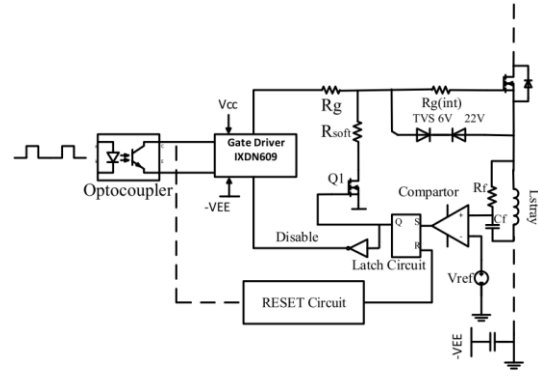
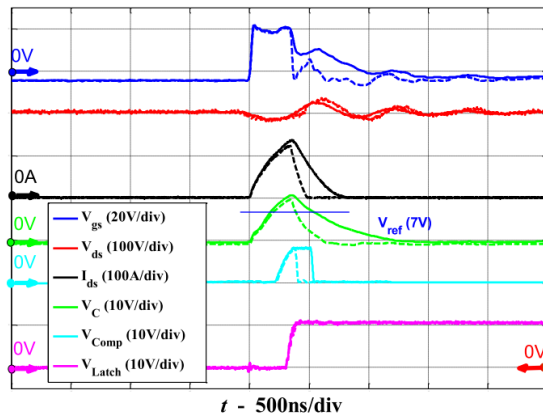


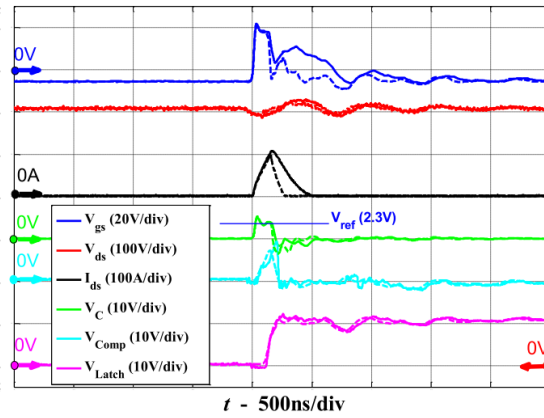
a- Desaturation Technique



b- Parasitic Inductance Technique

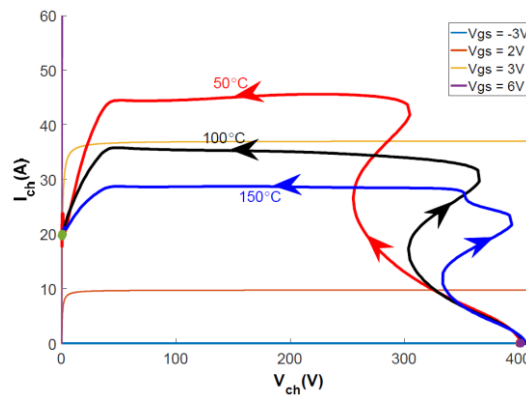


(a) Desaturation Technique



(b) Parasitic Inductance Technique

- Parasitic inductance technique detects fault 2 times faster
- Desaturation technique requires fast and low Coss diodes
- The current can be limited in lower level with parasitic inductance technique
- Desaturation technique has less distorted node voltages



For GaN transistor with loop inductance of 7 nH

@ 150°C - di/dt is nearly 8.6 A/ns

@ 100°C - di/dt is nearly 12.8 A/ns

@ 50°C - di/dt is nearly 21.4 A/ns