

APPLICATION NOTE:

Gate Drive Voltage Less Than Set-Point

Problem - When testing low threshold parts the actual gate drive voltage may be somewhat lower than the user entered value.

Reason - The gate drive circuit on the ITC5510, ITC5511, ITC55100, and the ITC55300 utilizes an emitter follower and so the output voltage is approximately 0.8 V lower than the entered value. With 10-20V gate drive settings this loss is insignificant, but it can create a problem with lower gate drive settings, 5V or less. The problem may initially show as an IPEAK failure, if the DUT requires the full gate enhancement to pass the specified current.

Solution - Enter a gate voltage 0.8V higher than the required value. The resulting voltage can be verified, if desired, with a scope probe across the gate and source leads at the DUT.