.4G>

Mode	802.11b (1Mbps)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Tune up	13.0	13.0	13.0
Mode	802.11g (6Mbps)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Tune up	13.5	13.5	13.5
Mode	802.11n (HT20) (MCS0)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Tune up	14.0	14.0	14.0
Mode	802.11n (HT40) (MCS0)		
Channel / Frequency (MHz)	3 (2422)	6 (2437)	9 (2452)
Tune up	13.0	13.0	13.0

<WLAN 5.2G>

Mode	802.11a (6Mbps)			
Channel / Frequency (MHz)	36 (5180)	40 (5200)	44 (5220)	48 (5240)
Tune up	15.0	15.0	15.0	15.0
Mode	802.11n (HT20) (MCS0)			
Channel / Frequency (MHz)	36 (5180)	40 (5200)	44 (5220)	48 (5240)
Tune up	11.5	11.5	11.5	11.5
Mode	802.11n (HT40) (MCS0)			
Channel / Frequency (MHz)	38 (5190)		46 (5230)	
Tune up	11.0		11.0	
Mode	802.11ac (VHT20) (MCS0)			
Channel / Frequency (MHz)	36 (5180)	40 (5200)	44 (5220)	48 (5240)
Tune up	10.5	10.5	10.5	10.5
Mode	802.11ac (VHT40) (MCS0)			
Channel / Frequency (MHz)	38 (5190)		46 (5230)	
Tune up	10.5		10.5	
Mode	802.11ac (VHT80) (MCS0)			
Channel / Frequency (MHz)	42 (5210)			
Tune up	10.0			

<WLAN 5.8G>

Mode	802.11a (6Mbps)				
Channel / Frequency (MHz)	149 (5745)	153 (5765)	157 (5785)	161 (5805)	165 (5825)
Tune up	11.0	11.0	11.0	11.0	11.0
Mode	802.11n (HT20) (MCS0)				
Channel / Frequency (MHz)	149 (5745)	153 (5765)	157 (5785)	161 (5805)	165 (5825)
Tune up	12.0	11.5	11.0	10.5	10.5
Mode	802.11n (HT40) (MCS0)				
Channel / Frequency (MHz)	151 (5755)			159 (5795)	
Tune up	10.5			10.5	
Mode	802.11ac (VHT20) (MCS0)				
Channel / Frequency (MHz)	149 (5745)	153 (5765)	157 (5785)	161 (5805)	165 (5825)
Tune up	10.0	10.0	9.0	9.0	8.0
Mode	802.11ac (VHT40) (MCS0)				
Channel / Frequency (MHz)	151 (5755)			159 (5795)	
Tune up	9.0			9.0	
Mode	802.11ac (VHT80) (MCS0)				
Channel / Frequency (MHz)	155 (5775)				
Tune up	7.5				

Mode	2.4G Bluetooth
GFSK	4.0
π/4-DQPSK	3.5
8DPSK	3.5
LE 1M	3.0

Then these appropriate gain settings are stored in each EUT individually. The user has no possibility to change these settings later on, and during manufacturing each EUT will be individual calibrated.