

To whom it may concern,

This cover letter is to address the reuse of test results for FCC and ISED certification of the MAYA-W1 Bluetooth and WLAN Modules.

Related FCC KDB: 791877

The below variants are considered:

	Module version	Data
Type of equipment:	All variants	WLAN/Bluetooth module
Type designation:	MAYA-W160	MAYA-W160
	MAYA-W161	MAYA-W161
	MAYA-W166	MAYA-W166
FCC ID:	MAYA-W160	XPYMAYAW160
	MAYA-W161	XPYMAYAW161
	MAYA-W166	XPYMAYAW166
IC ID:	MAYA-W160	8595A-MAYAW160
	MAYA-W161	8595A-MAYAW161
	MAYA-W166	8595A-MAYAW166

Product Description:

The MAYA-W1 line is a compact WiFi/Bluetooth module.

The MAYA-W1 is a surface mount form-factor with connections to a host processor through SDIO and High-Speed UART interfaces. All modules are equipped with a RF shield.

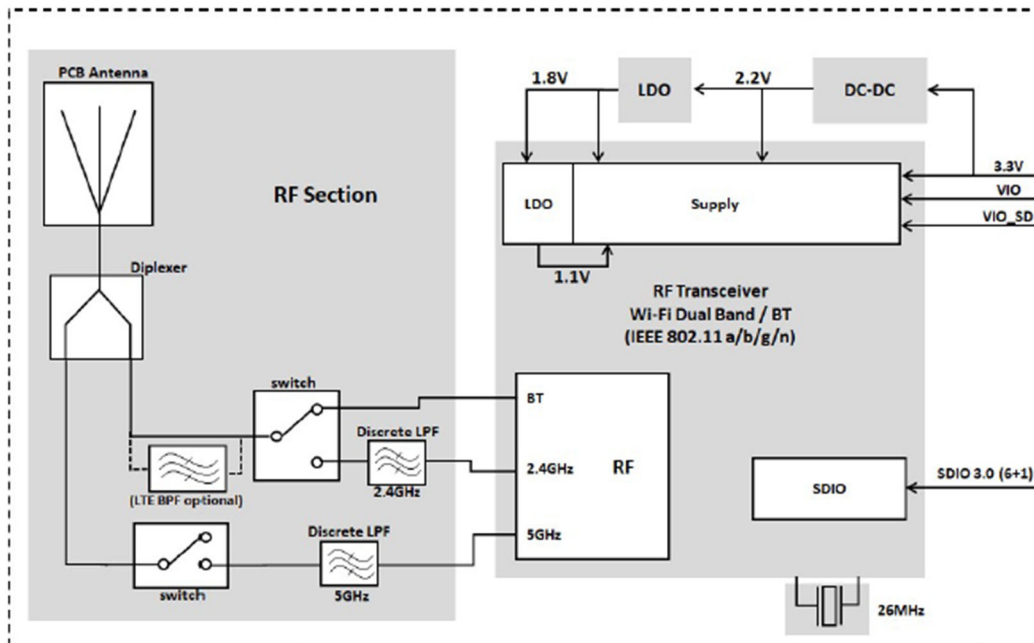
Product line differences

All three products, W166, W161 and W160 share the identical block diagram and parts for the 5GHz Wi-Fi. They only differ in the connection types.

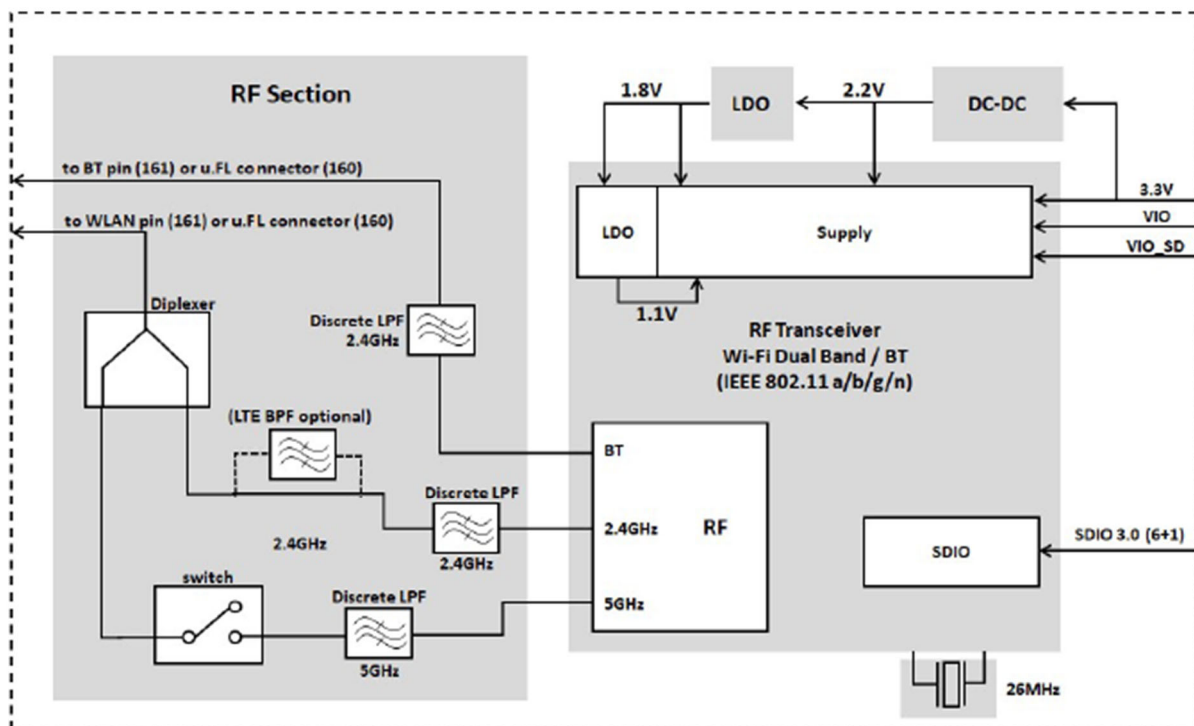
The W161 will be the primary test sample for 5GHz WLAN which is re-used by the W160 and W166.

The W161 2.4GHz radio test results will be reused by the W160. As the W160 and W161 share a common 2.4ghz Block Diagram and BOM for Wi-Fi and BT. They only differ in the connection type. See table above for connection type. The W166 variant has differences in the BOM for 2.4GHz radios and is tested fully for Bluetooth and 2.4ghz WLAN.

See block diagrams below.



MAYA-W166 Block Diagram



MAYA-W160 and MAYA-W161 Block Diagram

Testing concept:

Given that the MAYA-W166, W161 and W160 share the same 5GHz design and the MAYA-W161 and MAYA-W160 share the same Bluetooth and 2.4GHz WiFi design, we have determined that the below testing strategy shall sufficiently demonstrate FCC compliance.

Test Case		Model MAYA W161 Testing	MAYA-W160		MAYA-W166	
5GHz WiFi			Spot Check operational Mode	Spot Check acceptance criteria	Spot Check operational Mode	Spot Check acceptance criteria
Conducted emissions on AC Mains	§ 15.207	Full Testing	Full leverage from W161	-	Full leverage from W161	-
Occupied bandwidth	§ 15.403 (i) (26 dB) / § 15.407 (e) (6 dB)	Full Testing	Full leverage from W161	-	Full leverage from W161	-
		Full Testing	Full leverage from W161	-	Full leverage from W161	-
Maximum conducted output power	§ 15.407 (a) (1),(2),(3),(4)	Full Testing	Full leverage from W161	-	Leverage from W166 no antenna	-
Maximum power spectral density	§ 15.407 (a) (1),(2),(3),(5)	Full Testing	Full leverage from W161	-	Full leverage from W161	-
Transmitter undesirable emissions; General Field Strength Limits, Restricted Bands	15.407 (b) § 15.209 (a)	Full Testing	W161 Mode with lowest delta to limit line	Not greater than 25% increase in emissions and below limit line	Full Testing	-
Frequency stability	§ 15.407 (g)	Full Testing	Full leverage from W161	-	Full leverage from W161	-
Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS)	§ 15.407 (h)	Full Testing	Full leverage from W161	-	Full leverage from W161	-
Antenna requirement	§ 15.203 / 15.204	Full Testing	Full leverage from W161	-	Full leverage from W161	-
BLUETOOTH		* Spot check measurements which exceed the acceptance criteria listed, shall repeat the test case in full.				
Conducted emissions on AC Mains	§ 15.207	Full Testing	Full leverage from W161	-	Full Testing	-
Occupied bandwidth	§ 15.247 (a) (2)	Full Testing	Full leverage from W161	-	Full Testing	-

Peak conducted output power	§ 15.247 (b) (3), (4)	Full Testing	Full leverage from W161	-	Full Testing	-
Transmitter spurious RF conducted emissions	§ 15.247 (d)	Full Testing	Full leverage from W161	-	Full Testing	-
Transmitter spurious radiated emissions	§ 15.247 (d); § 15.209 (a)	Full Testing	W161 Mode with lowest delta to limit line	Not greater than 25% increase in emissions and below limit line	Full Testing	Not greater than 25% increase in emissions and below limit line
Band edge compliance	§ 15.247 (d)	Full Testing	Full leverage from W161	-	Full Testing	-
Power density	§ 15.247 (e)	Full Testing	Full leverage from W161	-	Full Testing	-
Antenna requirement	§ 15.203 / 15.204	Full Testing	Full leverage from W161	-	Full Testing	-
2.4GHZ WIFI		* Spot check measurements which exceed the acceptance criteria listed, shall repeat the test case in full.				
Conducted emissions on AC Mains	§ 15.207	Full Testing	Full leverage from W161	-	Full Testing	-
Occupied bandwidth	§ 15.247 (a) (2)	Full Testing	Full leverage from W161	-	Full Testing	-
Peak conducted output power	§ 15.247 (b) (3), (4)	Full Testing	Full leverage from W161	-	Full Testing	-
Transmitter spurious RF conducted emissions	§ 15.247 (d)	Full Testing	Full leverage from W161	-	Full Testing	-
Transmitter spurious radiated emissions	§ 15.247 (d); § 15.209 (a)	Full Testing	W161 Mode with lowest delta to limit line	Not greater than 25% increase in emissions and below limit line	Full Testing	Not greater than 25% increase in emissions and below limit line
Band edge compliance	§ 15.247 (d)	Full Testing	Full leverage from W161	-	Full Testing	-
Power density	§ 15.247 (e)	Full Testing	Full leverage from W161	-	Full Testing	-
Antenna requirement	§ 15.203 / 15.204	Full Testing	Full leverage from W161	-	Full Testing	-
		* Spot check measurements which exceed the acceptance criteria listed, shall repeat the test case in full.				