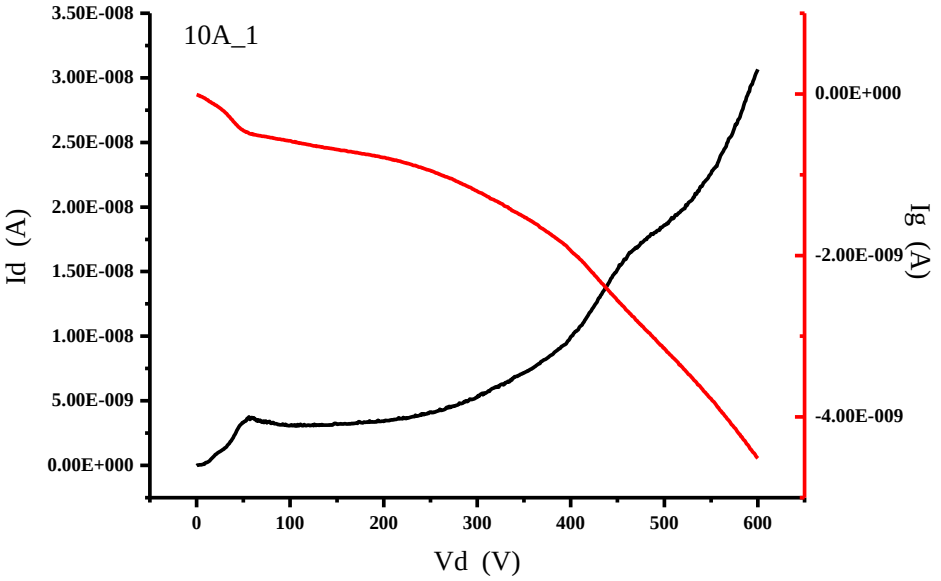
GaNPower Device and IC – Selected Data

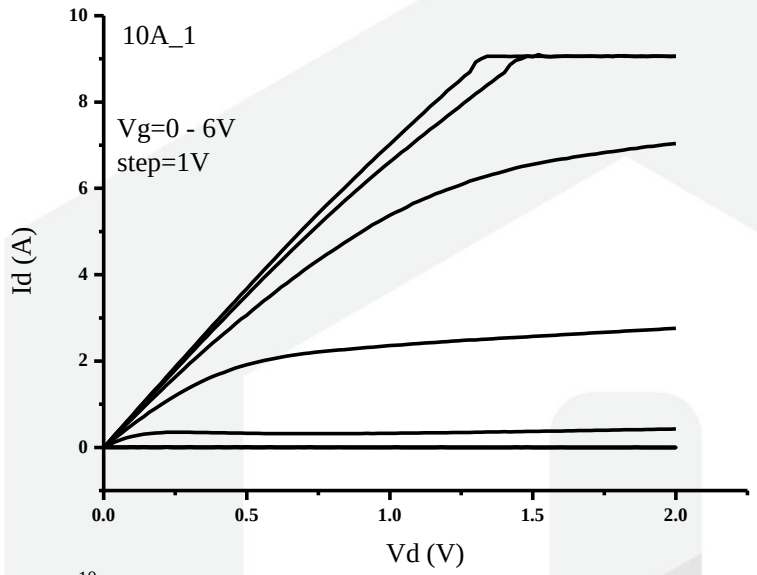
GANPOWER INTERNATIONAL

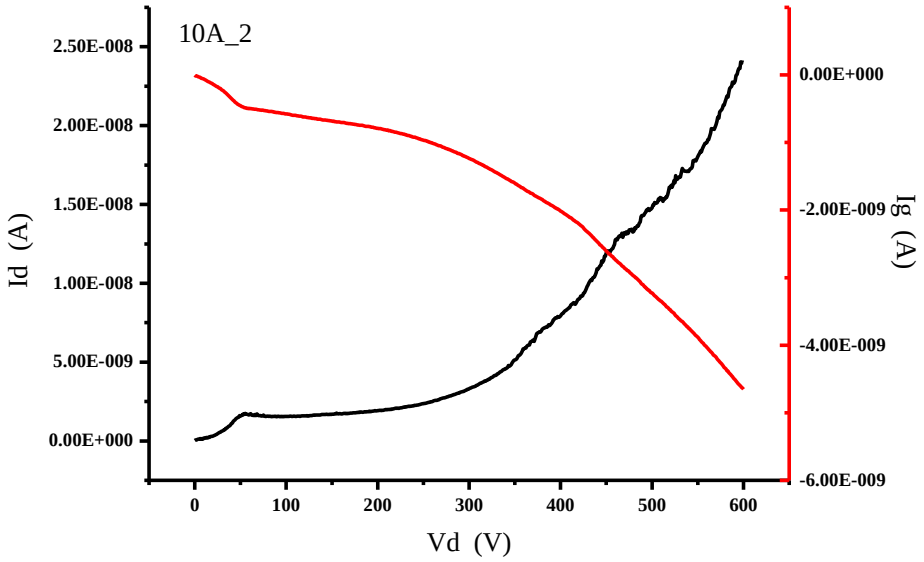
鎵能國際半導體有限公司

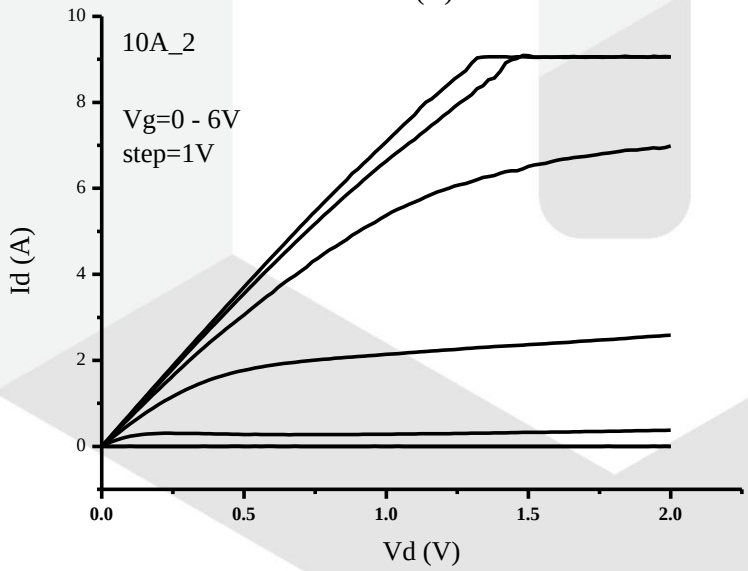
On-wafer measurement of 650V-10A bare dies

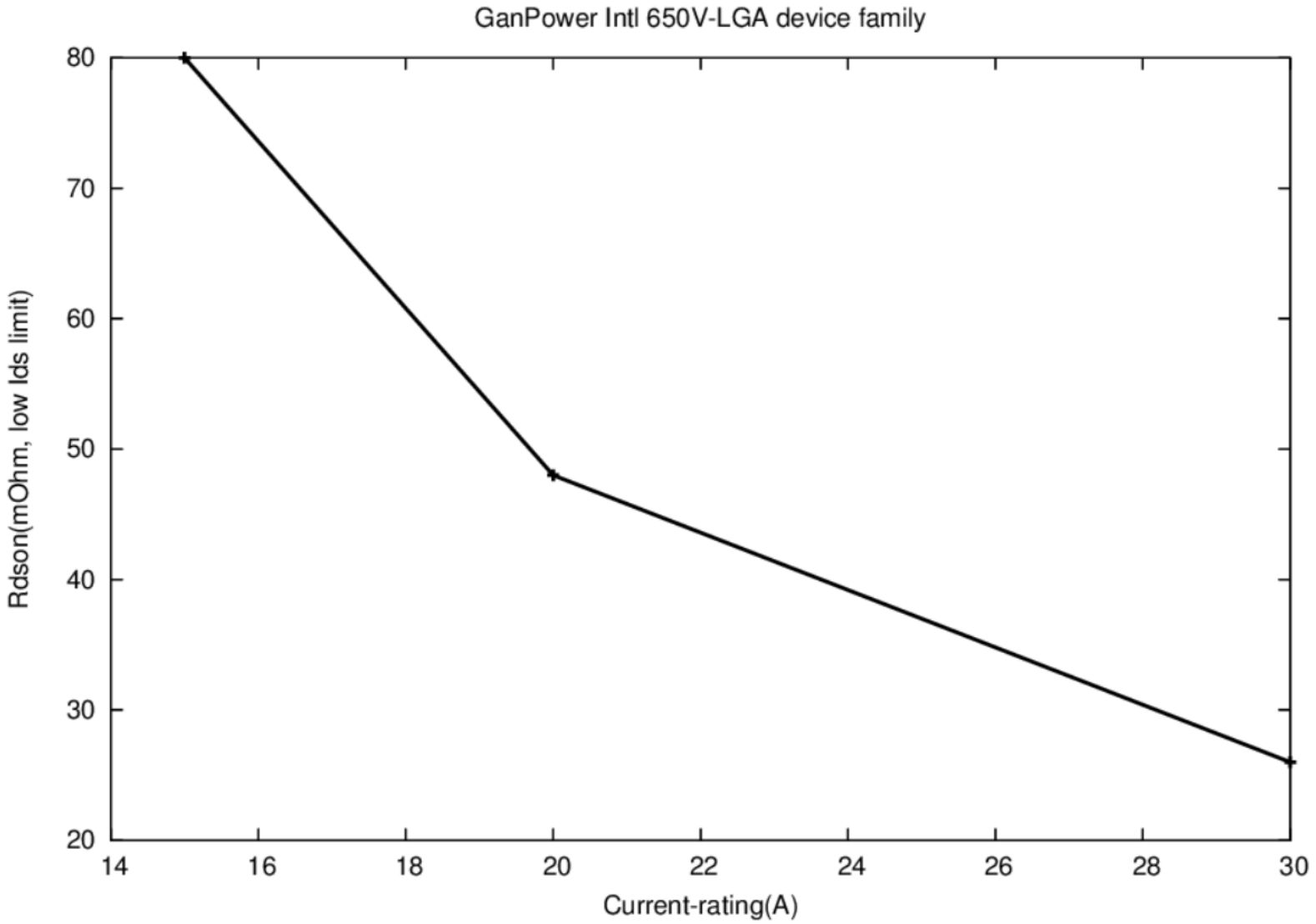
10A



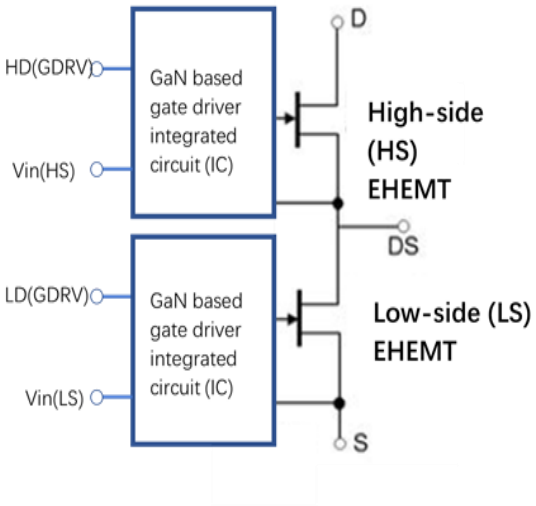








On-wafer data for all-GaN gate driver IC (half-bridge 650V-15A)



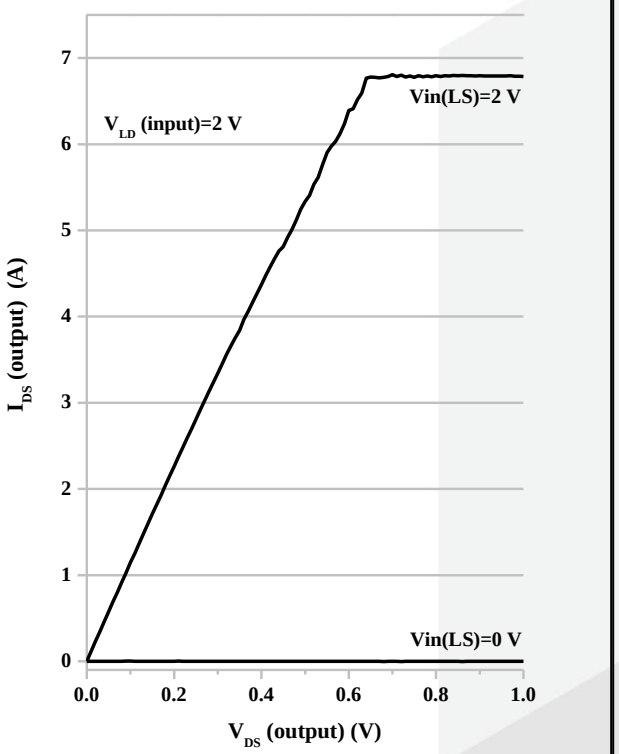


Figure 7 Low-side I_{DS} (output) vs. V_{DS} (output)

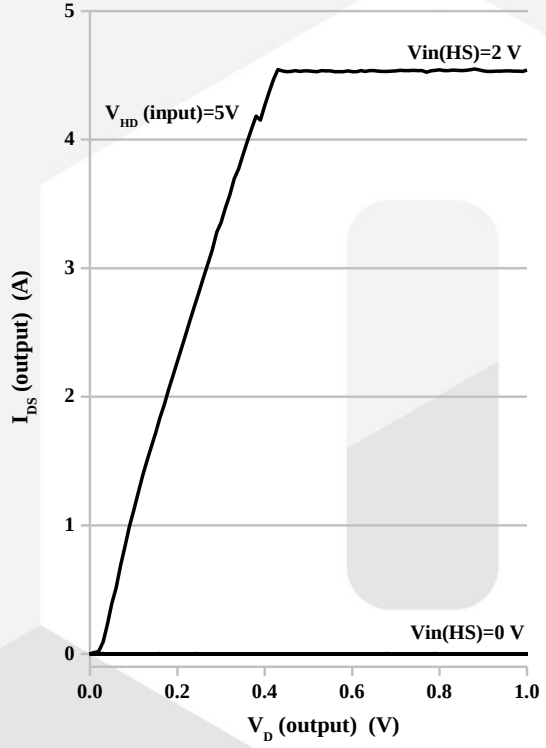
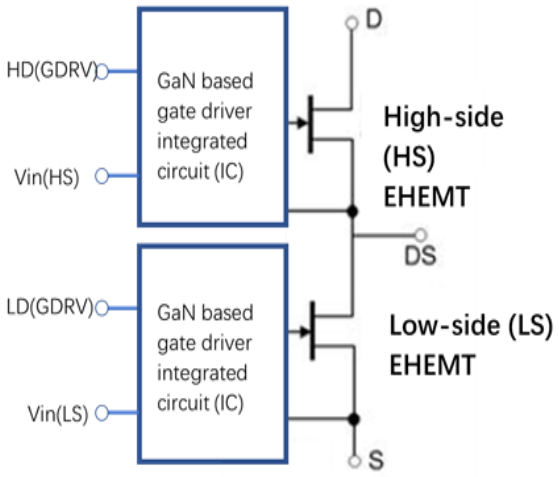


Figure 8 High-side I_D (output) vs. V_D (output)

On-wafer data for all-GaN gate driver IC (half-bridge 650V-15A)



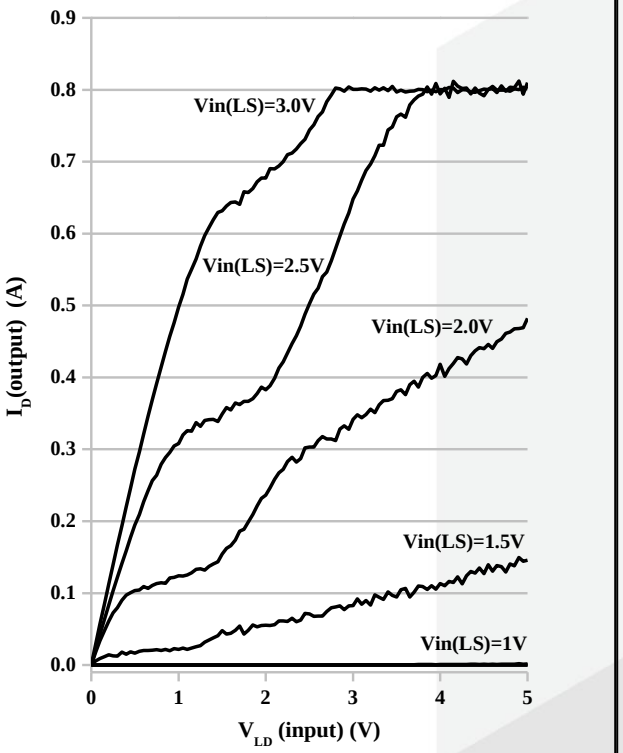


Figure 9 Low-side I_D (input) vs. V_{LD} (input)

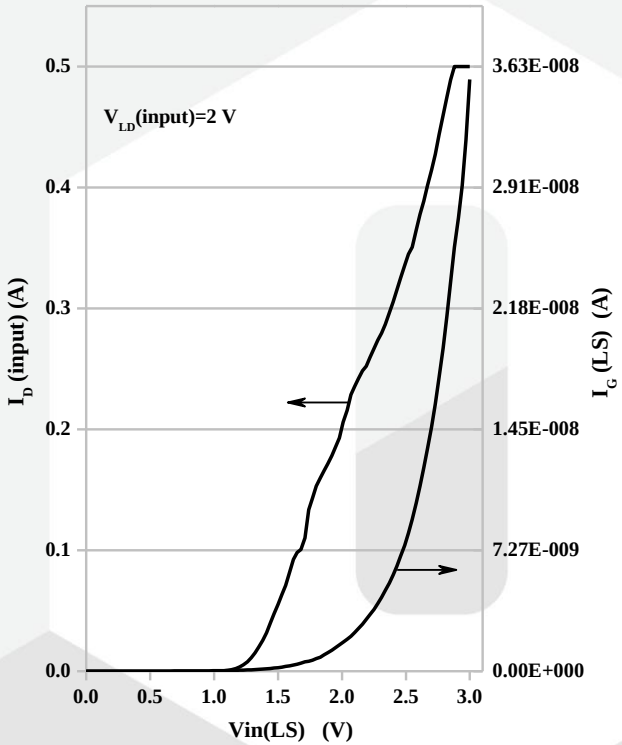
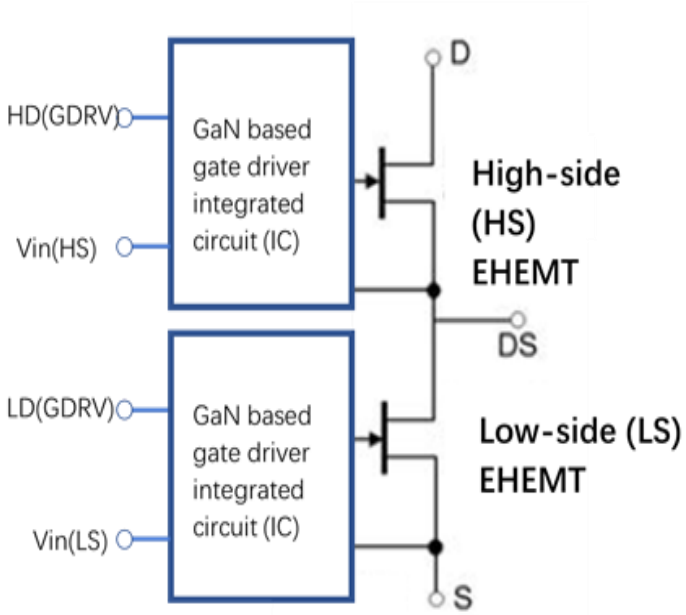


Figure 10 Low-side I_D (input) vs. Vin(LS) and I_G(LS) vs. Vin(LS)

On-wafer data for all-GaN gate driver IC (half-bridge 650V-15A)

IC Input-Output Transfer Characteristics (Compliance 4.5A)



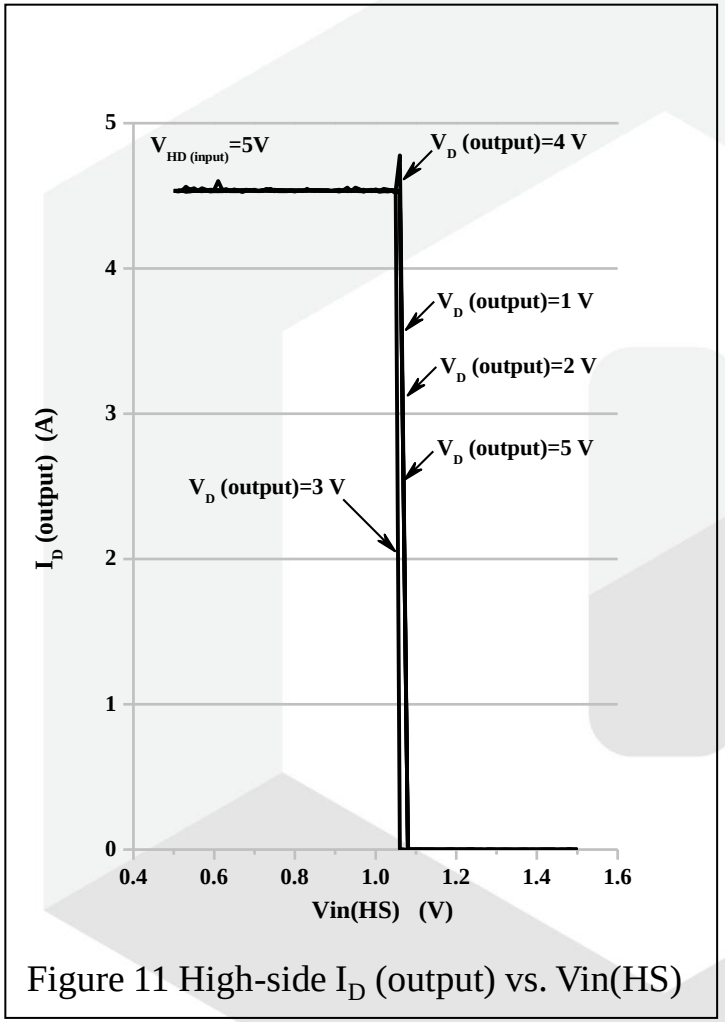
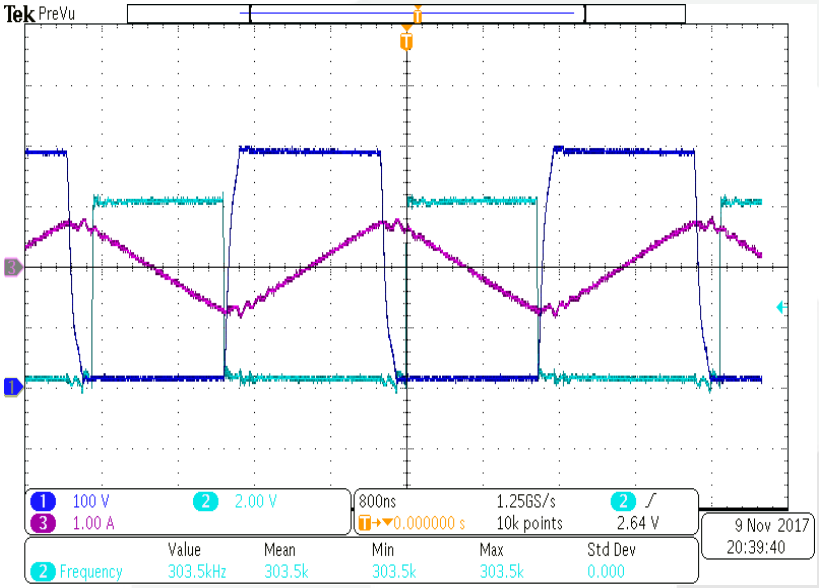


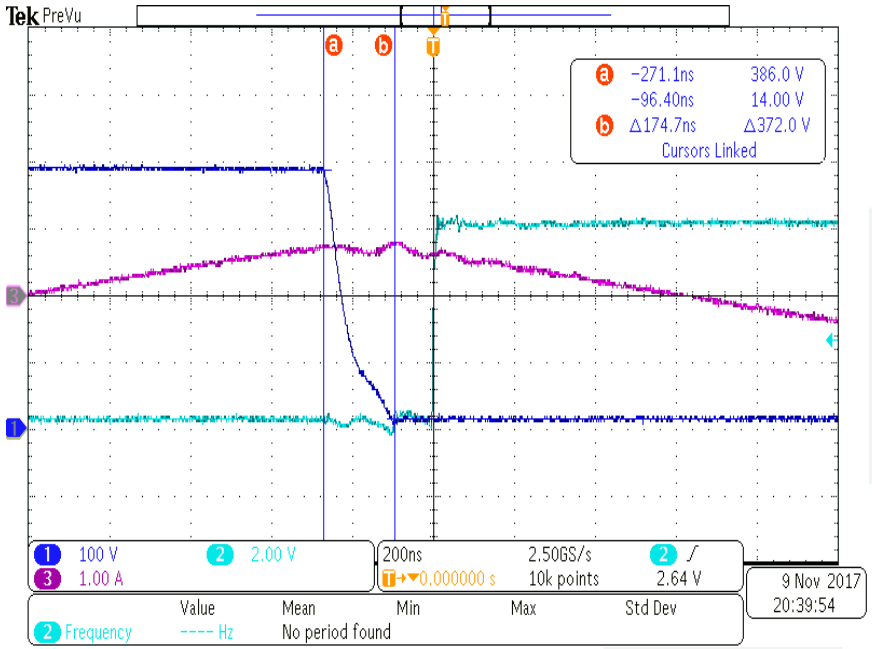
Figure 11 High-side I_D (output) vs. Vin(HS)

We tested the single 15A GaN devices based on the existing LCLC PCB board. The highest input voltage (which is also the V_{ds} of GaN) we exerted is 400V, the highest output is 10V/2A, 20W. The GaN devices work well and correctly. Here are some waveforms.



CH1: Low Side V_{ds} CH2: Low Side V_{gs} CH3: Parallel Resonant Current

Fig. 1 Waveforms of the LCLC resonant converter at 400V input, 10V output



CH1: Low Side V_{ds} CH2: Low Side V_{gs} CH3: Parallel Resonant Current

Label a: specific point when V_{ds} is 400V

Label b: specific point when V_{ds} is decreasing to 0V

Fig. 2 Zoom in waveforms of the LCLC resonant converter at 400V input, 10V output

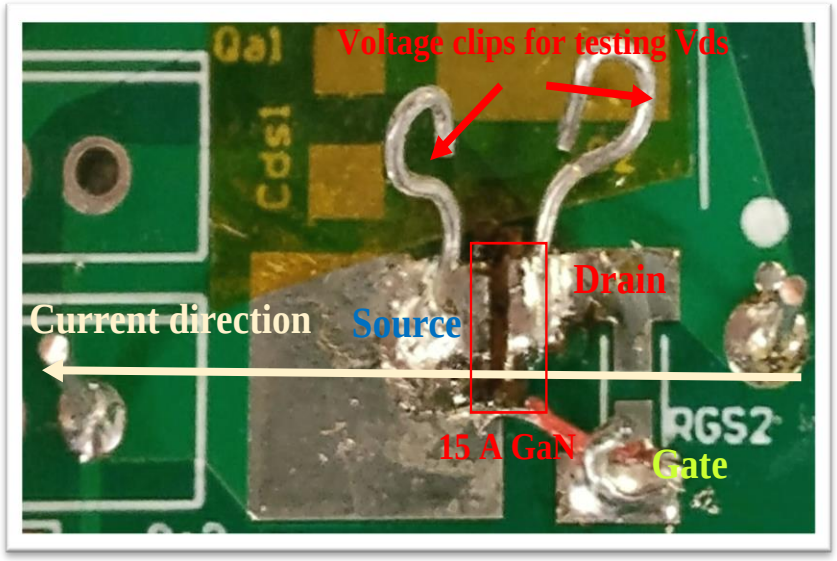


Fig. 3 Prototypes of the Rdson testing circuit

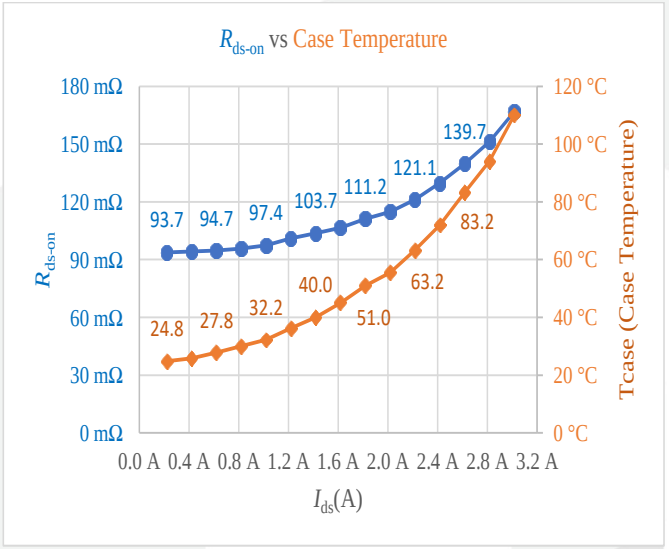


Fig. 4 $R_{ds\text{-}on}$ and Case Temperature Curves v.s. I_{ds}

衷心感謝您的耐心與支持

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