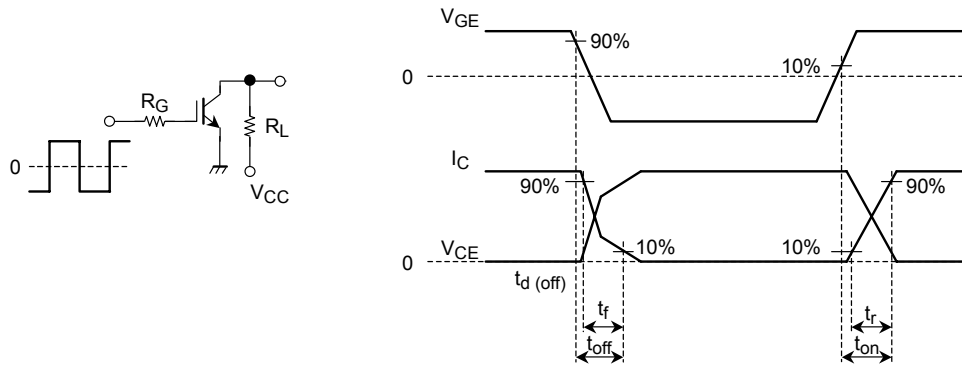
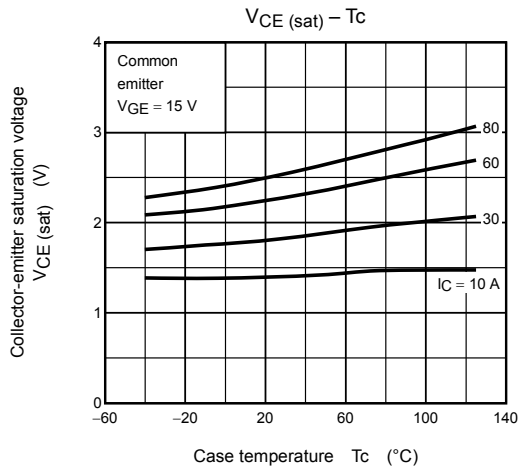
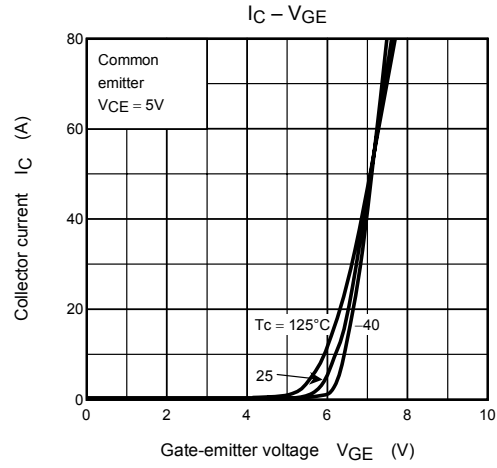
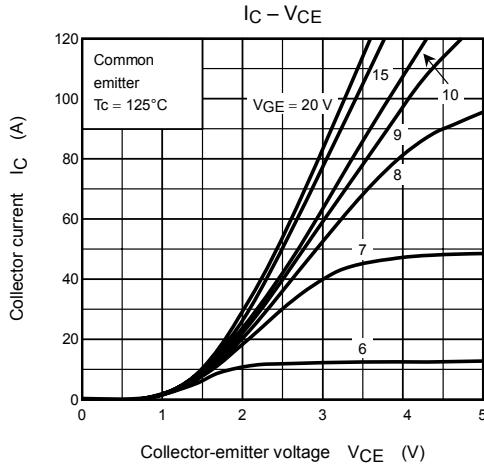
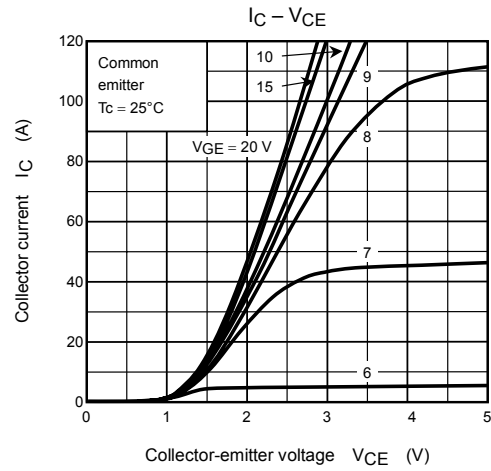
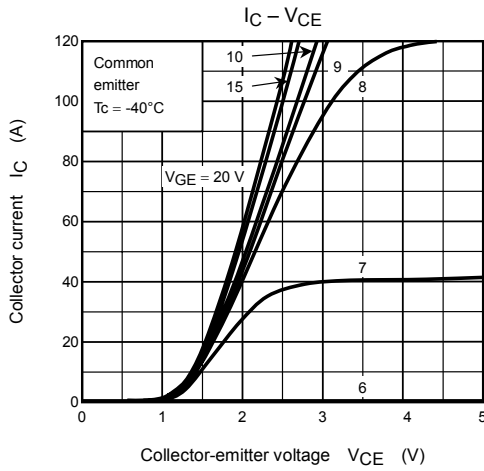


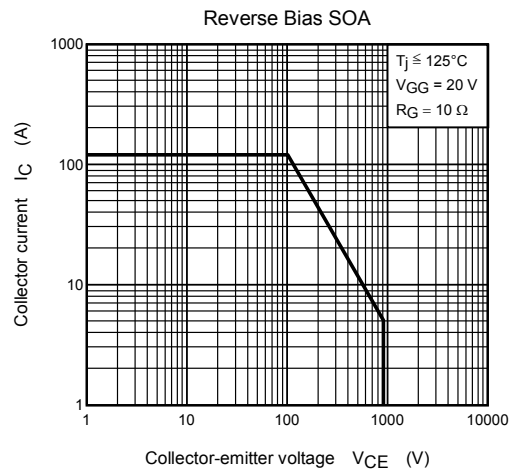
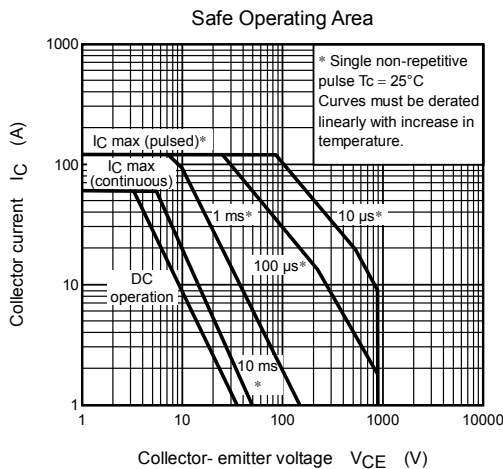
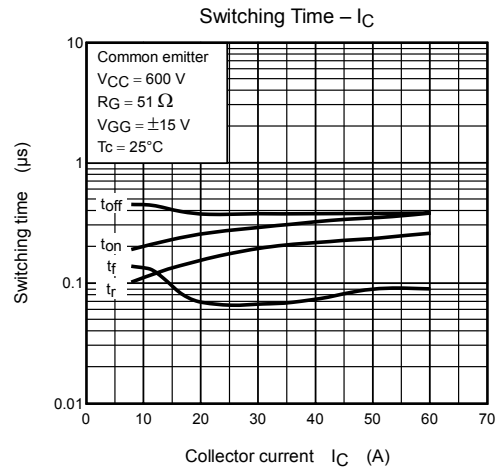
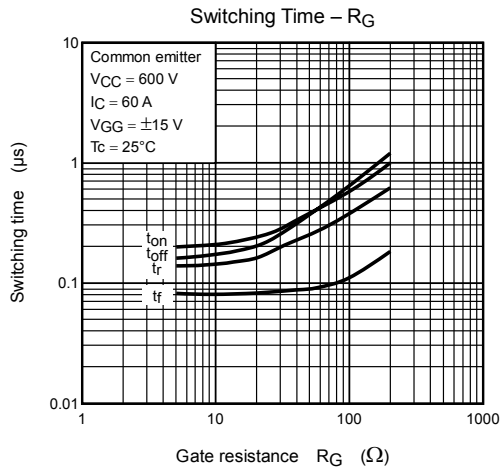
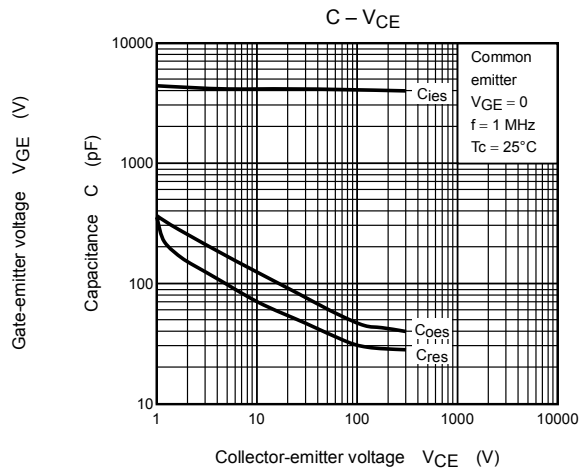
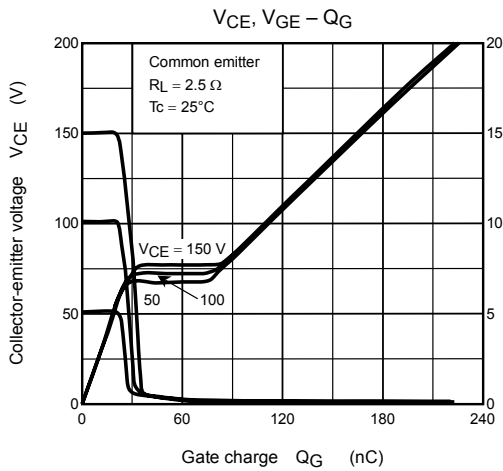
Electrical Characteristics (Ta = 25°C)

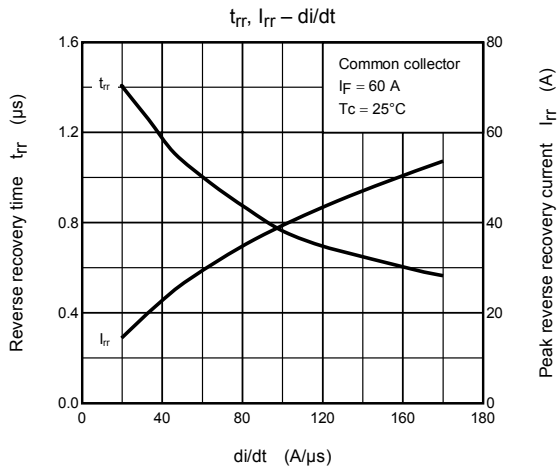
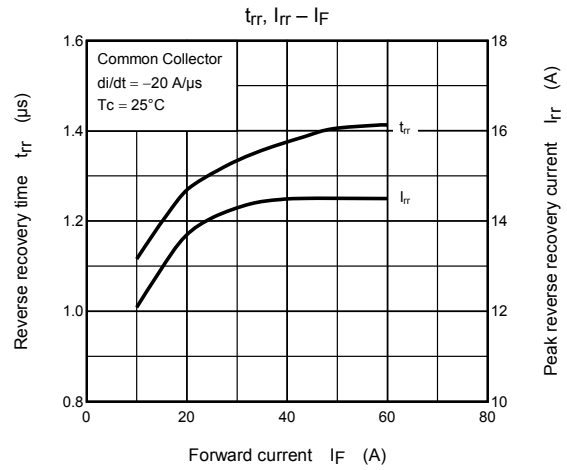
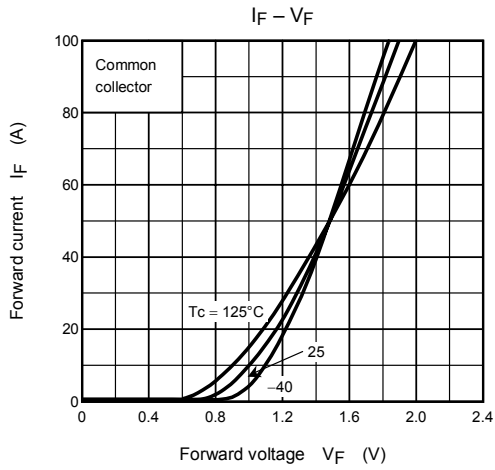
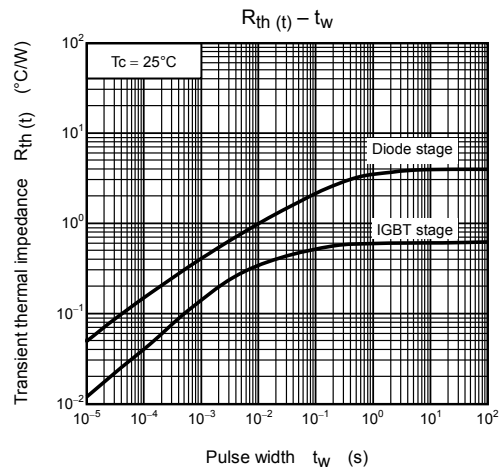
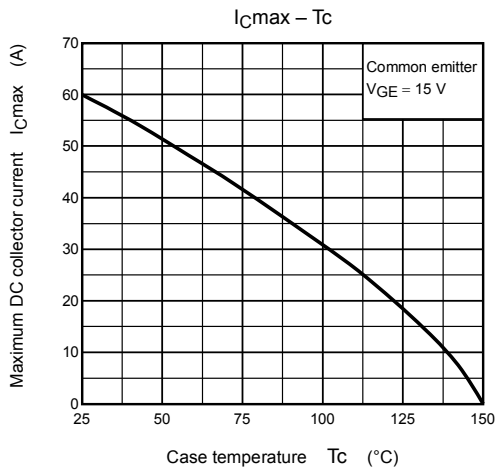
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current	I_{GES}	$V_{GE} = \pm 25 \text{ V}, V_{CE} = 0$	—	—	± 500	nA
Collector cut-off current	I_{CES}	$V_{CE} = 900 \text{ V}, V_{GE} = 0$	—	—	0.1	mA
Gate-emitter cut-off voltage	$V_{GE(OFF)}$	$I_C = 60 \text{ mA}, V_{CE} = 5 \text{ V}$	4.0	—	7.0	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 60 \text{ A}, V_{GE} = 15 \text{ V}$	—	2.3	2.8	V
Input capacitance	C_{ies}	$V_{CE} = 10 \text{ V}, V_{GE} = 0, f = 1 \text{ MHz}$	—	4200	—	pF
Switching time	Rise time	Resistive Load $V_{CC} = 600 \text{ V}, I_C = 60 \text{ A}$ $V_{GG} = \pm 15 \text{ V}, R_G = 51 \Omega$ (Note 1)	—	0.25	—	μs
	Turn-on time		—	0.37	—	
	Fall time		—	0.09	0.20	
	Turn-off time		—	0.40	—	
Diode forward voltage	V_F	$I_F = 15 \text{ A}, V_{GE} = 0$	—	1.1	1.9	V
Reverse recovery time	t_{rr}	$I_F = 60 \text{ A}, di/dt = -20 \text{ A}/\mu\text{s}$	—	1.4	3.0	μs

Note 1: Switching time measurement circuit and input/output waveforms









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