

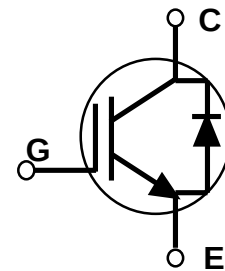
FEATURES

- * High Speed Switching
- * Low Saturation Voltage
: $V_{CE(sat)} = 2.7\text{ V}$ (at $I_C = 60\text{ A}$)
- * High Input Impedance

APPLICATIONS

- * Home Appliance
 - Induction Heater
 - IH JAR
 - Micro Wave Oven

TO-264



ABSOLUTE MAXIMUM RATINGS

Symbol	Characteristics		Rating	Unit
V _{CES}	Collector-Emitter Voltage		900	V
V _{GE}	Gate - Emitter Voltage		±25	V
I _C	Continuous Collector Current	T _C = 25°C	60	A
		T _C = 100°C	42	
I _{CM (1)}	Pulsed Collector Current		120	A
P _D	Maximum Power Dissipation	T _C = 25°C	200	W
		T _C = 100°C	120	
T _J	Operating Junction Temperature		-55 ~ 150	°C
T _{STG}	Storage Temperature Range			
T _L	Soldering maximum lead temperature (1/8” from case for 10 seconds)		300	°C

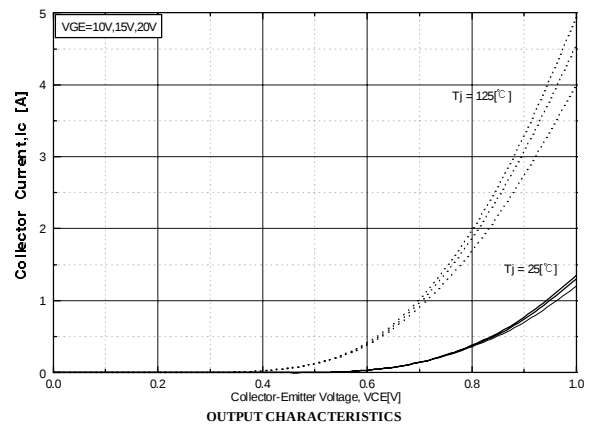
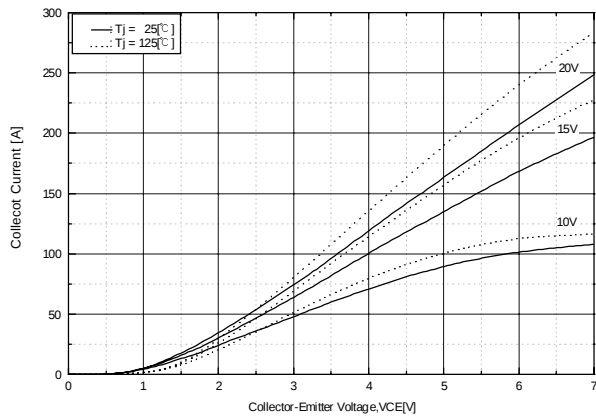
Notes: (1) Repetitive rating : Pulse with limited by max. junction temperature

ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$)

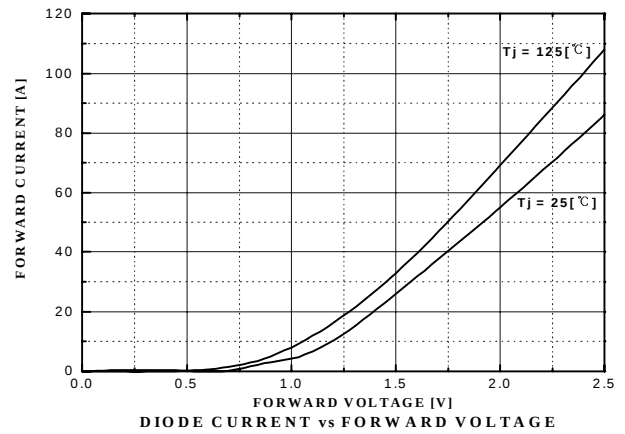
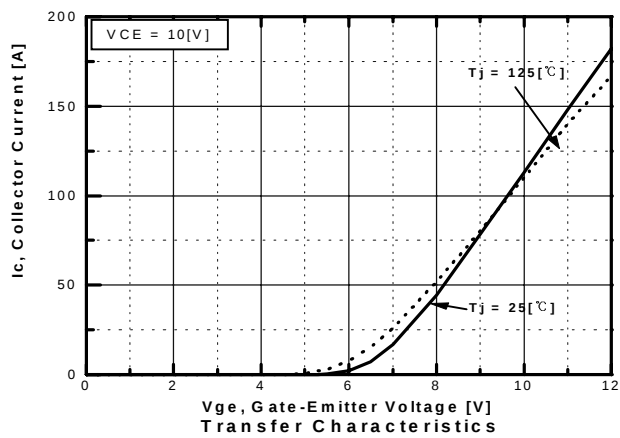
Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
BV_{CES}	C - E Breakdown Voltage	$V_{GE} = 0V, I_C = 1mA$	900	-	-	V
$V_{GE(th)}$	G - E threshold voltage	$I_C = 60mA, V_{CE} = 10V$	4.5	-	7.5	V
I_{CES}	Collector cutoff Current	$V_{CE} = V_{CES}, V_{GE} = 0V$	-	-	1.0	mA
I_{GES}	G - E leakage Current	$V_{GE} = V_{GES}, V_{CE} = 0V$	-	-	500	nA
$V_{CE(sat)}$	Collector to Emitter saturation voltage	$V_{GE} = 15V, I_C = 60A$	-	2.7	3.5	V
Cies	Input capacitance	$V_{GE} = 0V, f = 1MHz$ $V_{CE} = 10V$	-	4500	-	pF
Coes	Output capacitance		-	800	-	pF
Cres	Reverse transfer capacitance		-	200	-	pF
ton	Turn on time	$V_{CC} = 600V, I_C = 60A$ $V_{GE} = 15V$ $R_G = 51\Omega$ Resistive load	-	350	800	ns
tr	Rise time		-	250	600	ns
toff	Turn off time		-	500	1000	ns
tf	Fall time		-	250	400	ns
V_{EC}	Emitter-Collector Voltage	$I_E = 15A$	-	1.5	2.0	V
trr	Reverse recovery time	$I_E = 15A, di/dt = -100A/\mu s$	-	0.7	2.0	μs

THERMAL RESISTANCE

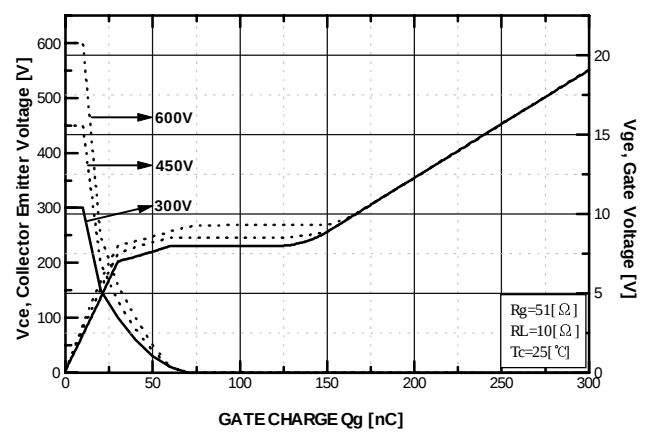
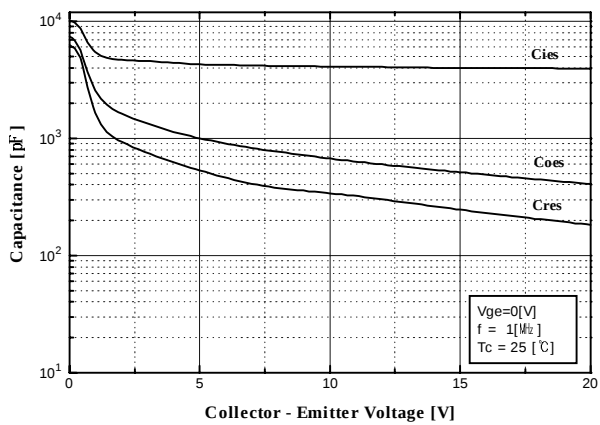
Symbol	Characteristics	Min	Typ	Max	Units
$R_{\theta JC}$	Junction-to-Case : IGBT	-	-	0.625	$^{\circ}\text{C/W}$
$R_{\theta JC}$	Junction-to-Case : Diode	-	-	4.0	$^{\circ}\text{C/W}$

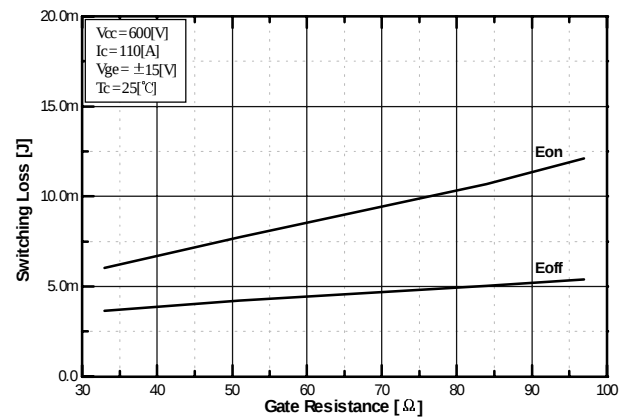
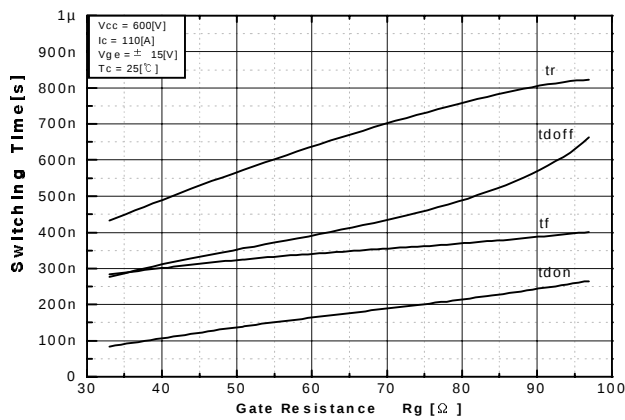
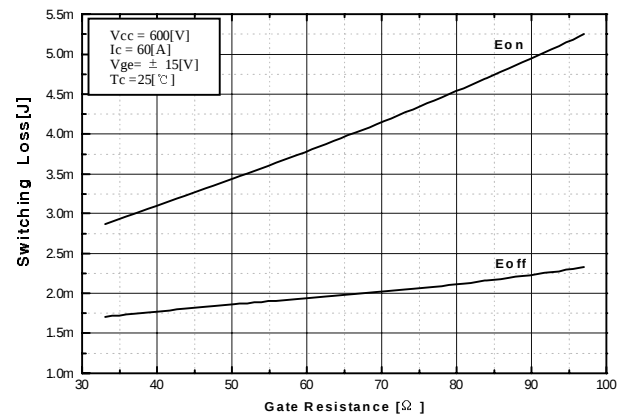
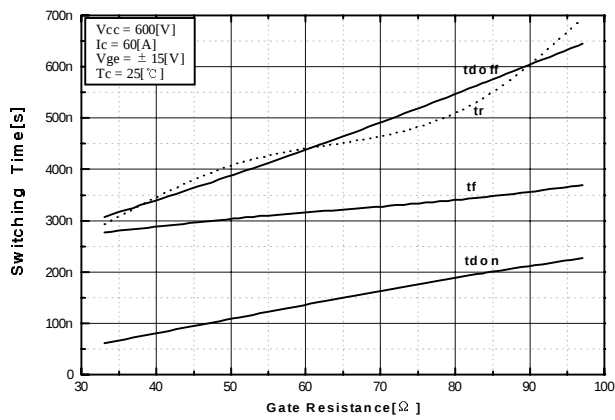
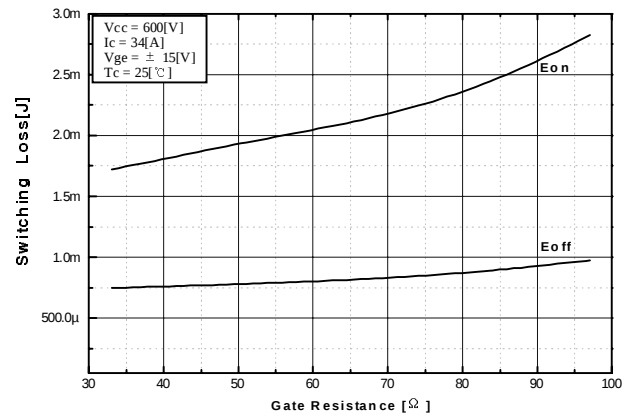
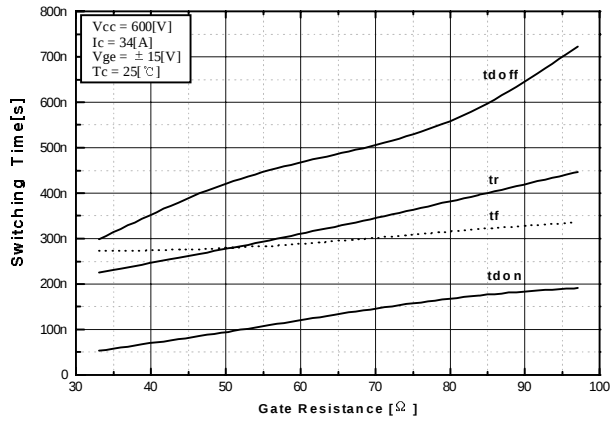


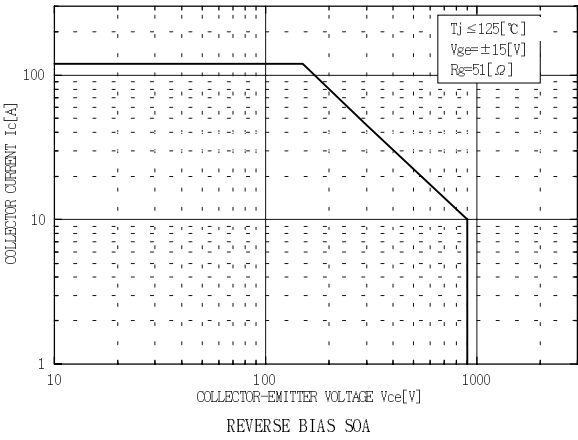
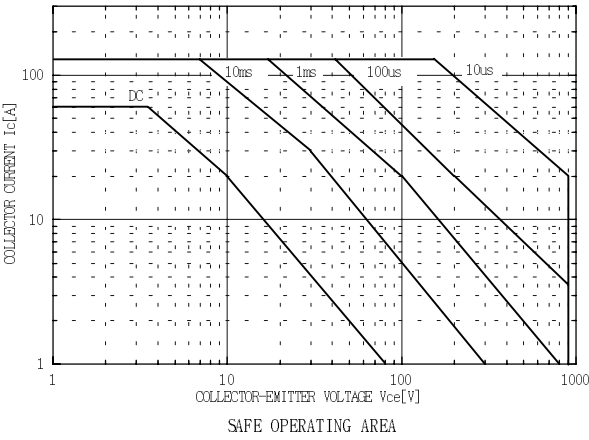
OUTPUT CHARACTERISTICS



DIODE CURRENT vs FORWARD VOLTAGE







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