

# FOCUS ON

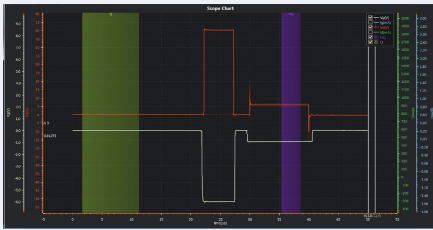
A FOCUS MICROWAVES MONTHLY NEWSLETTER

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## PRE-STATE

The Pre State is a short high voltage-pulse used to activate the traps in the semiconductor. The width of the pre-pulse, Quiescent and Non-Quiescent voltages of the On-State pulse are independently adjustable.

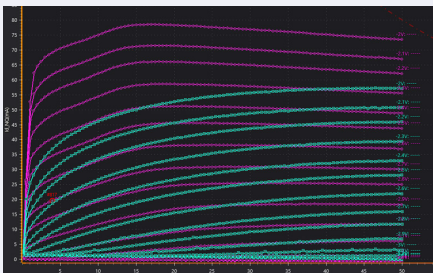
Also the user can adjust the delay ( $\Delta t$ ) between the two pulses (Pre-State and On-State) down to 0s. All timing settings of the TRI-State Gate Pulser and Drain Pulser are independently adjustable.



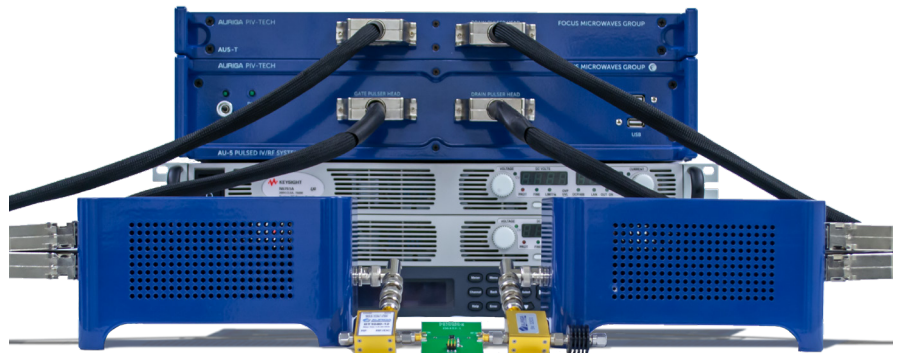
Focus' TRI-State system is the only off the shelf solution that can deliver 220V @ 2/10A for both the Pre-pulse (trapping control) or the On-State (Non-Quiescent) pulse in a sub micro-second regime.

Other systems on the market are either very low power or for longer pulses (>10us range)

Pre pulse= 0-220V 0-2A.  
Min pulse width 200ns  
Nq pulse= 0-220V 0-2A.  
Min pulse width 200ns  
Quiescent state = 0-220V 0-0.85A



## TRI-STATE PULSED I-V



Traditional Pulsed IV systems are comprised of two pairs of power supplies used for the Quiescent and Non Quiescent states. Focus now offers a new TRI-State pulse system which includes a third pair of power supplies allowing the user to create a Pre-Pulse state.

Nonlinear charge trapping effects have puzzled designers for years and the standard two state pulse systems are insufficient to fully characterize memory effects for the GaN FETs.

Focus' TRI-State Pulsed IV system offers not only an efficient isothermal measurement condition, but also allows the user to control and characterize various charge trapping states.

