



GSDN001

Double Pulse Test Results for the GS-065-0xx-1-L PDFNs

December 2020

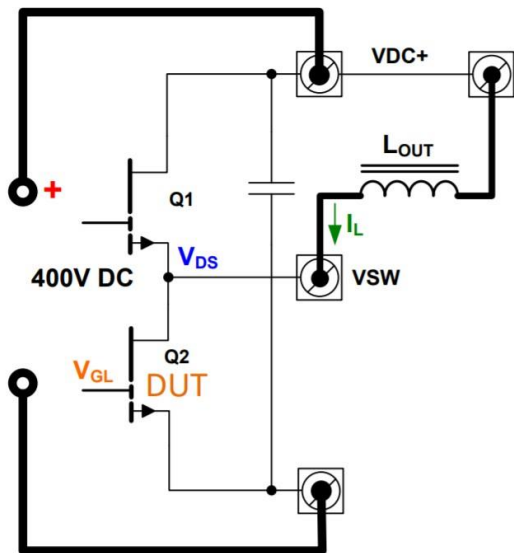
PURPOSE

The Double Pulse Test (DPT) is used to characterize the *turn-on* and *turn-off* characteristics of switching power transistors.

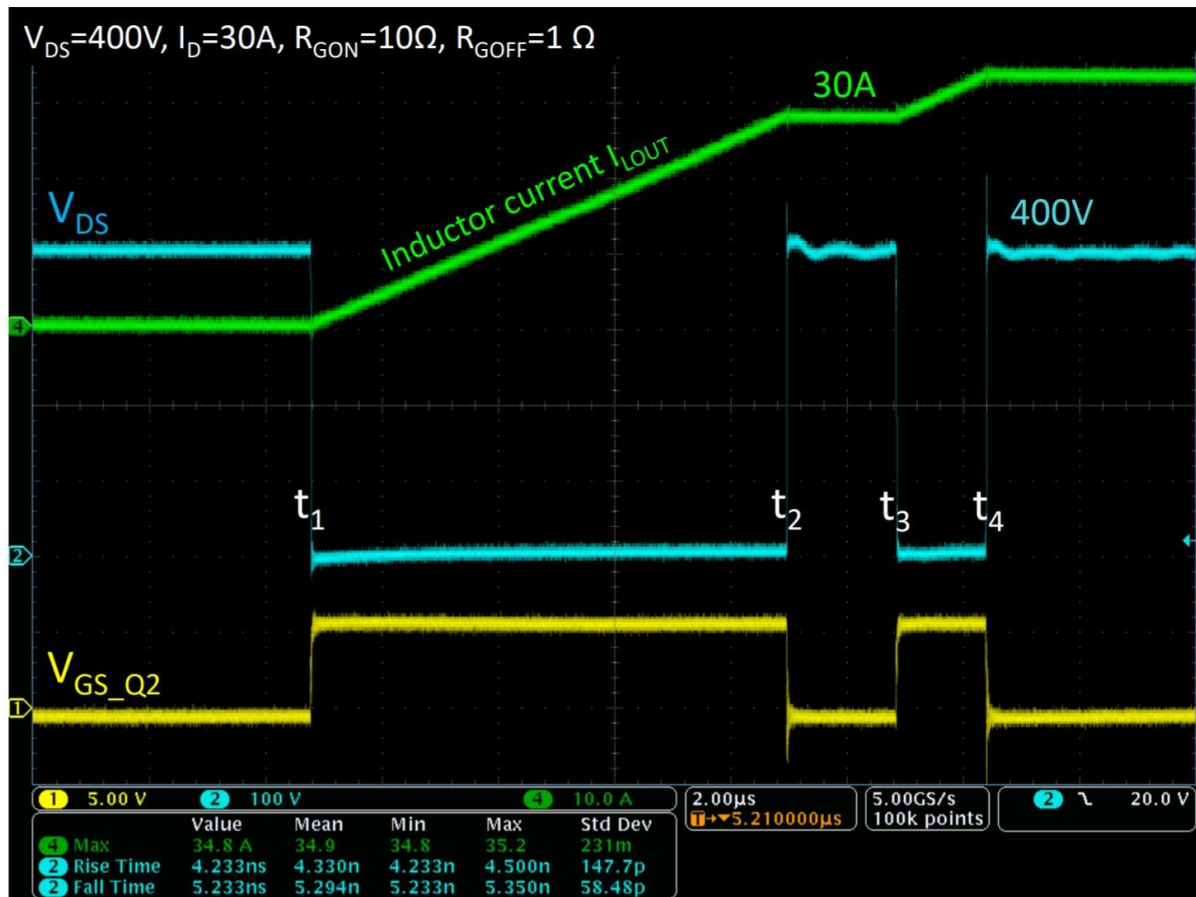
CONTENT

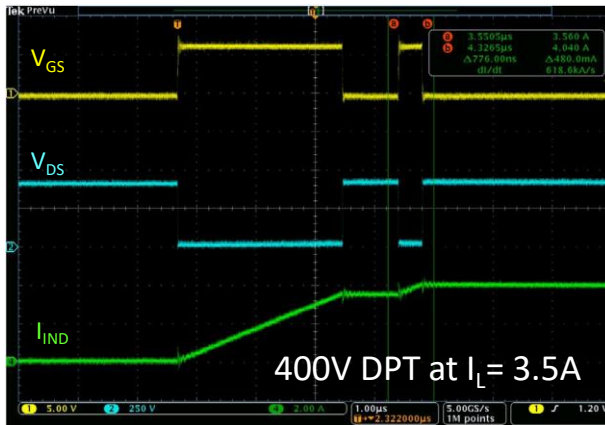
This document provides the following information

- An overview of the DPT set up
- DPT results for GaN Systems' PDFN E-HEMTS
 - GS-065-004-1-L
 - GS-065-008-1-L
 - GS-065-011-1-L




- t_1 : Device Under Test (DUT) turned on. Inductor charged to desired current (30A in this example)
- t_2 : DUT turned off. Inductor current freewheels in Q1.
DUT turn-off \rightarrow Measure dV/dt , t_{rise}
- t_3 : DUT turn-on \rightarrow Measure, dV/dt , t_{fall}
- t_4 : DUT turned off

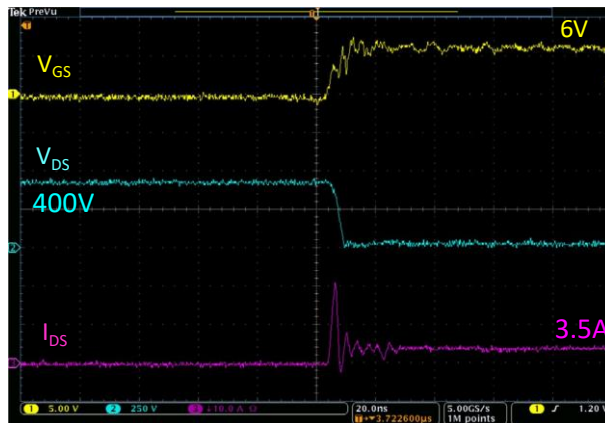




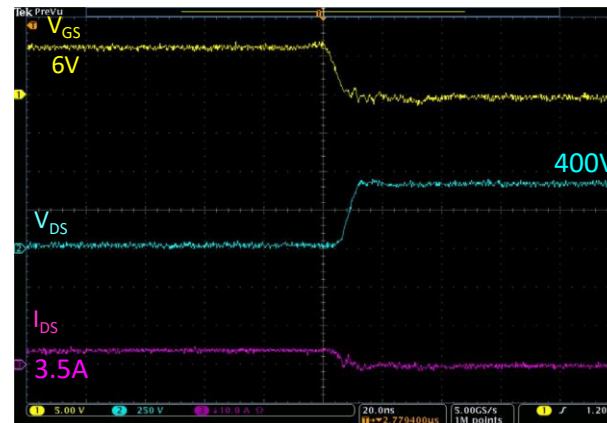
GS-065-004-1-L



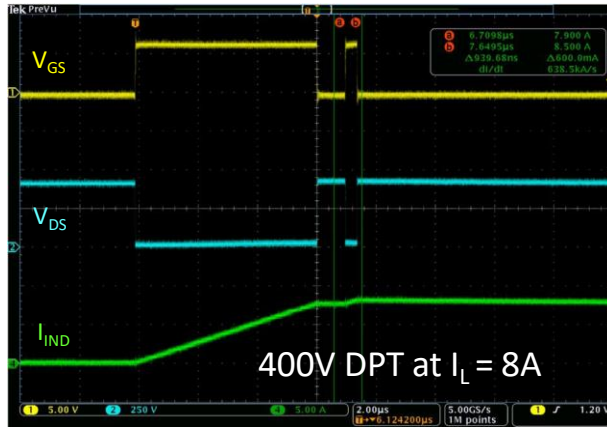
Parameter	Value
V_{DS}	650 V
I_D	3.5 A
$R_{DS(on)}$	450 mΩ



Turn-on



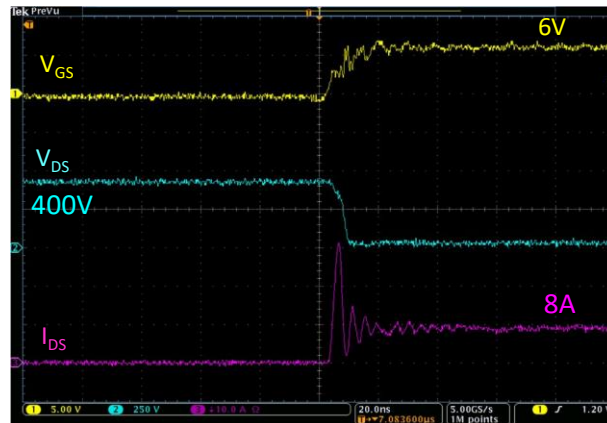
Turn-off



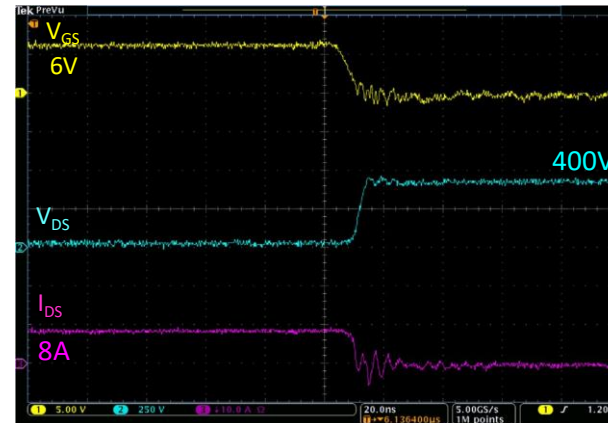
GS-065-008-1-L



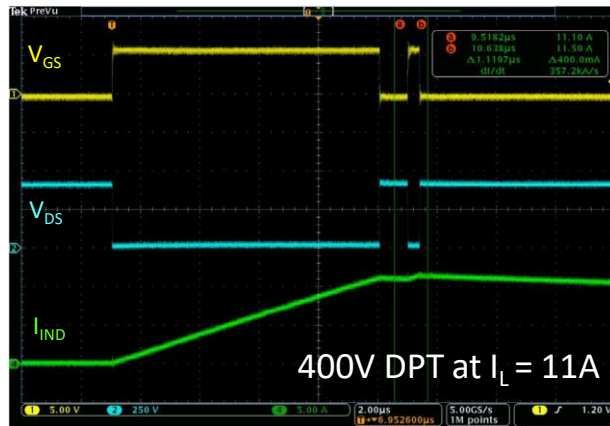
Parameter	Value
V_{DS}	650 V
I_D	8 A
$R_{DS(on)}$	225 mΩ



Turn-on

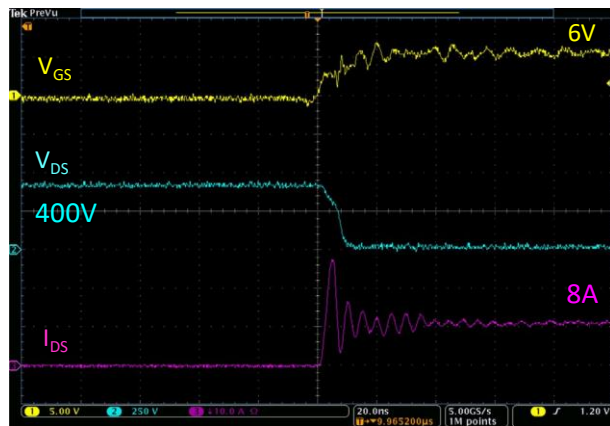


Turn-off

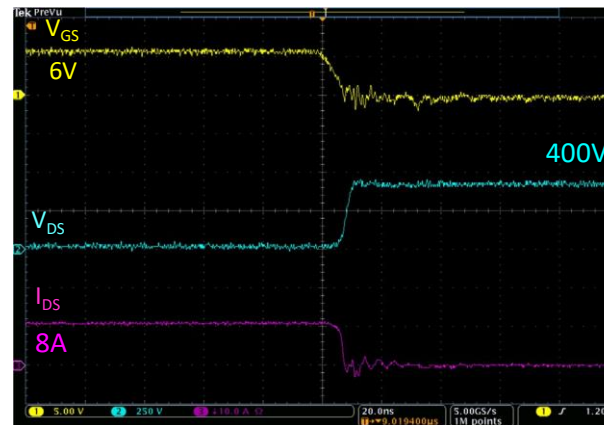


GS-065-011-1-L

Parameter	Value
V_{DS}	650 V
I_D	11 A
$R_{DS(on)}$	150 mΩ



Turn-on



Turn-off



GaN Systems

To contact GaN Systems for additional product and application support, please visit our website at <https://gansystems.com/contact/>.