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

Parameter	Symbol	Test condition	Min.	Typ.	Max.	Unit
OFF						
Collector Emitter Breakdown Voltage	BV_{CES}					

Parameter	Symbol	Test condition	Min.	Typ.	Max.	Unit
SWITCHING (Note 2)						
Turn-Off Delay Time	$t_{d(off)}$	V_{CC} = 600V, I_C = 7.5A R_G = 5 , V_{GE} = 15V Inductive Load, T_{vj} = 25	--	88	--	ns
Fall Time	t_f		--	99	148	ns
Turn-Off Switching Loss	E_{OFF}		--	0.10	0.15	mJ
Turn-Off Delay Time	$t_{d(off)}$	V_{CC} = 600V, I_C = 15A R_G = 5 , V_{GE} = 15V Inductive Load, T_{vj} = 25	--	88	--	ns
Fall Time	t_f		--	104	156	ns
Turn-Off Switching Loss	E_{OFF}		--	0.28	0.42	mJ
Turn-Off Delay Time	$t_{d(off)}$	V_{CC} = 600V, I_C = 7.5A R_G = 5 , V_{GE} = 15V Inductive Load, T_{vj} = 175	--	105	--	ns
Fall Time	t_f		--	167	--	ns
Turn-Off Switching Loss	E_{OFF}		--	0.18	0.27	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	--	98	--	ns
Fall Time	t_f		--	166	--	ns
Turn-Off Switching Loss	E_{OFF}		--	0.48	0.72	mJ

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

Device Characteristics

Fig. 1 IGBT Output Characteristics

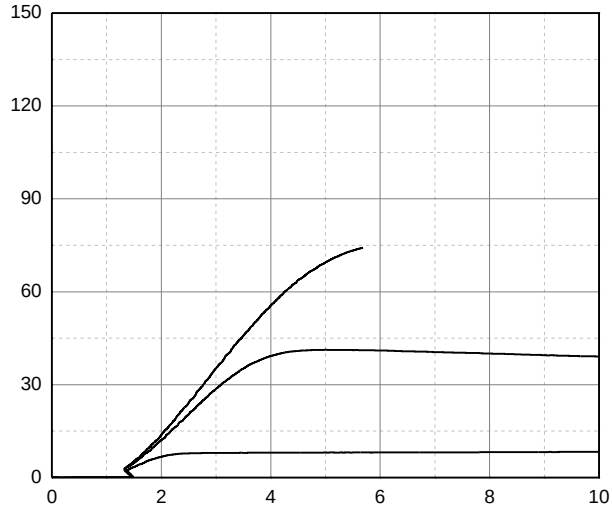


Fig. 2 IGBT Output Characteristics

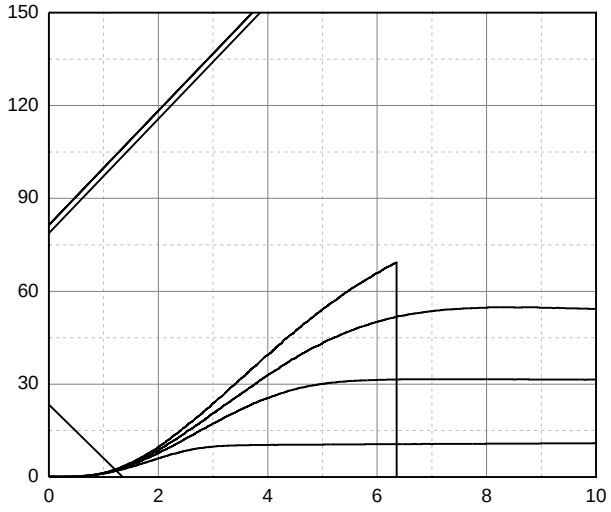


Fig. 3 IGBT Saturation Voltage vs. Junction Temperature

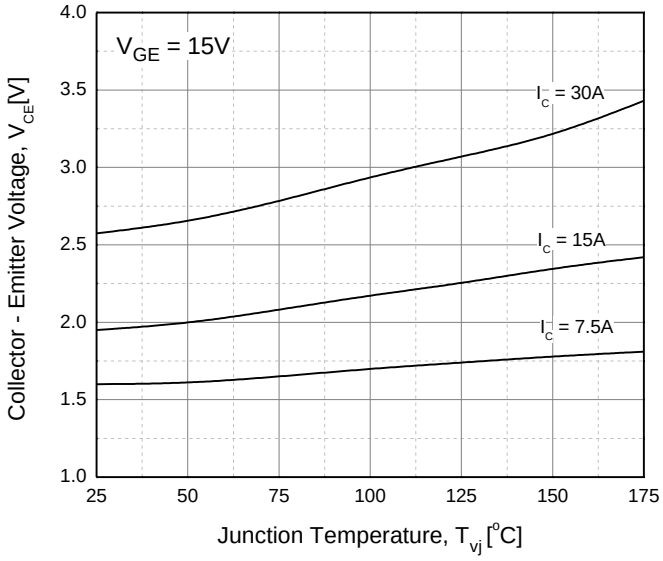


Fig. 4 IGBT Threshold Voltage vs. Junction Temperature

Device Characteristics

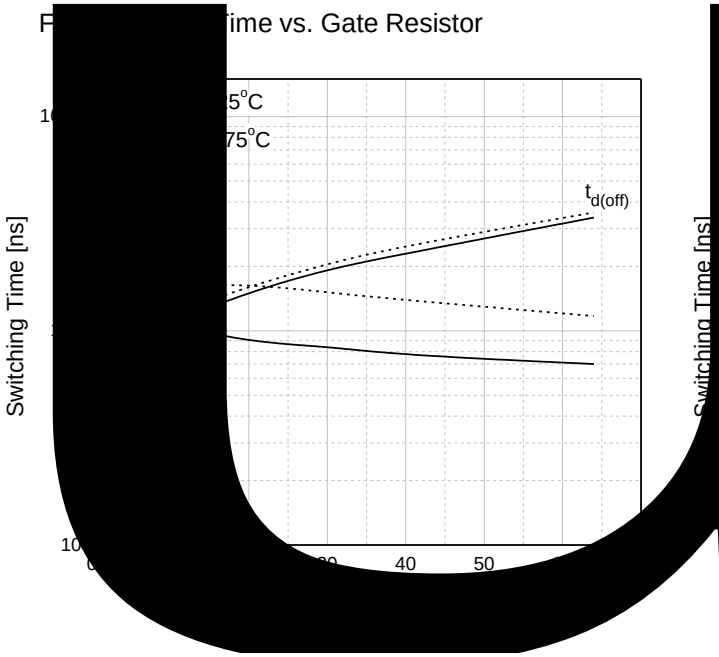


Fig. 11 Turn-off Loss vs. Gate Resistor

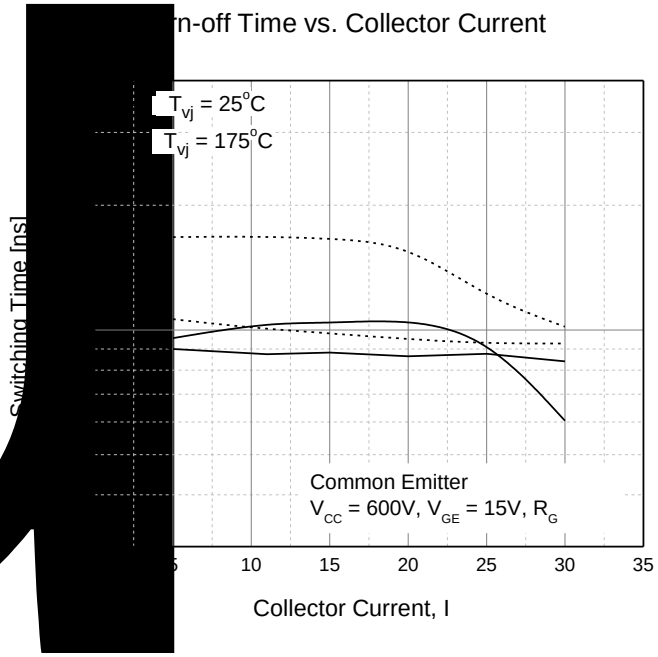
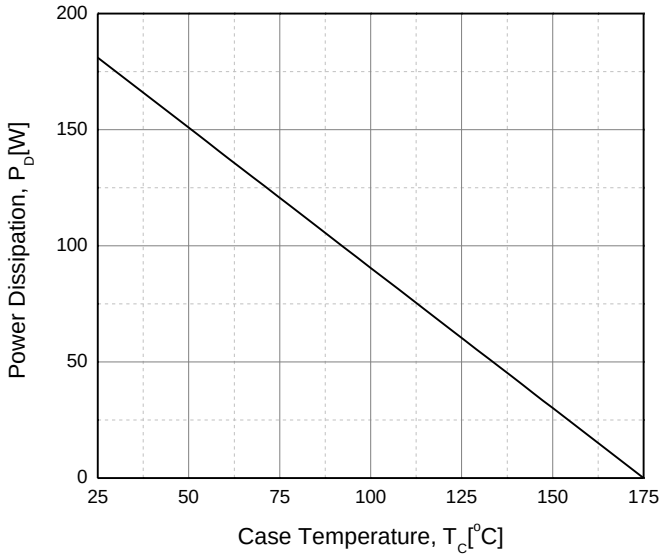
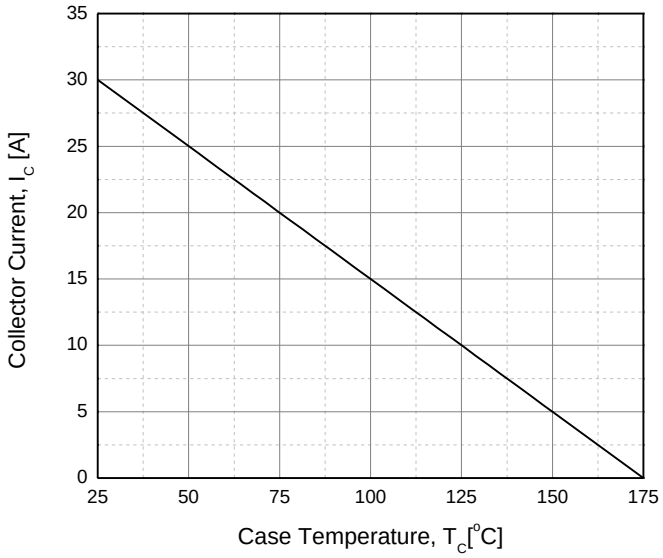


Fig. 12 Turn-off Loss vs. Collector Current

Fig.


200
150
100
50
0
25
50
75
100
125
150
175
Power Dissipation, P_D[W]
Case Temperature, T_C[°C]


35
30
25
20
15
10
5
0
25
50
75
100
125
150
175
Collector Current, I_C [A]
Case Temperature, T_C[°C]

Device Characteristics

Fig. 17 SOA

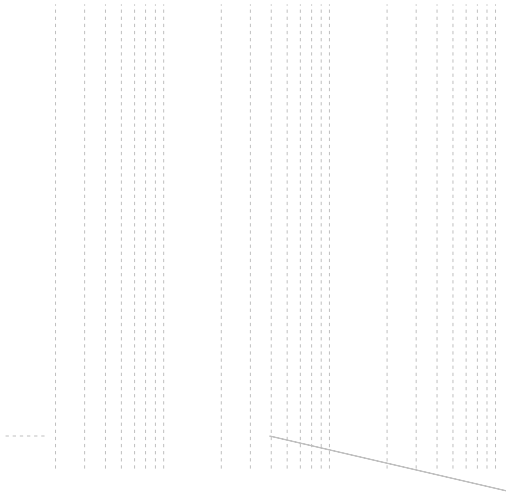
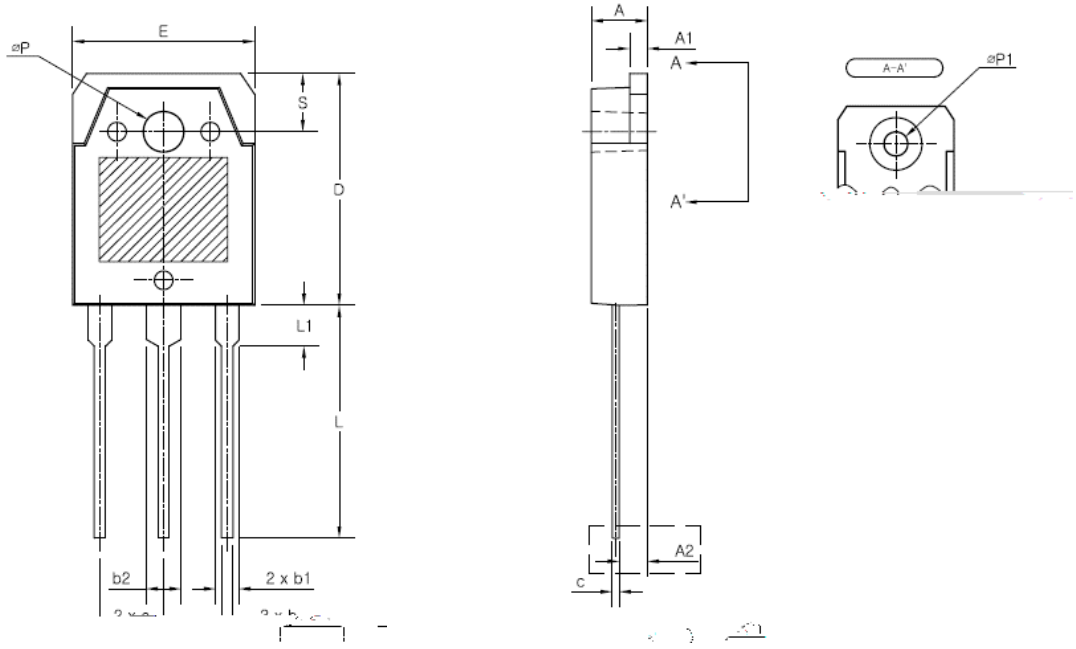


Fig. 18 RBSOA

Fig. 19 Load Current vs. Frequency

Fig. 20 Load Current vs. Frequency

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		2	2.2

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