

Pulsed I-V



Auriga's 5th generation AU-5
Pulsed IV/RF Characterization System

AU-5

Auriga's 5th generation pulsed IV/RF characterization system delivers unparalleled performance, capturing measurements with incredible speed and accuracy. Pulsed IV (current-voltage) measurements have emerged as the preferred method of capturing current-voltage characteristics of active devices such as field effect (FETs) and bipolar junction (BJTs) transistors. With the growing popularity of higher-power devices, like GaN HEMTs, LDMOS, SiC, and graphene, current and voltage requirements are constantly being pushed higher and higher.

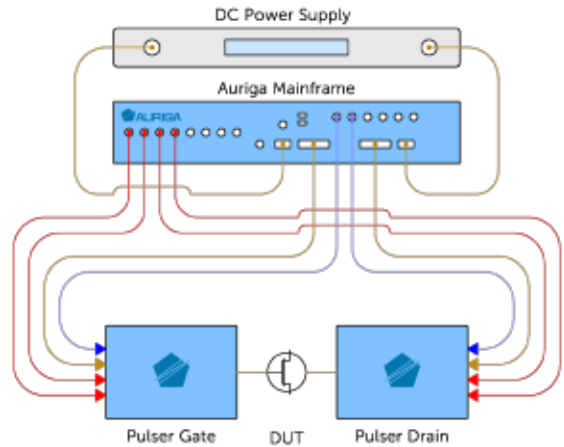
Introducing Auriga MEM™

Auriga MEM™, Auriga's newest pulsed IV function, enhances current resolution to an industry-leading 0.01% of maximum current. Using Auriga's advanced calibration algorithms and an external Keysight digital multimeter (DMM), Auriga MEM brings the DC measurement plane directly to the device under test.

Key Features :

- Provides extraordinary current resolution of 0.01% of max current.
- Provides temperature independent measurements, allowing for accurate measurements impervious to environmental temperature changes.
- Maintains calibration integrity for a longer period of time.

These key features enable the AU-5 to achieve the measurement accuracy and repeatability needed for tomorrow's demanding devices.

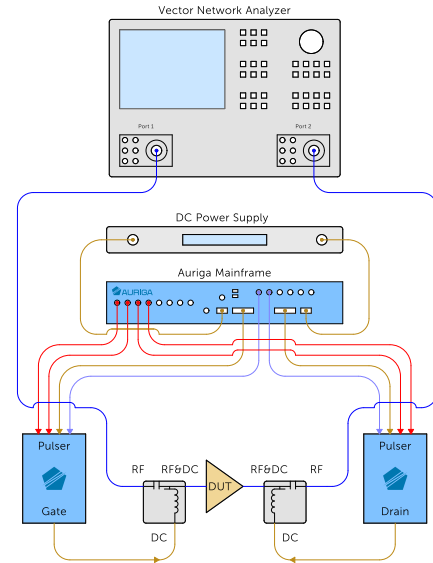


AURIGA
Measurement Enhancement Mode
MEM™



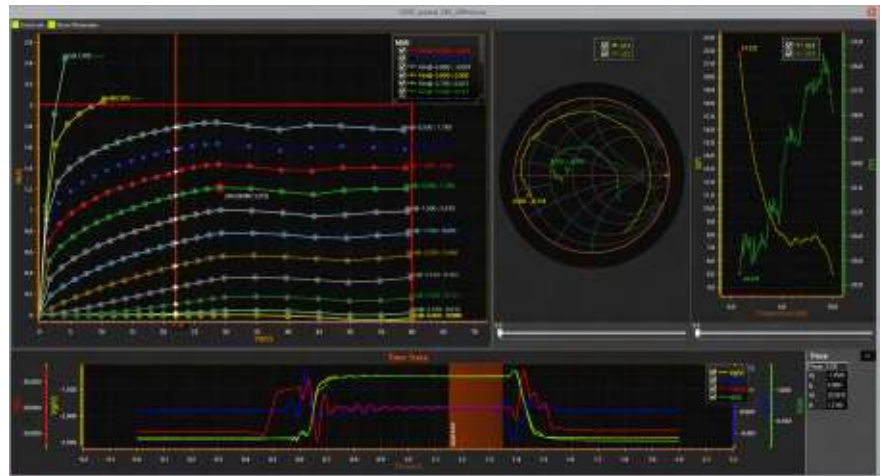
Pulsed-IV

The AU-5 Pulsed IV/RF characterization System is supplied with two external and interchangeable pulser heads. Their interchangeability enables this system to provide a variety of pulsed voltage and current ranges to provide the greatest resolution in the dynamic range of interest. External heads allow the pulser circuitry to be located closer to the device under test (DUT), minimizing any signal degradation due to transmission line effects. External heads enable the AU-5 to reside approximately six feet away from the DUT. The AU-5 is supplied with four external power supplies. These supplies provide the quiescent and non-quiescent voltages for both the gate (or base) and drain (or collector) and allow for a greater range of measurement alternatives.



New Intuitive GUI

In order to achieve consistency in quality and maintain the visual aesthetic we developed a brand new graphical interface. The new advanced windowing options allow the user to customize how the measurement application behaves and provide additional insight into the device performance for different test conditions.

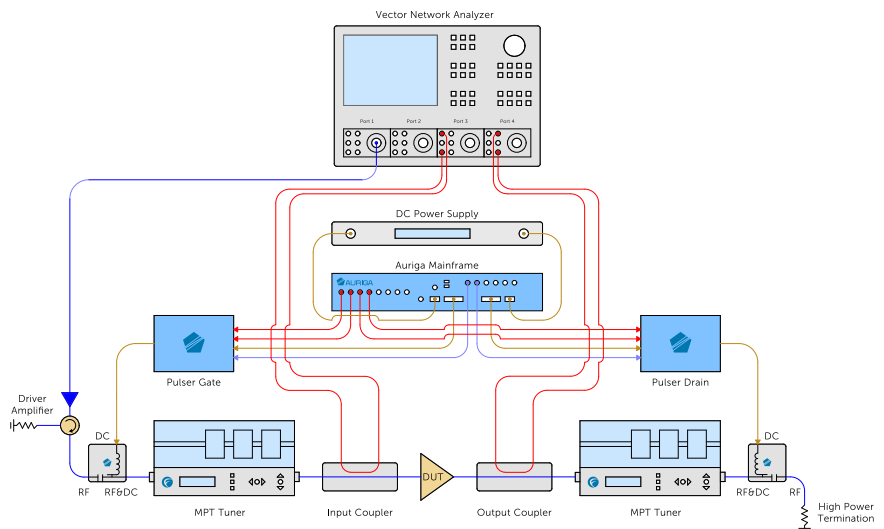


Pulsed Load Pull and Compact Modeling

Optional RF Measurement System

The AU-5 has advanced triggering capabilities allowing the user to trigger either a 2-port Vector Network Analyzer for linear S-parameter measurements used for compact model generation.

The pulsed synchronization features can also be used to define the sequences for intricate applications like hybrid active load pull and behavior model generation.



Model Specifications

Pulser Heads

Specifications:	PHG20	PHG100	PHD220-2	PHD220-10	PHD220-30	PHD600-5	PHD1200-10	PHD1200-100
Max Voltage	±20 V	±100 V	220 V	220 V	220 V	600 V	1200 V	1200 V
Max Current Pulsed	100 mA	2 A	2 A	10 A	30 A	5 A	10 A	100 A
Max Current DC	100 mA	100 mA	0.85 A	1.7 A	2.5 A	1.0 A	1.0 A	1.0 A
Max Error	0.1 %	0.1 %	0.1 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %
Max Power	2 W	40 W	40 W	200 W	1000 W	1000 W	1000 W	1000 W
Min Pulse Width	200 ns	200 ns	200 ns	750 ns	1000 ns	200 ns	>700 ns	>700 ns
Max Pulse Repetition Frequency (PRF)	250 KHz @ 20 V	250 KHz @ 20 V	20 KHz @ 200 V 80 KHz @ 100 V	20 KHz @ 200 V 80 KHz @ 100 V	20 KHz @ 200 V 80 KHz @ 100 V	80 KHz @ 200 V	28 KHz (V dep.) 1.4 KHz @1200V	28 KHz (V dep.) 1.4 KHz @1200V
Min Output Rise/Fall	30 ns	30 ns	30 ns	55 ns	60 ns	35 ns	35 ns	35 ns
Test Port Connector	BNC (f)	BNC (f)	BNC (f)	BNC (f)	BNC (f)	MHV (f)	MHV (f)	MHV (f)

Bias-Tees

Model	Min Freq	Max Freq	Max Current (A)	RF Power (W)	Voltage (V)	Typ. Ins. Loss (dB)	Connector Type
BT0480-50-P	0.4 GHz	8.0 GHz	2	50	50	1.2	2.92 mm (m-f)
BT0780-150-P	0.7 GHz	8.0 GHz	3	150	200	1.5	Type N (m-f)
BT2080-100-P	2.0 GHz	8.0 GHz	10	100	100	1.7	Type N (m-f)
BT0110-50-P	0.1 GHz	10 GHz	3	50	100	1.8	2.92 mm (m-f)
BT0710-50-P	0.7 GHz	10 GHz	3	50	100	1.8	2.92 mm (m-f)
BT0118-10-P	0.1 GHz	18 GHz	2	10	50	1.5	2.92 mm (m-f)
BT1018-50-P	1.0 GHz	18 GHz	1	50	50	2	2.92 mm (m-f)
BT2018-50-P	2.0 GHz	18 GHz	2	50	50	1.8	2.92 mm (m-f)
BT0118-1-N	0.1 GHz	18 GHz	1	1	50	1.5	2.92 mm (m-f)
BT0126-1-N	0.1 GHz	26.5 GHz	1	1	50	2.2	2.92 mm (m-f)
BT1026-10-P	1.0 GHz	26.5 GHz	2	10	50	2	2.92 mm (m-f)
BT1026-1-P	1.0 GHz	26.5 GHz	2	1	150	2.2	2.92 mm (m-f)
BT0140-1-N	0.1 GHz	40 GHz	1	1	50	2.5	2.92 mm (m-f)
BT1040-12-P	1.0 GHz	40 GHz	2	12	50	2.5	2.92 mm (m-f)
BT0150-1-N	0.1 GHz	50 GHz	1	1	50	2	2.4mm (m-f)
BT0150-12-P	0.1 GHz	50 GHz	1	12	50	2	2.4mm (m-f)
BT0167-1-N	0.1 GHz	67 GHz	1	1	50	3.2	1.85mm (m-f)
BT0167-12-P	0.1 GHz	67 GHz	1	12	50	3.2	1.85mm (m-f)

P for Pulsed Application N for Noise Measurements

