Absolute Maximum Ratings

Parameter		Symbol	Value	Unit
Collector-Emitter Voltage		V_{CES}	1350	V
Gate-Emitter Voltage	c	V_{GES}	±25	V
Continuous Collector Current	T_C			

T

Electrical Characteristics T_{vj}=25℃, unless otherwise noted

Parameter	Symbol	Test condition	Min.	Typ.	Max.	Unit
SWITCHING (Note 2)						
Turn-Off Delay Time	$t_{d(off)}$	V_{CC} = 600V, I_C = 15A R_G = 5 , V_{GE} = 15V Inductive Load, T_{vj} = 25	--	113	--	ns
Fall Time	t_f		--	106	159	ns
Turn-Off Switching Loss	E_{OFF}		--	0.38	0.57	mJ
Turn-Off Delay Time	$t_{d(off)}$	V_{CC} = 600V, I_C = 15A R_G = 5 , V_{GE} = 15V Inductive Load, T_{vj} = 175	--	131	--	ns
Fall Time	t_f		--	213	--	ns
Turn-Off Switching Loss	E_{OFF}		--	0.70	1.05	mJ
Turn-Off Delay Time	$t_{d(off)}$	V_{CC} = 600V, I_C = 30A R_G = 5 , V_{GE} = 15V Inductive Load, T_{vj} = 25	--	113	--	ns
Fall Time	t_f		--	105	157	ns
Turn-Off Switching Loss	E_{OFF}		--	0.81	1.22	mJ
Turn-Off Delay Time	$t_{d(off)}$	V_{CC} = 600V, I_C = 30A R_G = 5 , V_{GE} = 15V Inductive Load, T_{vj} = 175	--	123	--	ns
Fall Time	t_f		--	220	--	ns
Turn-Off Switching Loss	E_{OFF}		--	1.52	2.28	mJ

Notes :
(2) Not subject to production test verified by design/characterization

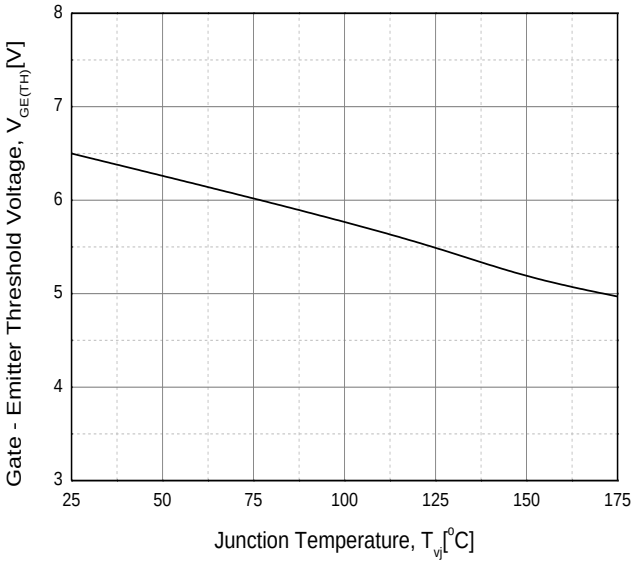
Device Characteristics

Fig. 1 IGBT Output Characteristics

Fig. 2 IGBT Output Characteristics

Fig. 3 IGBT Saturation Voltage vs. Junction Temperature

Fig. 4 IGBT Threshold Voltage vs. Junction Temperature



Device Characteristics

Fig. 5 IGBT Transfer Characteristic

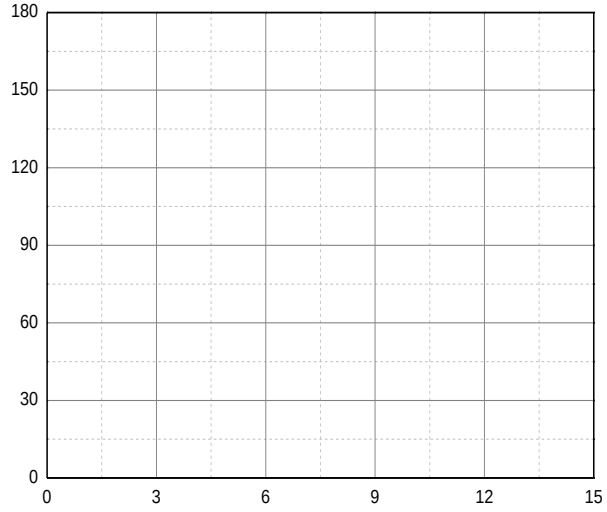


Fig. 6 IGBT Capacitance Characteristics

Fig. 7 Diode Conduction Characteristics

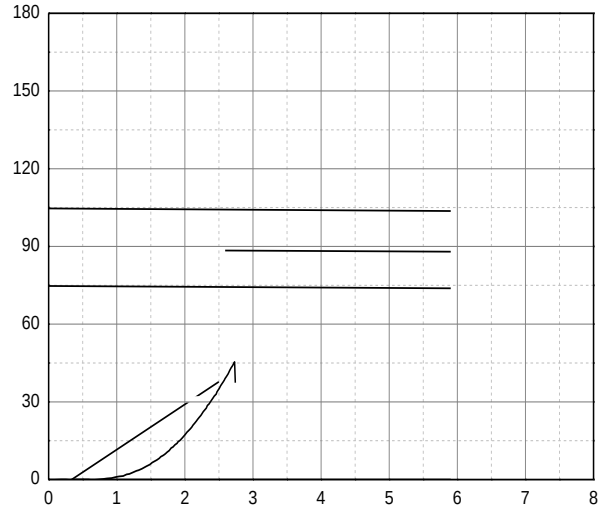
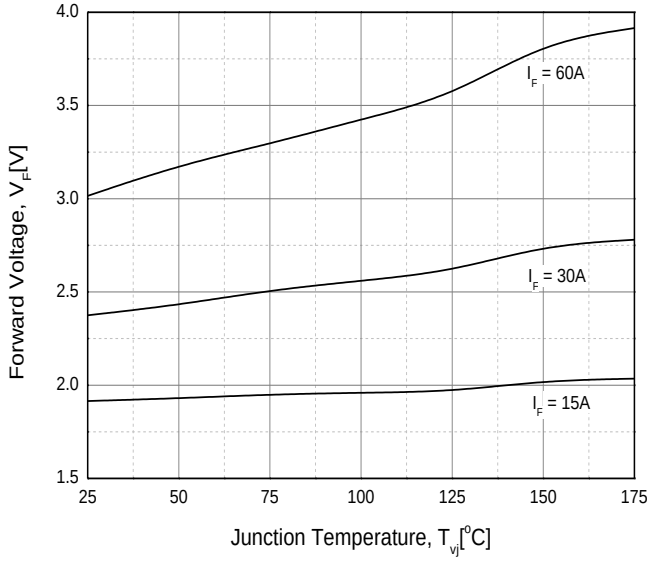


Fig. 8 Diode Forward Voltage vs. Junction Temperature



Device Characteristics

Fig. 9 Turn-off Time vs. Gate Resistor

Fig. 10 Turn-off Time vs. Collector Current

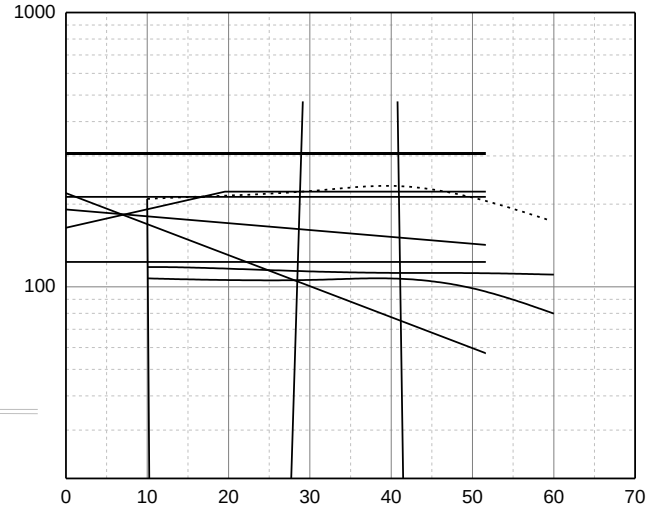


Fig. 11 Turn-off Loss vs. Gate Resistor

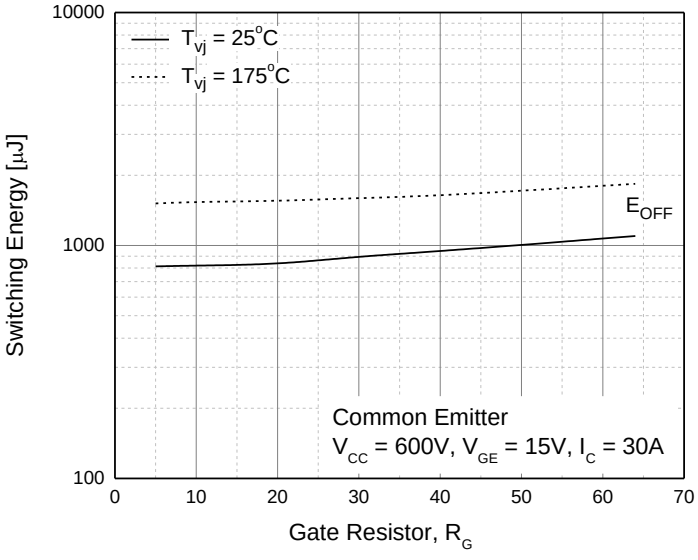
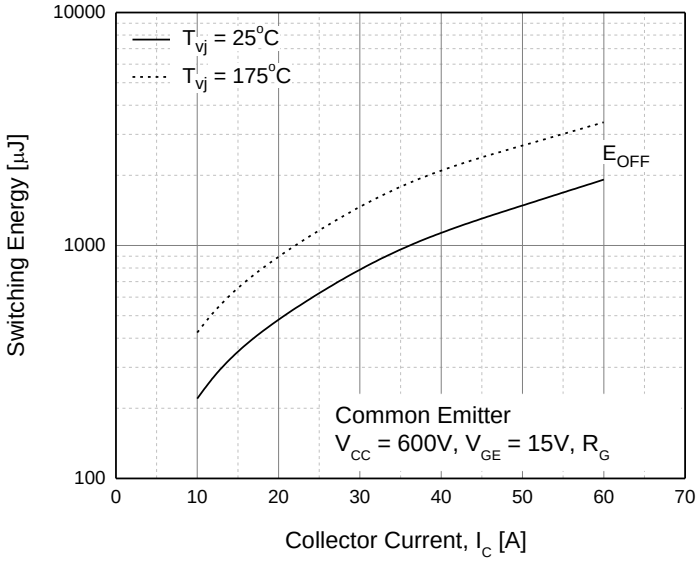
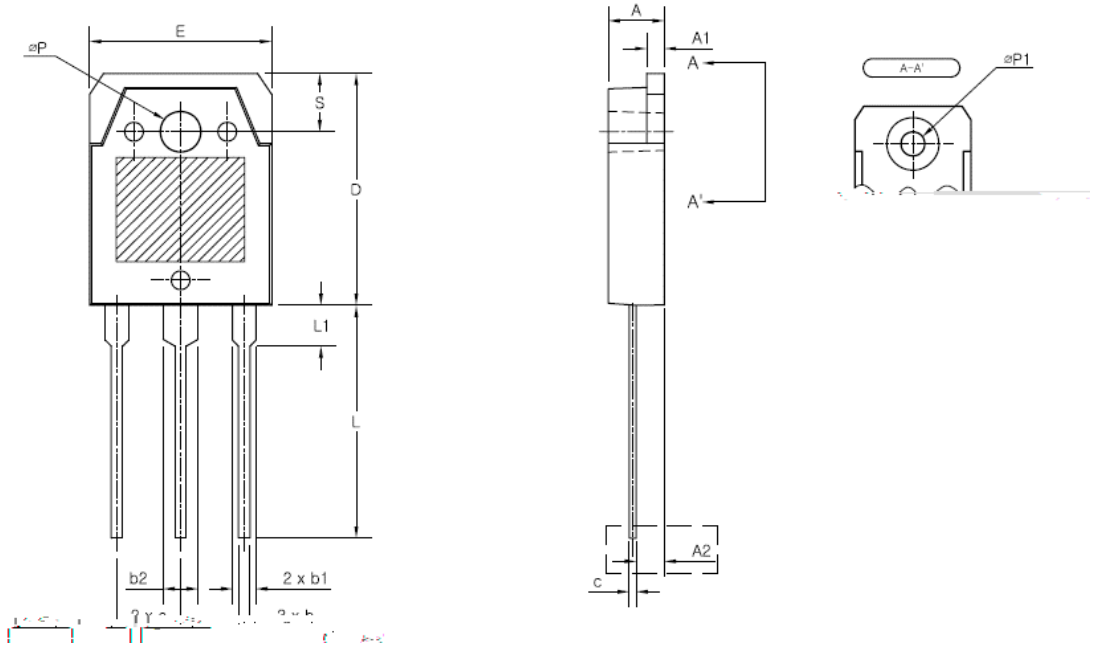


Fig. 12 Turn-off Loss vs. Collector Current



TO-3PN MECHANICAL DATA



SYMBOL	mm		
	MIN	NOM	MAX
A	4.6	4.8	5
A1	1.45	1.5	1.65
A2	2.2	2.4	2.6
b	0.8	1	1.2
b1	2.8	3	3.2
b2	1.8	2	2.2
c	0.55	0.6	0.75
D	19.20	19.65	20.10
E	15.4	15.6	15.8
e	5.15	5.45	5.75
L	19.8	20	20.2
L1	3.3	3.5	3.7
P	3.5		
P1	3.2		
S	5		

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