

Figure 1 a) Schematic drawing of the MOSFET devices under test, showing the as-fabricated device as well as the encapsulant. b) Optical microscope image of a device after aerosol jet spray printing of the BCB encapsulant. Inset: scanning electron micrograph of the device active channel, including dimensions.

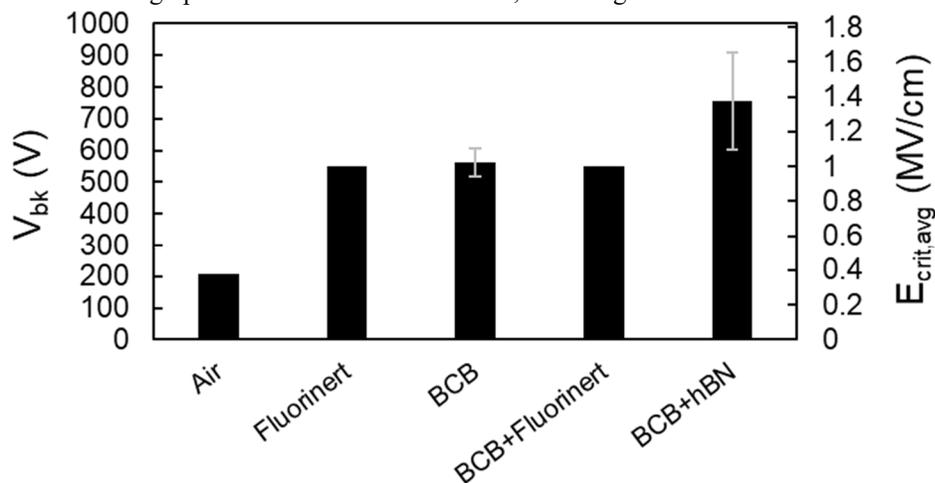


Figure 2 Breakdown voltage V_{bk} and associated average electric field $E_{crit,avg}$ for devices without encapsulation tested in air and Fluorinert, respectively; devices with BCB encapsulation tested in air and Fluorinert, respectively; and device tested with hBN-loaded BCB encapsulant.

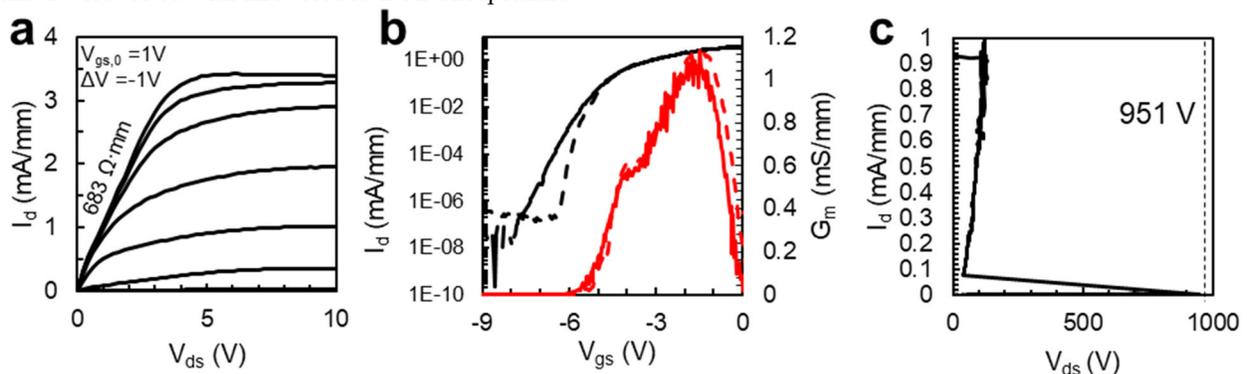


Figure 3 a) I_d - V_{ds} performance for a MOSFET prior to encapsulation; b) transfer curve I_d - V_{gs} and transconductance G_m for the same device before (dotted line) and after (solid) hBN-BCB encapsulation; c) breakdown voltage V_{bk} of the same device.

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