



IQSTAR2019-WB-AMP

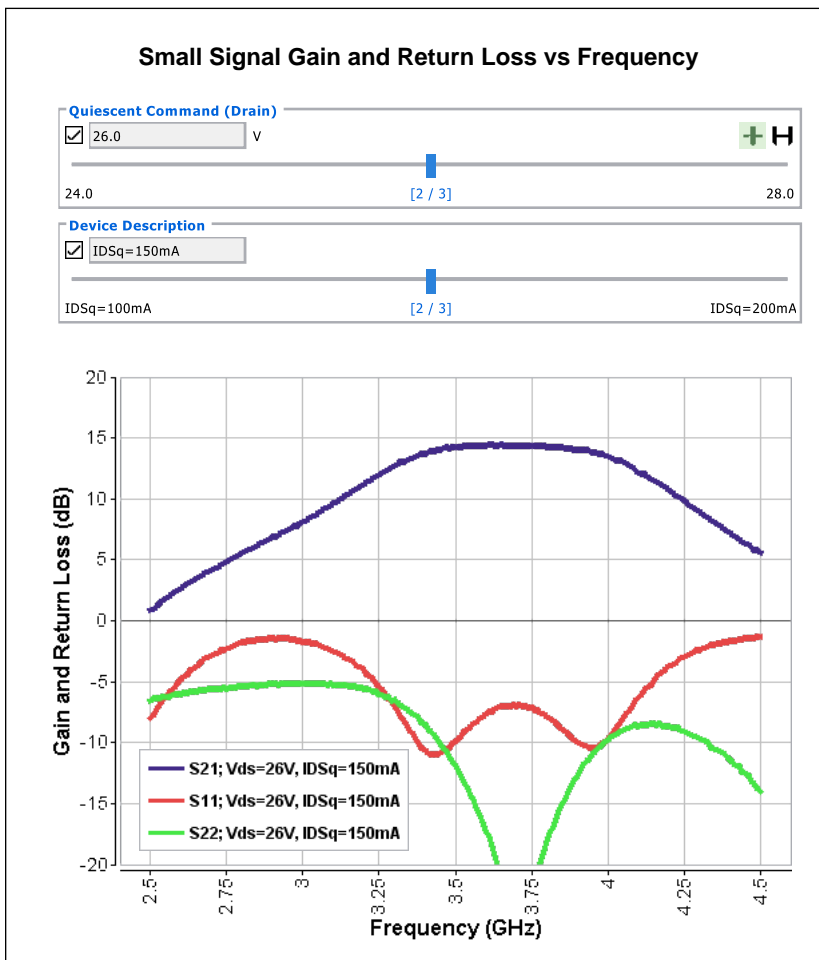
RF Power Amplifier GaN on SiC HEMT
10W, 28V, 3.4 - 4 GHz

Description

IQSTAR can generate multiple measurement data in short time. If these capabilities are combined with the sweep plan feature, the user may face some difficulties to retrieve the key information among ,all these data.The Whiteboard was developed to allow a maximum data exploration with no compromise on the flexibility.

This workspace example has be done to present the whiteboard capabilities, including differents type of measurement files, resulting from a HPA device characterization (S-Parameters, PowerSweep, 2-tones, Modulated signal and DPD evaluation))

TO-270WB-14 Plastic



Features

- Pictures
- Table
- Slider with data interpolation
- Custom data
- PDF export
- 3D Graph
- Advanced filter selection

S-Parameters Applications

- 1) Import *.S2P files from 'Files' tab in 'Whiteboard Tools' on the right side on the windows.
- 2) Move the sliders to select 'Quiescent Voltage' value and 'Quiescent Current' value to display.

Absolute Maximum Ratings

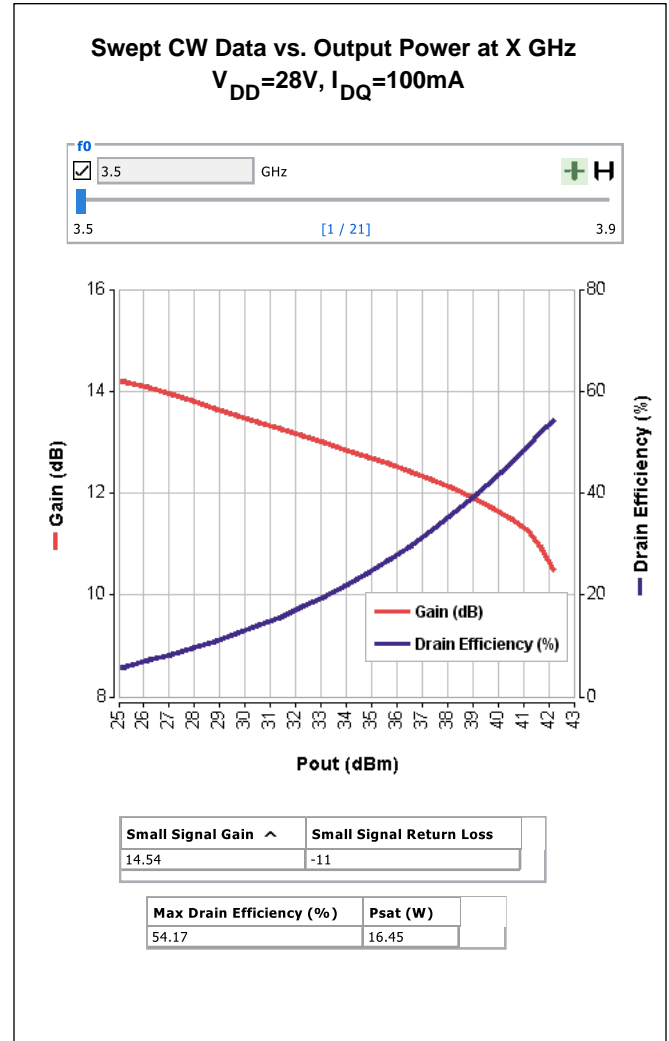
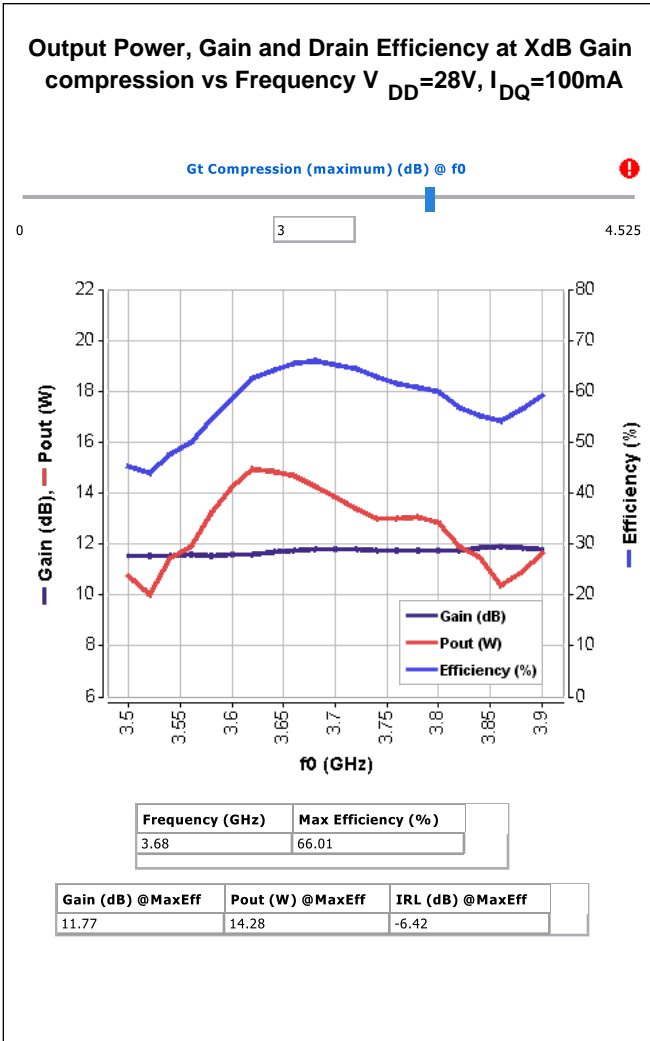
| Parameter | Rating | Units |
|---|-----------|-------|
| Breakdown Voltage, BVdg | 120 | V |
| Gate Voltage (VGS) | -10 to +2 | V |
| Drain Voltage (VDS) | +28 | V |
| RF Input Power | +32 | dBm |
| VSWR Mismatch, P1dB Pulse (10% duty cycle, 100u width), T25°C | 10:1 | |

DC Characteristics

| Parameter | Conditions | Min | Typ | Max | Units |
|--------------------------------|--------------------|------|------|------|-------|
| Gate Threshold Voltage | VDS=10V, Id=3.6mA | -3.6 | -3.0 | -2.4 | V |
| Gate Quiescent Voltage | VDS=28V, ID=200mA | | -2.7 | | V |
| Saturated Drain Current | VDS=6.0V, VGS=2.0V | 2.59 | 3.5 | | A |
| Drain-Source Breakdown Voltage | VGS=-5V, IDS=3.6mA | 120 | | | V |

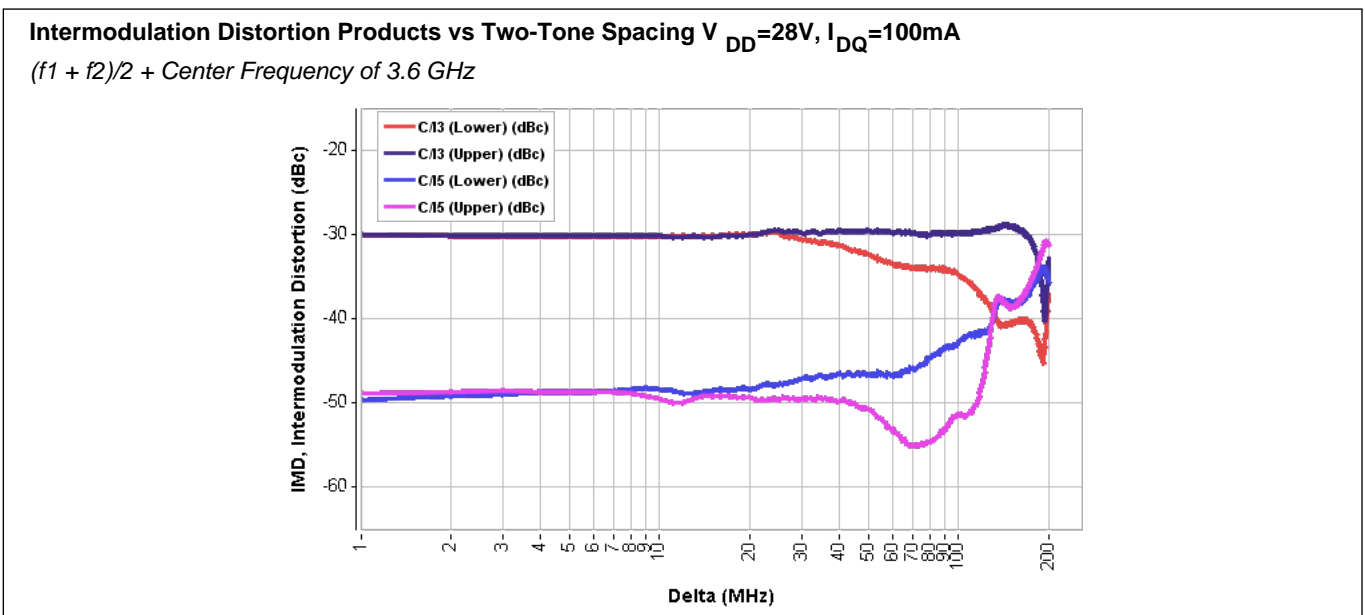
1-Tone Power Sweep vs Frequency Sweep Application

- 1) Import '1-tone.imx' file from 'Files' tab in 'Whiteboard Tools' on the right side on the windows.
- 2) Move the sliders to select 'Gain compression level' value and/or 'Frequency' value to display the associated results.

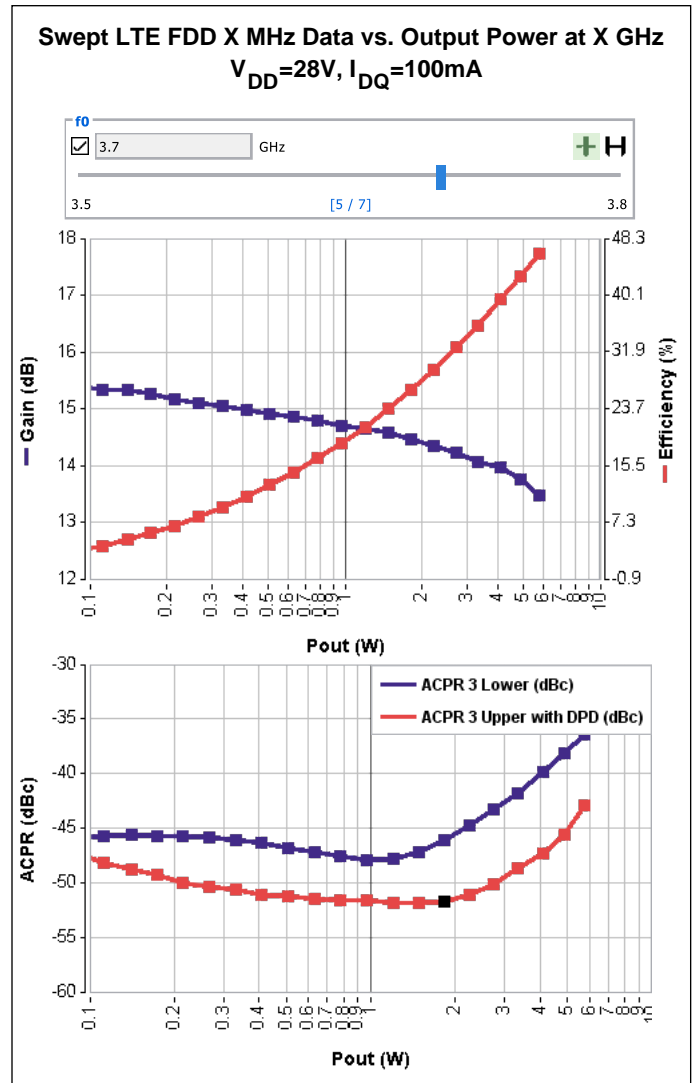
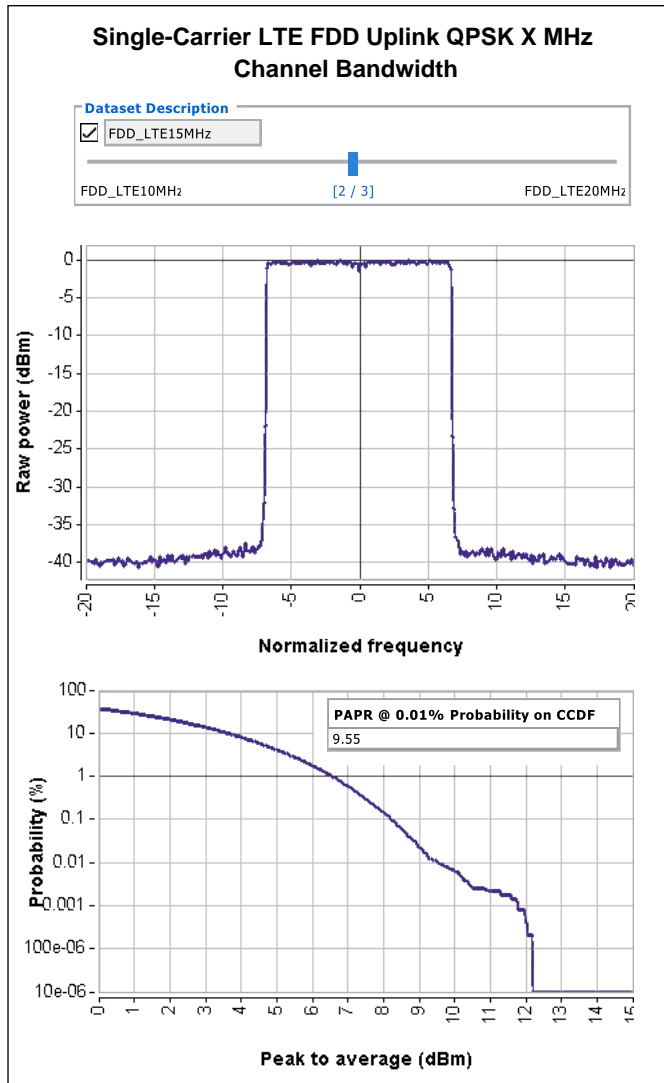


Video Bandwidth Application

- 1) Import 'VBW.imx' file from 'Files' tab in 'Whiteboard Tools' on the right side on the windows



- 1) Import 'Modulated_LTEXMHzDPD.imx' files from 'Files' tab in 'Whiteboard Tools' on the right side on the windows
- 2) Move the sliders to select 'Modulation signal shape' and/or 'Frequency' value to display the associated results.



Digital Pre-distortion evaluation

- 1) Select a point in the ACPR(dBc) vs Pout(W) plot above to display the DPD results corresponding to this power level point

