

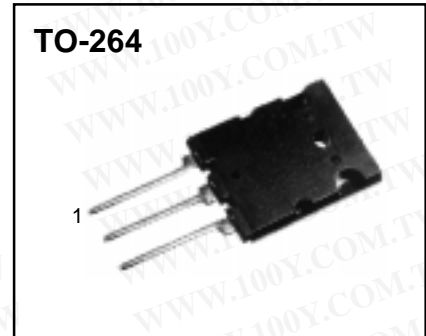
SGL60N90D

IGBT CO-PAK

FEATURES

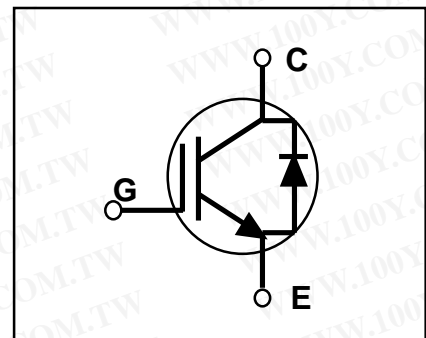
- * High Speed Switching
- * Low Saturation Voltage
 : $V_{CE(sat)} = 2.7\text{ V}$ (at $I_C=60\text{A}$)
- * High Input Impedance

TO-264



APPLICATIONS

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



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	$T_C = 25^\circ\text{C}$	60	A
		$T_C = 100^\circ\text{C}$	42	
$I_{CM(1)}$	Pulsed Collector Current		120	A
P_D	Maximum Power Dissipation	$T_C = 25^\circ\text{C}$	200	W
		$T_C = 100^\circ\text{C}$	120	
T_J	Operating Junction Temperature		-55 ~ 150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range			
T_L	Soldering maximum lead temperature (1/8" from case for 10 seconds)		300	$^\circ\text{C}$

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

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ELECTRICAL CHARACTERISTICS (T_C=25°C)

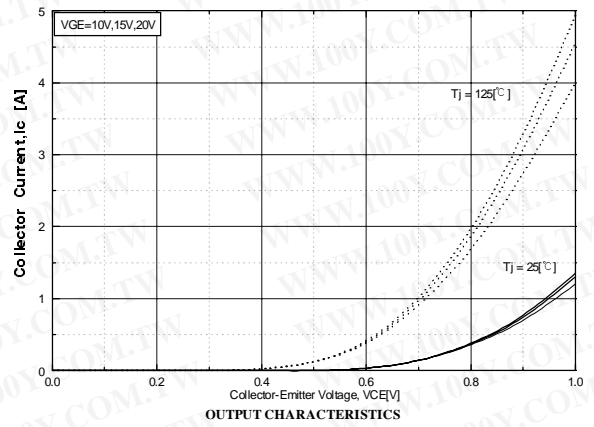
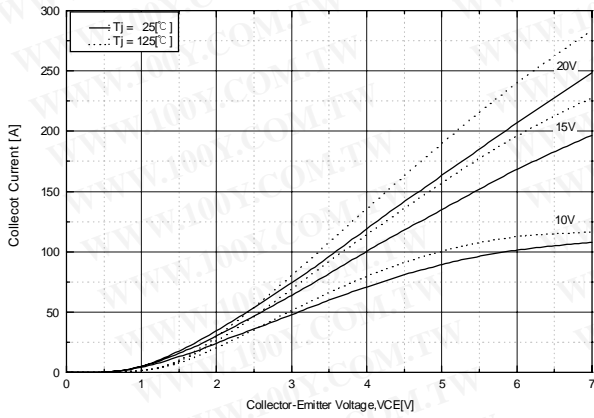
Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
BV _{CES}	C - E Breakdown Voltage	V _{GE} = 0V , I _C = 1mA	900	-	-	V
V _{GE(th)}	G - E threshold voltage	I _C =60mA , V _{CE} = 10V	4.5	-	7.5	V
I _{CES}	Collector cutoff Current	V _{CE} = V _{CES} , V _{GE} = 0V	-	-	1.0	mA
I _{GES}	G - E leakage 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	-	4500	-	pF
Coes	Output capacitance	V _{CE} = 10V	-	800	-	pF
Cres	Reverse transfer capacitance		-	200	-	pF
ton	Turn on time	V _{CC} = 600V , I _C = 60A	-	350	800	ns
tr	Rise time	V _{GE} = 15V	-	250	600	ns
toff	Turn off time	R _G = 51Ω	-	500	1000	ns
tf	Fall time	Resistive load	-	250	400	ns
V _{EC}	Emitter-Collector Voltage	I _E = 15A	-	1.5	2.0	V
trr	Reverse recovery time	I _E = 15A, die/dt = -100A/μs	-	0.7	2.0	μs

THERMAL RESISTANCE

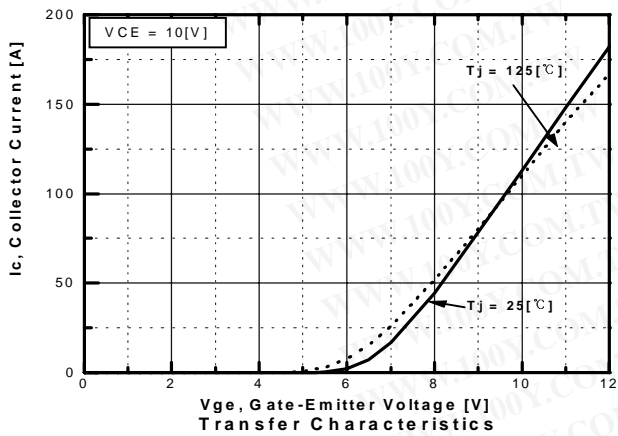
Symbol	Characteristics	Min	Typ	Max	Units
R _{θJC}	Junction-to-Case : IGBT	-	-	0.625	°C/W
R _{θJC}	Junction-to-Case : Diode	-	-	4.0	°C/W

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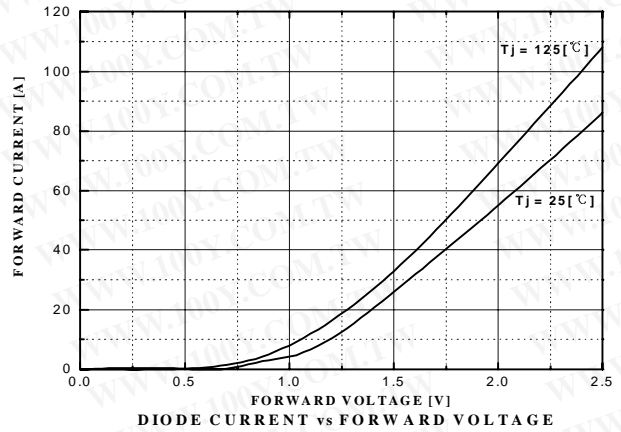
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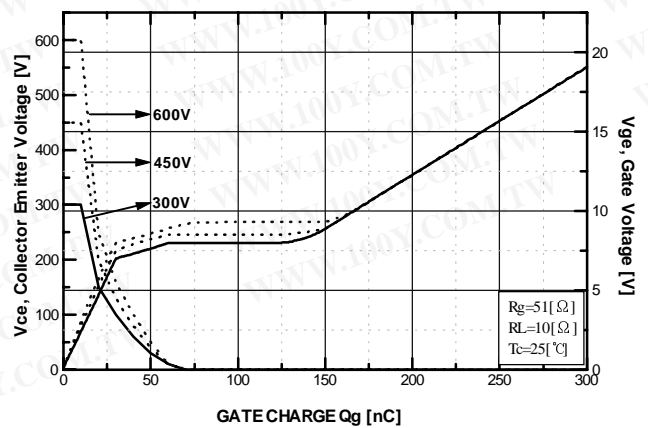
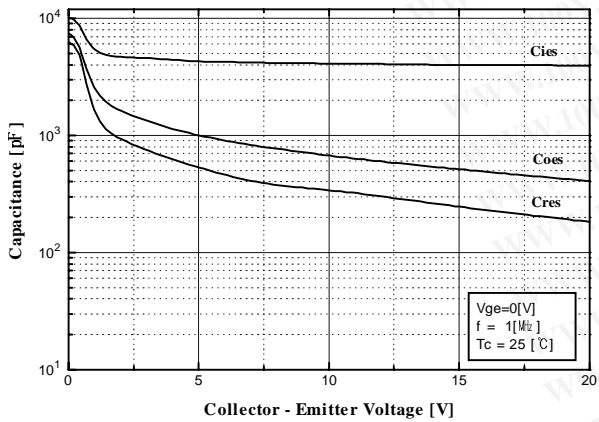
OUTPUT CHARACTERISTICS



Transfer Characteristics



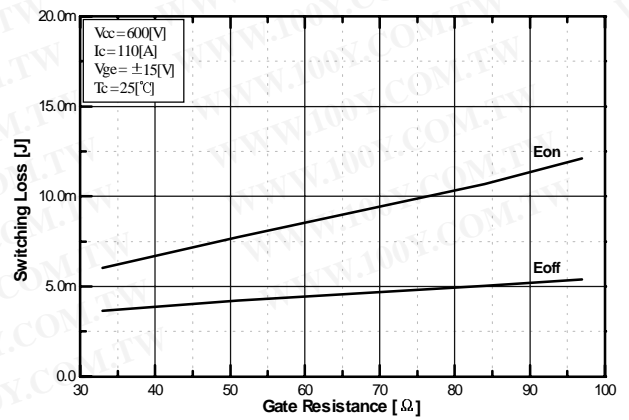
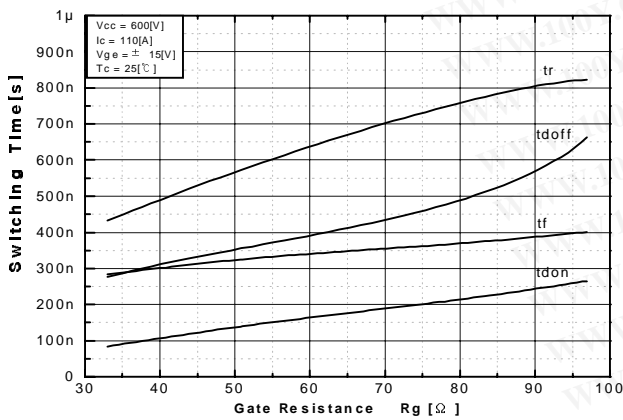
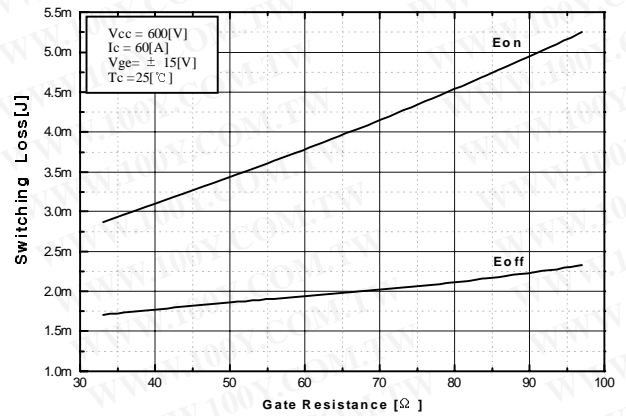
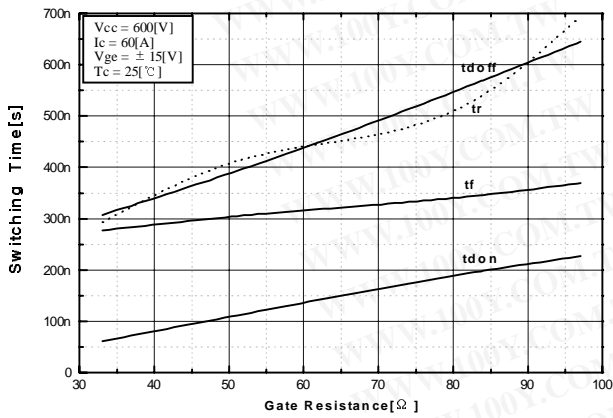
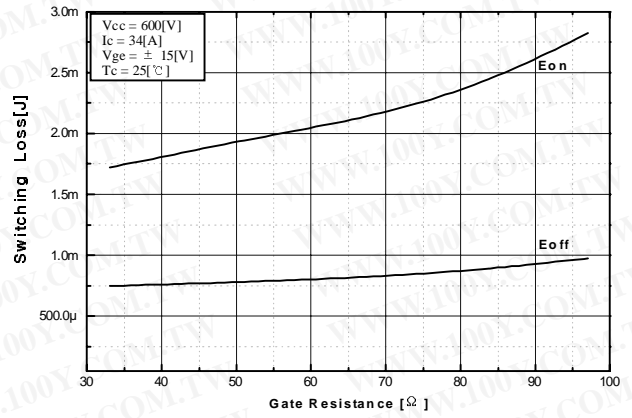
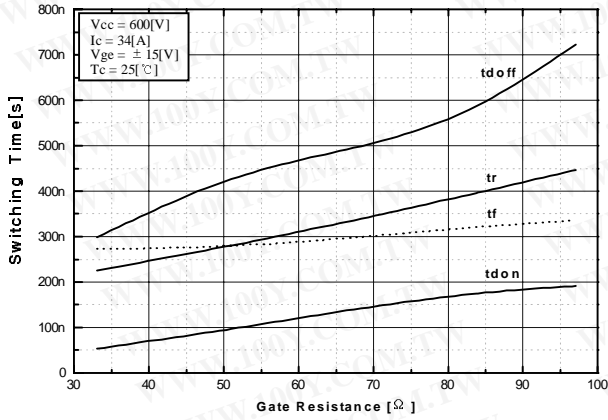
DIODE CURRENT vs FORWARD VOLTAGE



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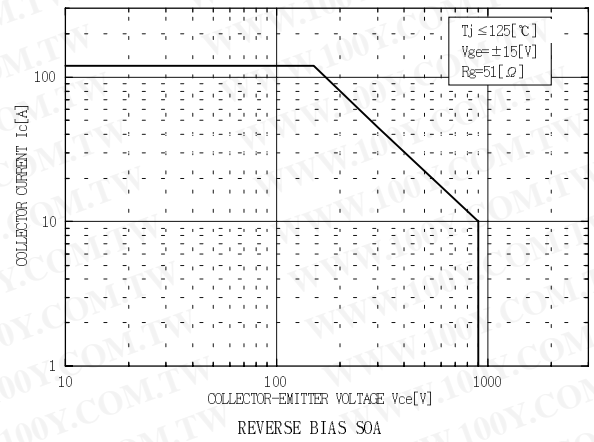
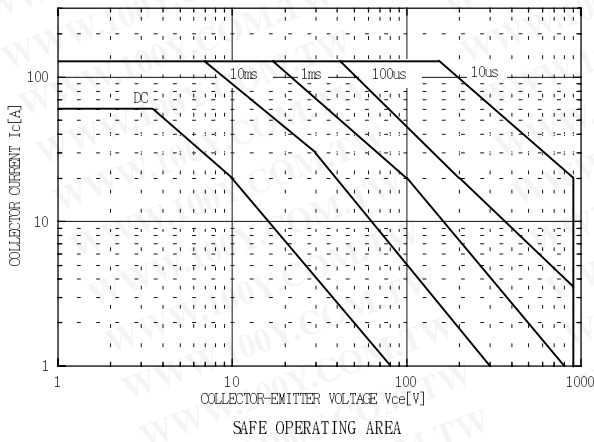
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