

LIGBT in bulk-Si

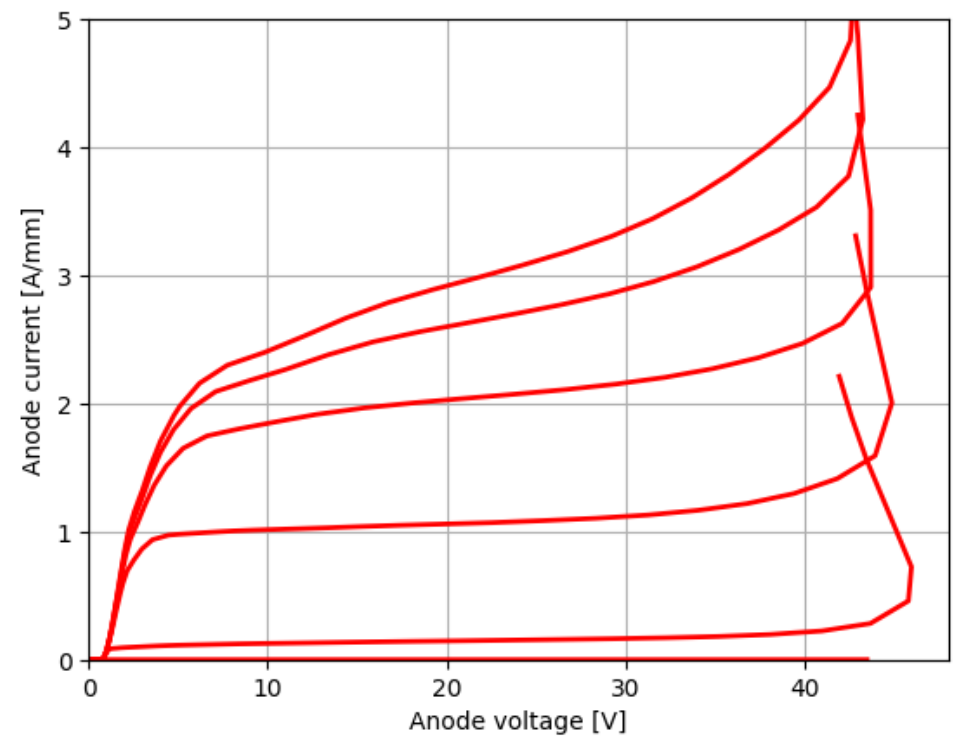
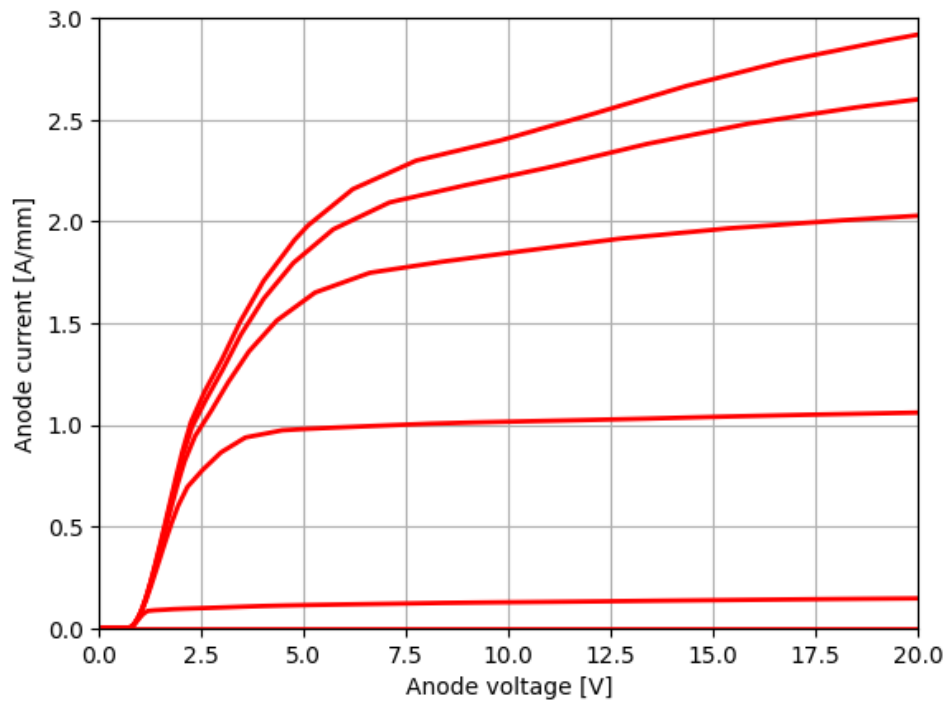
- A fast fundamentally latch-free LIGBT implemented on bulk-Si and isolated from the substrate.
- Patented concept.
- I_{Dsat} is around 2.5 A/mm, will challenge conventional LDMOS solutions below 40V.
- For 80V and 140V devices the falltime will increase to about 6 ns and 12 ns, but will still challenge most LDMOS solutions.
- Area for a 40V-device in BCD technology is 0.015mm².
- The current density for the 80V device is 10x higher than a comparable LDMOS.
- Status: to be implemented in BCD technology.

Bulk LIGBT summary

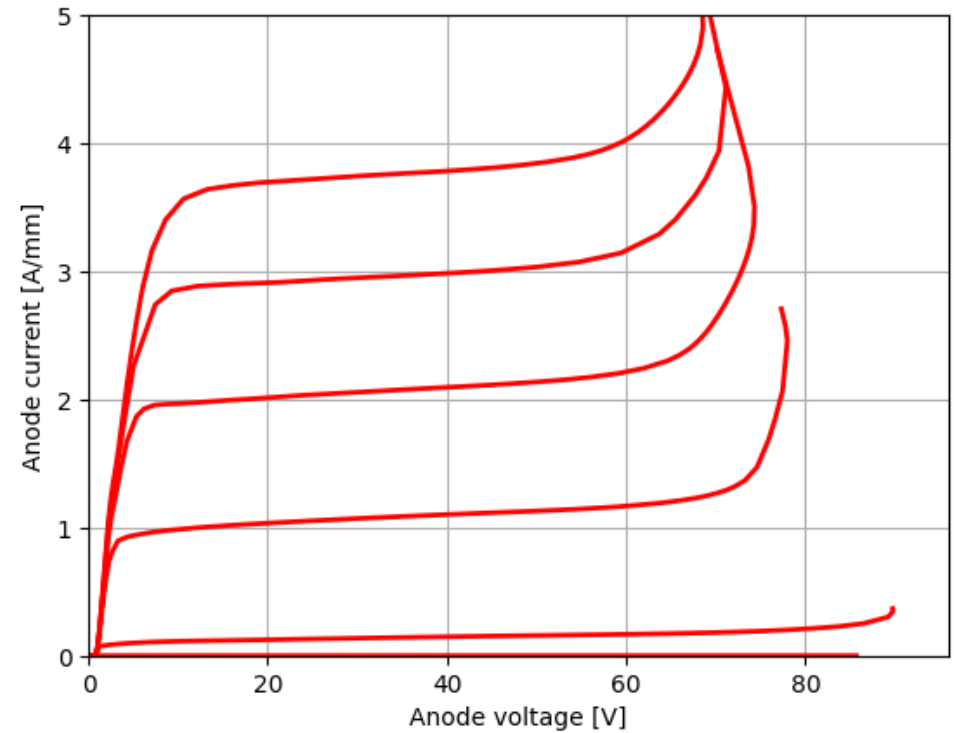
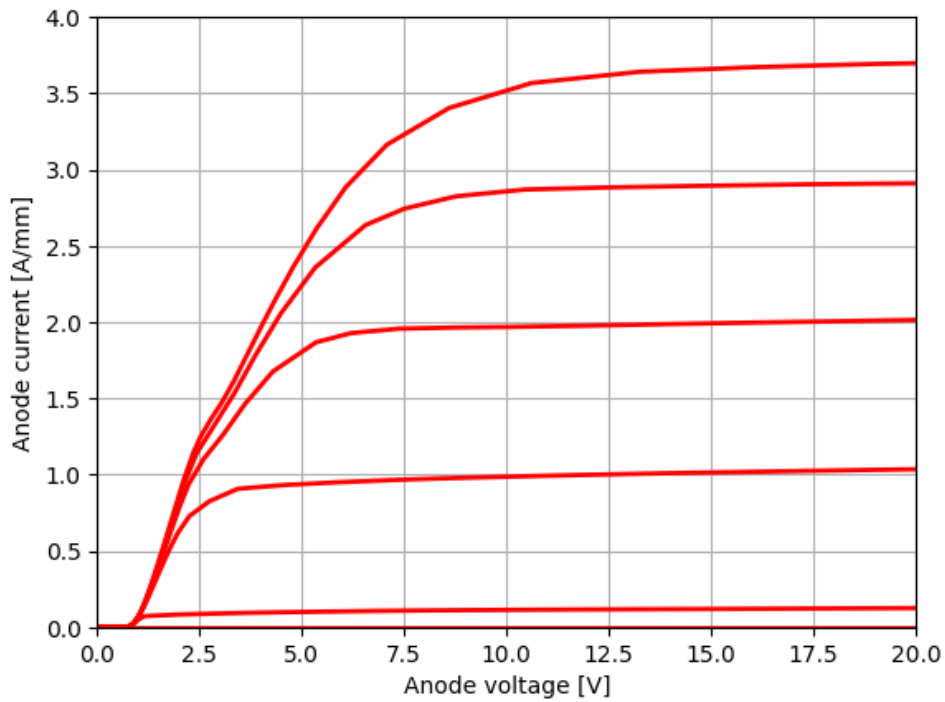
	40V	80V	140V
BV	43 V	85 V	141 V
IDsat	2.4 A/mm	3.5 A/mm	3.3 A/mm
Von @1 A/mm	2.2V	2.2V	2.2V
t _{fall} (I=1 A/mm)	2.7 ns	5.9 ns	11.8 ns
Area (W=1mm)	0.015 mm ²	0.017 mm ²	0.021 mm ²

IV-characteristics on following pages.

40V-device IV-characteristics



80V-device IV-characteristics



140V-device IV-characteristics

