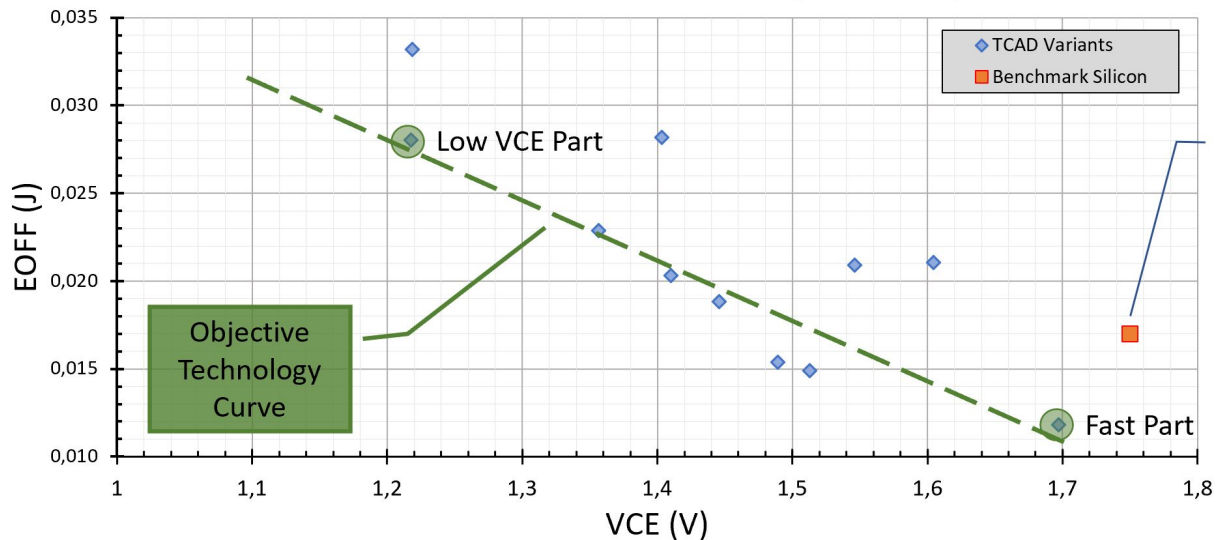


IGTO Enables Cost Effective Inverters

Process variants on E_{OFF} vs. V_{CE} plane (w/ 20% smaller die)



TCAD simulation: E_{OFF} vs. V_{CE} @150A ($T_J=175^\circ\text{C}$)

Pakal Tech: Developing the next generation Si transistor w/ better physics

General:

- Silicon Valley, USA based startup
- In the market w/ 650V devices (>5mio pcs)
- Pakal Si IGTO = Best of IGBT & Thyristor
- High current device
- Si = **proven reliability & cost effective**
- IGTO outperforms IGBT in dynamic & static losses
- Pakal **develops 1200V automotive qualified devices**
- Vast demand from automotive industry for cost driven auxiliary inverters will force more than just SiC semiconductors to be available for the market
- Future powertrain: mix of Si, SiC & other semiconductor materials