

Field Stop Trench IGBT

40 A, 650 V

AFGHL40T65SQ

Features

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Gate-to-Emitter Voltage
 Transient Gate-to-Emitter Voltage

	V_{GES}	± 20 ± 30	V
Collector Current (Note 1) @ $T_C = 25^\circ\text{C}$ @ $T_C = 100^\circ\text{C}$	I_C	80 40	A
Pulsed Collector Current (Note 2)	I_{LM}	160	A
Pulsed Collector Current (Note 3)	I_{CM}	160	A
Maximum Power Dissipation @ $T_C = 25^\circ\text{C}$ @ $T_C = 100^\circ\text{C}$	P_D	239 119	W
Operating Junction / Storage Temperature Range	T_J, T_{STG}	-55 to +175	$^\circ\text{C}$

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THERMAL CHARACTERISTICS

Rating	Symbol	Value	Unit
Thermal resistance junction-to-case, for IGBT			

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TYPICAL CHARACTERISTICS

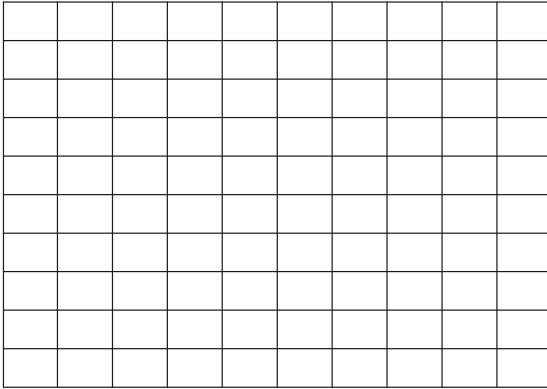


Figure 1. Typical Output Characteristics

Figure 2. Typical Output Characteristics

Figure 3. Typical Saturation Voltage

Figure 4. Saturation Voltage vs. Case Temperature [

Figure 5. Saturation Voltage vs. V_{GE}

Figure 6. Saturation Voltage vs. V_{GE}

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TYPICAL CHARACTERISTICS

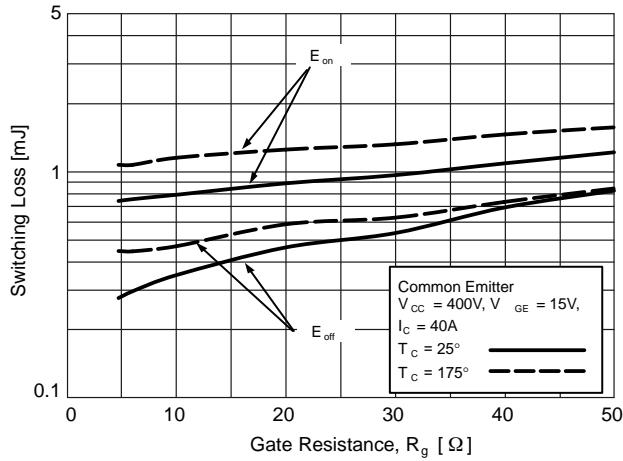


Figure 13. Switching Loss vs. Gate Resistance

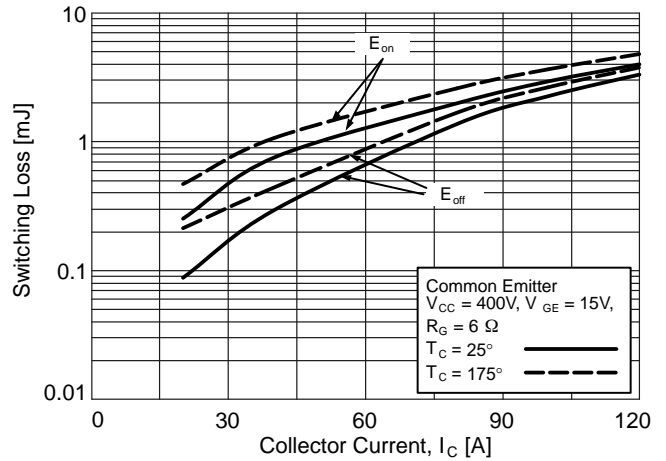


Figure 14. Switching Loss vs. Collector Current

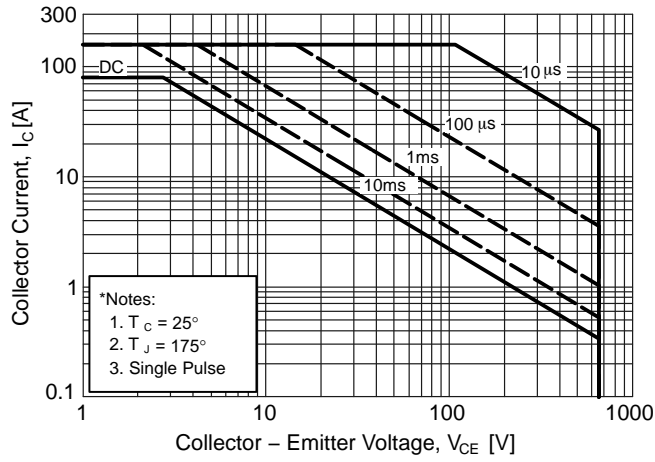


Figure 15. SOA Characteristics

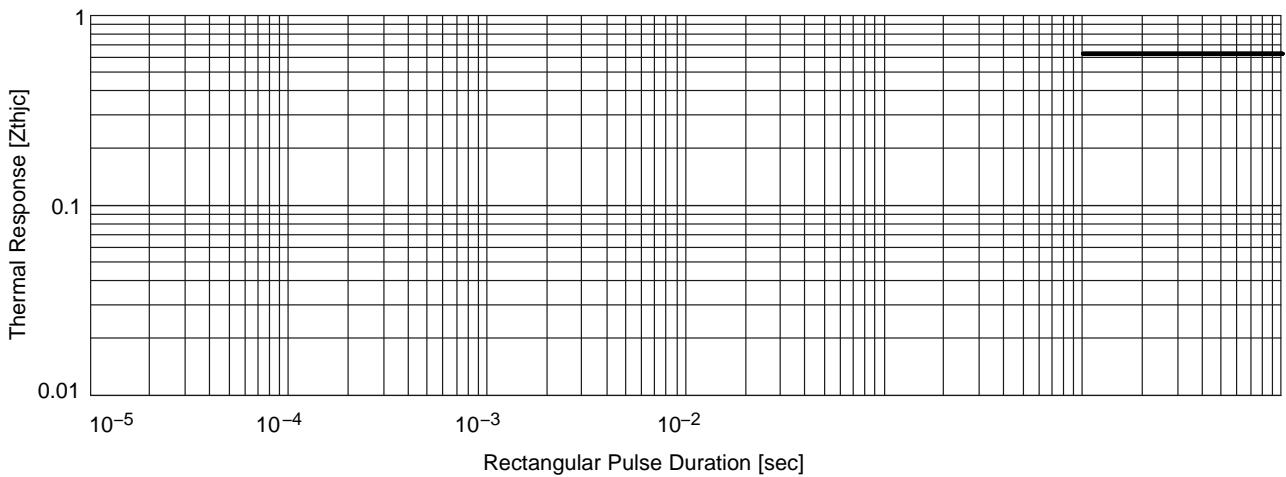


Figure 16. transient Thermal Impedance of IGBT

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