

Data Referencing Plan

1. Introduction

Parent device (Model: EAP650, FCC ID: 2AXJ4EAP650)
Variant device (Mode: EAP650, FCC ID: 2AXJ4EAP650V22)
Key Differences
a) Change the DC-DC material
b) Change the peripheral crystal of the 5G chip (Pin-to-Pin change, from 96MHz to 48MHz).

2. Spot Check Test Plan

EMC For 802.11b/g/n/ax (Wi-Fi 2.4G)			
15.247(a)(2)	6dB Bandwidth	DTS (2412-2462MHz Band)	<i>See file</i> 2509TW0109-U1 FCC Part 15.247 WiFi 2.4G_V1.0
15.247(b)(3)	Output Power	DTS (2412-2462MHz Band)	<i>See file</i> 2509TW0109-U1 FCC Part 15.247 WiFi 2.4G_V1.0
15.247(e)	Power Spectral Density	DTS (2412-2462MHz Band)	<i>See file</i> 2509TW0109-U1 FCC Part 15.247 WiFi 2.4G_V1.0
15.247(d)	Band Edge / Out-of-Band Emissions	DTS (2412-2462MHz Band)	<i>See file</i> 2509TW0109-U1 FCC Part 15.247 WiFi 2.4G_V1.0
15.205 15.209	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	DTS (2412-2462MHz Band)	<i>See file</i> 2509TW0109-U1 FCC Part 15.247 WiFi 2.4G_V1.0
15.207	AC Conducted Emissions 150kHz – 30MHz	DTS (2412-2462MHz Band)	<i>See file</i> 2509TW0109-U1 FCC Part 15.247 WiFi 2.4G_V1.0
EMC For 802.11a/n/ac/ax (Wi-Fi 5G)			
15.407(a)	26dB Bandwidth	NII-1 (5150-5250MHz Band) NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band) NII-3 (5725-5850MHz Band)	<i>See file</i> 2509TW0109-U2 FCC Part 15.407 WiFi 5G_V1.0
15.407 (e)	6dB Bandwidth	NII-3 (5725-5850MHz Band)	<i>See file</i> 2509TW0109-U2 FCC Part 15.407 WiFi 5G_V1.0
15.407(a)(1)(ii), (2), (3)	Output Power	NII-1 (5150-5250MHz Band) NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band) NII-3 (5725-5850MHz Band)	<i>See file</i> 2509TW0109-U2 FCC Part 15.407 WiFi 5G_V1.0
15.407(h)(1)	Peak Power Spectral Density	NII-1 (5150-5250MHz Band) NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band)	<i>See file</i> 2509TW0109-U2 FCC Part 15.407 WiFi 5G_V1.0

		NII-3 (5725-5850MHz Band)	
15.407(a)(1)(ii), (2), (3), (12)	Frequency Stability	NII-1 (5150-5250MHz Band) NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band) NII-3 (5725-5850MHz Band)	<i>See file</i> 2509TW0109-U2 FCC Part 15.407 WiFi 5G_V1.0
15.407(g)	Radiated Emission	NII-1 (5150-5250MHz Band) NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band) NII-3 (5725-5850MHz Band)	<i>See file</i> 2509TW0109-U2 FCC Part 15.407 WiFi 5G_V1.0
15.407(b)(1), (2), (3), (4)(i)	Restricted Bands Emission	NII-1 (5150-5250MHz Band) NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band) NII-3 (5725-5850MHz Band)	<i>See file</i> 2509TW0109-U2 FCC Part 15.407 WiFi 5G_V1.0
15.205, 15.209 15.407(b)(8), (9), (10)	AC Conducted Emissions 150kHz – 30MHz	NII-1 (5150-5250MHz Band) NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band) NII-3 (5725-5850MHz Band)	<i>See file</i> 2509TW0109-U2 FCC Part 15.407 WiFi 5G_V1.0
15.407(h)	DFS	NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band)	<i>See file</i> 2509TW0109-U3 FCC Part 15.407 WiFi 5G-DFS_V1.0
RF Exposure			
KDB 447498	MPE	DTS (2402-2480MHz Band) DTS (2412-2462MHz Band) NII-1 (5150-5250MHz Band) NII-2A (5250-5350MHz Band) NII-2C (5470-5725MHz Band) NII-3 (5725-5850MHz Band)	<i>See file</i> 2509TW0109-U5 FCC RF Exposure Report_V1.0

3. Conclusion for the Spot check

EMC For 802.11b/g/n/ax (Wi-Fi 2.4G)					
15.247(b)(3)	2412-2462MHz $R_{dB}=26.56\text{dBm}$	2412-2462MHz $V_{dB}=26.06\text{dBm}$	$d_{dB}=0.5\text{dB}$	$C_{dB}=30\text{dBm}$ $M_{dB}= C_{dB}-R_{dB} =3.44\text{dB}$ $d_{dBmax}(M_{dB})=3.172\text{dB}$	$d_{dB}<d_{dBmax}(M_{dB})$ Pass
15.205	2412-2462MHz $R_{dB}=53.88\text{dBuV/m}$	2412-2462MHz $V_{dB}=51.20\text{dBuV/m}$	$d_{dB}=2.68\text{dB}$	$C_{dB}=54\text{dBuV/m}$ $M_{dB}= C_{dB}-R_{dB} =0.12\text{dB}$ $d_{dBmax}(M_{dB})=3.006\text{dB}$	$d_{dB}<d_{dBmax}(M_{dB})$ Pass
15.209	2412-2462MHz $R_{dB}=51.42\text{dBuV/m}$	2412-2462MHz $V_{dB}=54.68\text{dBuV/m}$	$d_{dB}=3.26\text{dB}$	$C_{dB}=74\text{dBuV/m}$ $M_{dB}= C_{dB}-R_{dB} =22.58\text{dB}$ $d_{dBmax}(M_{dB})=4.129\text{dB}$	$d_{dB}<d_{dBmax}(M_{dB})$ Pass
EMC For 802.11a/n/ac/ax (Wi-Fi 5G)					
15.407(a)	5150-5850MHz $R_{dB}=164.3\text{MHz}$	5150-5850MHz $V_{dB}=162.4\text{MHz}$	$d_{dB}=1.9$	$C_{dB}=160\text{MHz}$ $M_{dB}= C_{dB}-R_{dB} =4.3\text{MHz}$ $d_{dBmax}(M_{dB})=2.785$	$d_{dB}<d_{dBmax}(M_{dB})$ Pass
15.407(e)	5725-5850MHz $R_{dB}=76.86\text{MHz}$	5725-5850MHz $V_{dB}=78.01\text{MHz}$	$d_{dB}=1.15$	$C_{dB}=0.5\text{MHz}$ $M_{dB}= C_{dB}-R_{dB} =83.14\text{MHz}$	$d_{dB}<d_{dBmax}(M_{dB})$ Pass

				$d_{dBmax}(M_{dB})=6$	
15.407(a)(1)(ii), (2), (3)	5150-5850MHz $R_{dB}=27.04\text{dBm}$	5150-5850MHz $V_{dB}=26.85\text{dBm}$	$d_{dB}=0.19\text{dB}$	$C_{dB}= 30\text{dBm}$ $M_{dB}= C_{dB} - R_{dB} =2.96\text{dB}$ $d_{dBmax}(M_{dB})=3.148\text{dB}$	$d_{dB} < d_{dBmax}(M_{dB})$ Pass
15.407(b)(1), (2), (3), (4)(i)	5150-5850MHz $R_{dB}=64.75\text{dBuV/m}$	5150-5850MHz $V_{dB}=65.01\text{dBuV/m}$	$d_{dB}=0.26\text{dB}$	$C_{dB}= 74 \text{ dBm/MHz}$ $M_{dB}= C_{dB} - R_{dB} =9.25\text{dB}$ $d_{dBmax}(M_{dB})=3.4625\text{dB}$	$d_{dB} < d_{dBmax}(M_{dB})$ Pass
15.205, 15.209 15.407(b)(8), (9), (10)	5150-5850MHz $R_{dB}=67.99\text{dBuV/m}$	5150-5850MHz $V_{dB}=67.93\text{dBuV/m}$	$d_{dB}=0.06\text{dB}$	$C_{dB}= 68.2\text{dBuV/m}$ $M_{dB}= C_{dB} - R_{dB} =0.21\text{dB}$ $d_{dBmax}(M_{dB})=3.0105\text{dB}$	$d_{dB} < d_{dBmax}(M_{dB})$ Pass
15.407(h)	5250-5725MHz $R_{dB}=60\text{s}$	5250-5725MHz $V_{dB}=60\text{s}$	$d_{dB}=0$	$C_{dB}= 60\text{s}$ $M_{dB}= C_{dB} - R_{dB} =0$ $d_{dBmax}(M_{dB})=3$	$d_{dB} < d_{dBmax}(M_{dB})$ Pass

All the tests considered for Data Referencing pass the acceptance criterion.