Artemis Acceptance Test Procedure

Date: \_\_\_\_\_ / \_\_\_\_\_\_ / 20\_\_\_ S/N: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SW Version: \_\_\_\_\_\_\_

Test Operator: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Power +5Vin: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Vdc (measure at PCB TP)

1) UART TX serial test: Observe Power-on banner message. Passes if message is displayed with no garbled characters. P/F: \_\_\_\_\_\_\_\_\_

2) UART RX serial test: Issue “?” help command from PC terminal. Passes if help message is displayed with no garbled characters. P/F: \_\_\_\_\_\_\_\_\_

3) FSEL Test: Cycle through binary inputs and observe channel display on serial terminal. Passes if all digits are recognized and displayed (after settling). P/F: \_\_\_\_\_\_\_\_\_

4) /MUTE Test: cycle /MUTE, and observe channel display on serial terminal. Passes if channel output toggles (muted output less or equal to -40 dBc when unmuted) P/F: \_\_\_\_\_\_\_\_\_

5) +3.3V out Test: Measure P2-15 with a DMM. Passes if voltage = 3.3V ±10%.

V(3.3V): \_\_\_\_\_\_\_\_\_\_\_\_ P/F: \_\_\_\_\_\_\_\_\_

6) Sideband Test: Set CH2 and observe the output at 11 GHz on a spectrum analyzer (1 MHz span). Verify that any sidebands are ≤-40 dBc. Record strongest sideband. *Note: sidebands are considered measurable if they are greater than 3 dB above the noise floor*.

(Fc level: \_\_\_\_\_\_\_\_ dBm) – (SB level: \_\_\_\_\_\_\_ dBm) = \_\_\_\_\_\_\_\_\_ dBc

Span: \_\_\_\_\_\_\_\_\_\_\_ MHz SB Frequency: Fc± \_\_\_\_\_\_\_\_\_\_\_ (MHz) P/F: \_\_\_\_\_\_\_\_\_

7) Output level test #1: Set CH1 and observe the output at 8 GHz on a spectrum analyzer. Record the signal level. Passes if output is ≥ +10 dBm & frequency is 8 GHz +/-10KHz.

Level: \_\_\_\_\_\_\_\_\_\_ dBm P/F: \_\_\_\_\_\_\_\_\_

8) Output level test #2: Set CH3 and observe the output at 15 GHz on a spectrum analyzer. Record the signal level. Passes if output is ≥ 0 dBm. Level: \_\_\_\_\_\_\_\_\_\_ dBm P/F: \_\_\_\_\_\_\_\_\_

Set CH0, passes if 3 GHz level is ≥ +10 dBm Level: \_\_\_\_\_\_\_\_\_\_ dBm P/F: \_\_\_\_\_\_\_\_\_

9) Noise Test: Set CH2 and observe the output at 11 GHz on a spectrum analyzer. Center on the peak, set a 100 Khz span and measure the abs. noise level. Passes if NL is better than -78 dBc/Hz at 10KHz offset. Fc level: \_\_\_\_\_\_\_\_\_\_ dBm Noise level: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBm/Hz

NL (dBc) = {Noise Level} - {Fc level} = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBc/Hz P/F: \_\_\_\_\_\_\_\_\_

10) Load custom channel config and test with custom reference settings. Done: \_\_\_\_\_\_\_\_

REFERENCE Freq: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Level: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

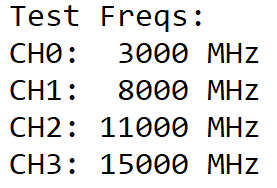
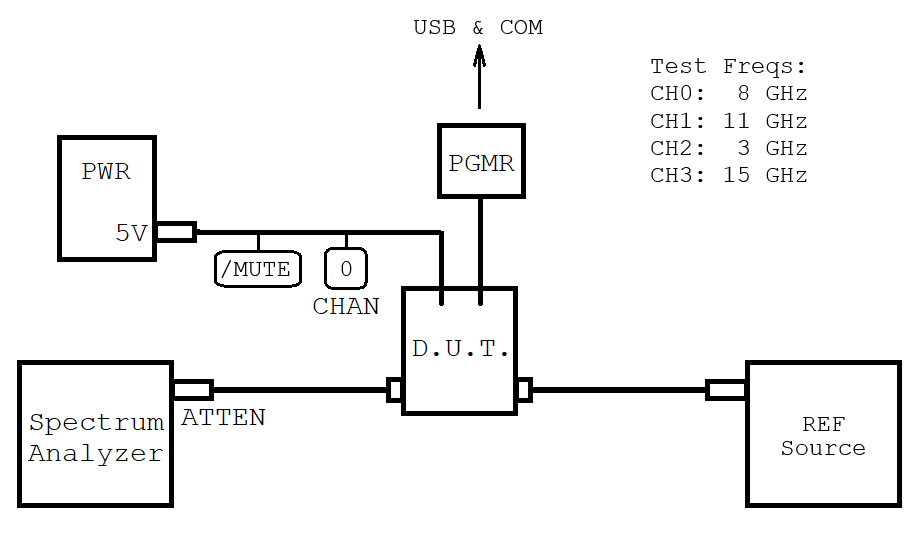
FSEL 0: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FSEL 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FSEL 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FSEL 3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Test Operator Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REV - 10/21/2024

Artemis ATP: Test Setup



POWER SUPPLY: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DMM Model/SN: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

S/A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

EXT. ATTEN: \_\_\_\_\_\_ dB ATTEN MODEL/SN: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D.U.T. RF OUT CABLE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LOSS AT 2 GHz: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dB LOSS AT 12 GHz: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dB

LOSS AT 8 GHz: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dB LOSS AT 15 GHz: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dB

ATP REF SOURCE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LEVEL AT D.U.T. CONNECTOR: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBm

Date: \_\_\_\_\_ / \_\_\_\_\_\_ / 20\_\_\_ TEST OPERATOR: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REV - 10/21/2024