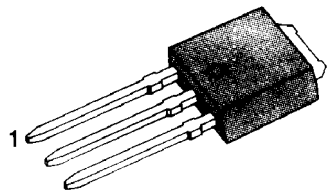
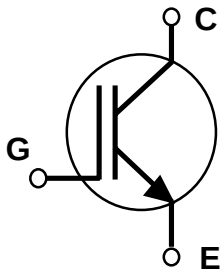
SGI25N40 *N-CHANNEL IGBT*

FEATURES

* High Input Impedance
* High Peak Current Capability(170A)
* Easy Drive by Gate Voltage

I^2 - PAK





APPLICATIONS

* STROBE FLASH

ABSOLUTE MAXIMUM RATINGS

Symbol	Characteristics		Rating	Unit
V_{CES}	Collector-Emitter Voltage		400	V
V_{GE}	Gate - Emitter Voltage		±25	V
I_C	Continuous Collector Current	T_C = 25°C	25	A
I_{CM}	Pulsed Collector Current(1mS)		170	A
P_D	Maximum Power Dissipation	T_C = 25°C	75	W
T_J	Operating Junction Temperature		-55 ~ 150	°C
T_{STG}	Storage Temperature Range			
T_L	Maximum Lead Temp. For Soldering Purposes,1/8” from case for 5 seconds		300	°C

FAIRCHILD SEMICONDUCTOR TM

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 = 250μA	400	-	-	V
$V_{GE(th)}$	G - E threshold voltage	I_C =10mA , V_{CE} = 10V	3.0	-	6.0	V
I_{CES}	Collector cutoff Current	V_{CE} = 400V , V_{GE} = 0V	-	-	10	μA
I_{GES}	G - E leakage Current	V_{GE} = V_{GES} , V_{CE} = 0V	-	-	100	nA
V_{CE}(sat)	Collector to Emitter saturation voltage	I_C =170A , V_{GE} = 20V T_J = 25°C	-	5	8	V
Cies	Input capacitance	V_{GE} = 0V , f = 1MHz, V_{CE} = 10V	-	-	3.0	nF
ton	Turn on time	V_{CC} = 300V , Load = 12Ω R_G = 51Ω , V_{GE}= 20V R- Load switching time operation	-	-	500	ns
tr	Turn on rise time		-	-	500	ns
toff	Turn off time		-	-	6000	ns
tf	Turn off fall time		-	-	7000	ns

THERMAL RESISTANCE

Symbol	Characteristics	Min	Typ	Max	Units
$R_{\theta JC}$	Junction-to-Case	-	-	1.2	°C/W
$R_{\theta JA}$	Junction-to-Ambient	-	-	40	°C/W
$R_{\theta CS}$	Case-to-Sink	-	0.24	-	°C/W

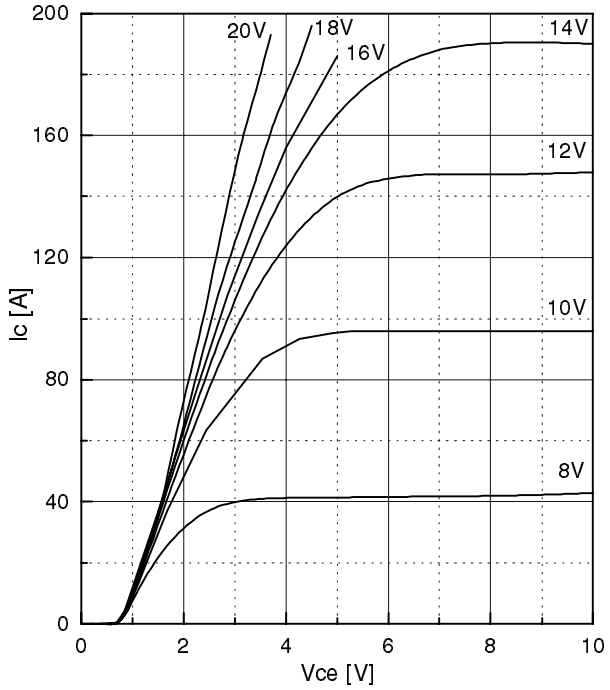


Fig.1 Typical Output Characteristics

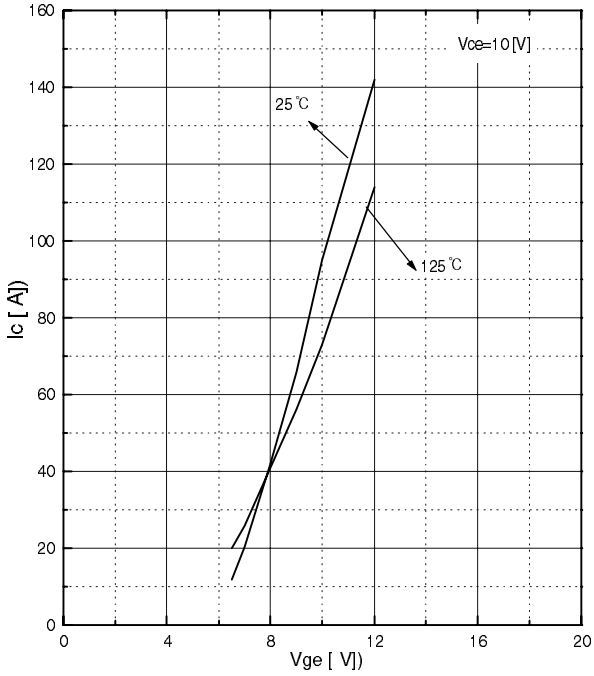


Fig.2 Typical Output Characteristics

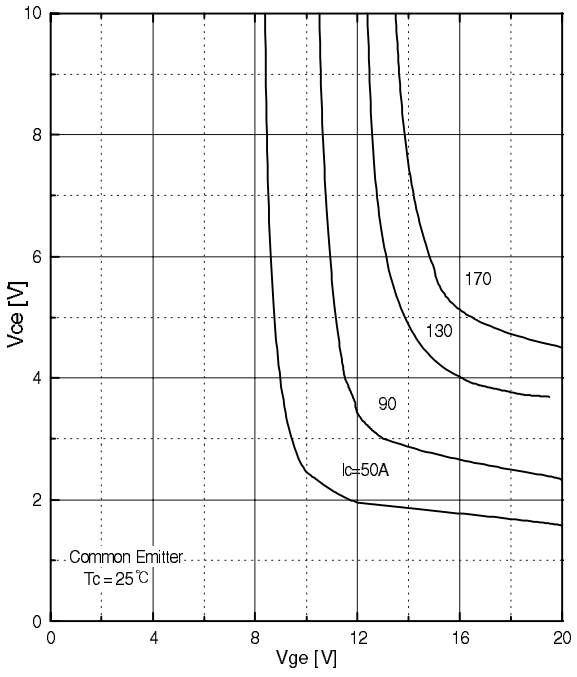


Fig.3 Collector-Emitter Saturation Voltage Characteristics

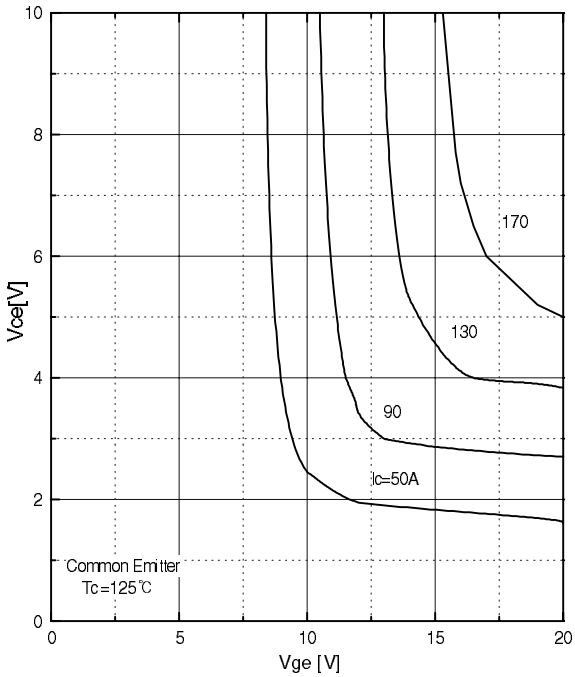


Fig.4 Collector-Emitter Saturation Voltage Characteristics

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