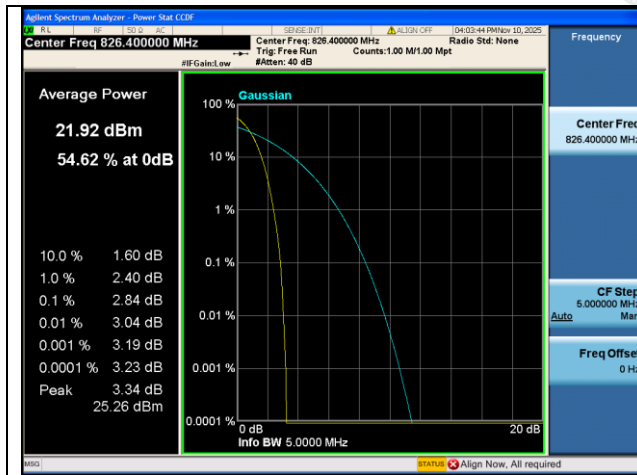
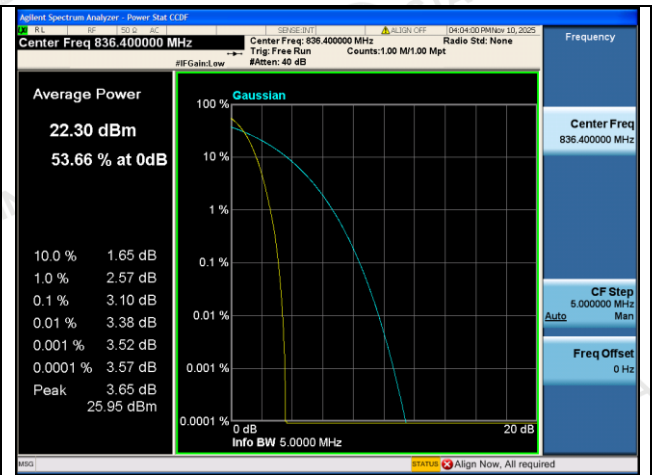
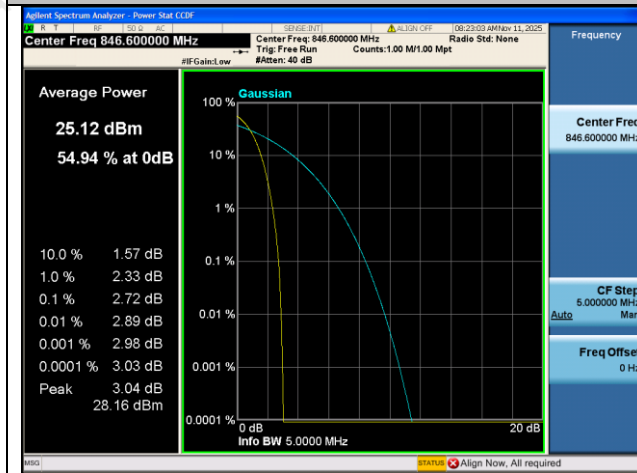




Band5-4132-PASS



Band5-4182-PASS



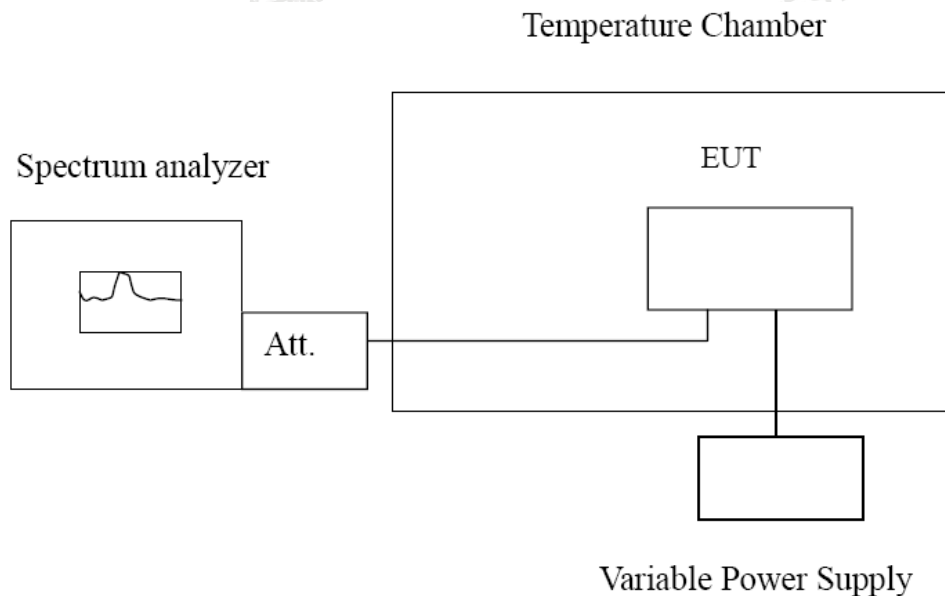
Band5-4233-PASS

3.6 Frequency Stability under Temperature & Voltage Variations

LIMIT

Cellular Band: ± 2.5 ppm PCS Band: Within the authorized frequency block

TEST CONFIGURATION



TEST PROCEDURE

The EUT was setup according to EIA/TIA 603C

Frequency Stability under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Frequency Stability under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

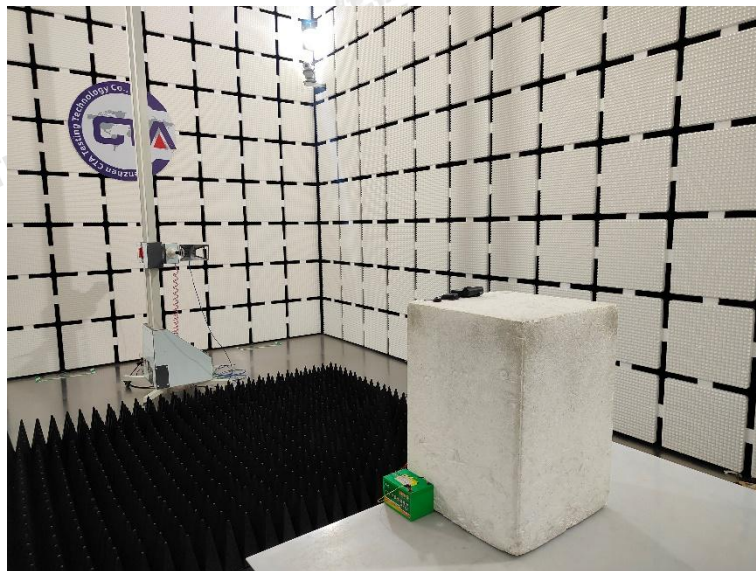
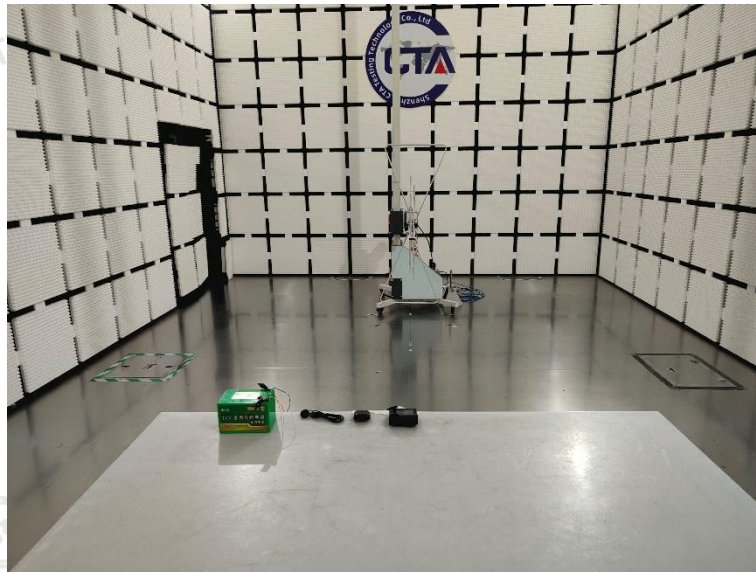
TEST RESULTS

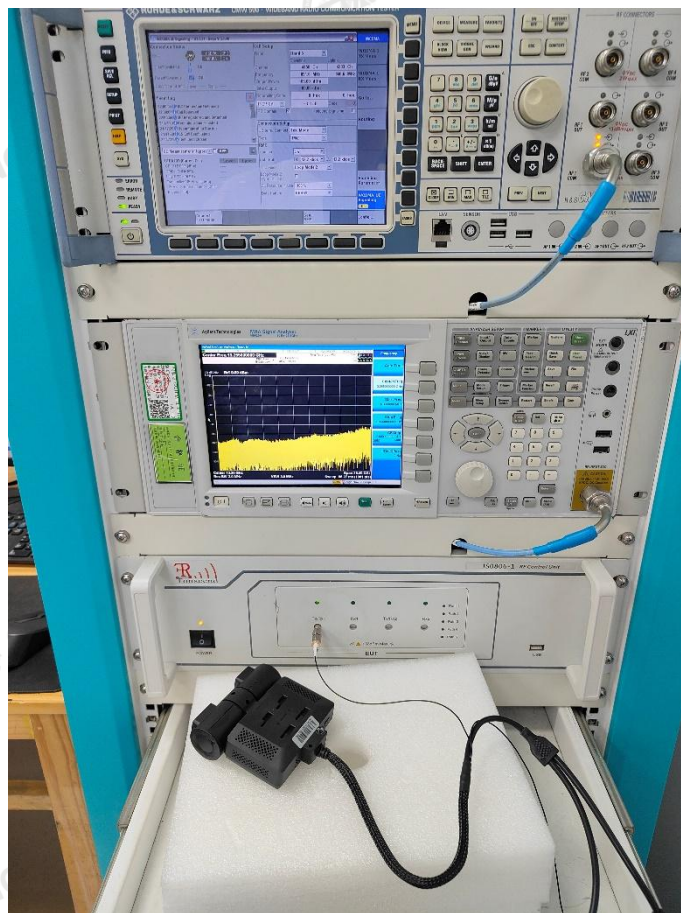
Reference Frequency: WCDMA Band II Middle channel=9400 channel=1880MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
12.0	-30	2	0.001	±2.5	Pass
	-20	19	0.010		
	-10	-14	-0.007		
	0	-9	-0.005		
	10	16	0.009		
	20	-1	-0.001		
	30	-11	-0.006		
	40	-8	-0.004		
	50	19	0.010		
13.2	25	3	0.002		
End point 10.8	25	-1	-0.001		

Reference Frequency: WCDMA Band IV Middle channel=1413 channel=1732.6MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
12.0	-30	-2	-0.001	±2.5	Pass
	-20	11	0.006		
	-10	-14	-0.008		
	0	-9	-0.005		
	10	7	0.004		
	20	-18	-0.010		
	30	1	0.001		
	40	-12	-0.007		
	50	8	0.005		
13.2	25	11	0.006		
End point 10.8	25	18	0.010		

Reference Frequency: WCDMA Band V Middle channel=4182 channel=836.6MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
12.0	-30	-2	-0.002	±2.5	Pass
	-20	-20	-0.024		
	-10	5	0.006		
	0	17	0.021		
	10	-6	-0.007		
	20	0	0.000		
	30	15	0.018		
	40	-20	-0.024		
	50	5	0.006		
13.2	25	6	0.007		
End point 10.8	25	18	0.022		

4 Test Setup Photos of the EUT





5 External and Internal Photos of the EUT

Reference to the test report No. CTA25110601101

***** End of Report *****