



Light-Controlling Strobe Applications

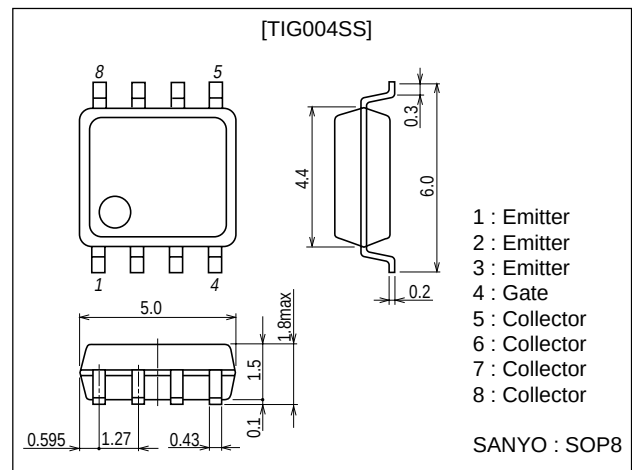
Features

- Low-saturation voltage.
- 4V drive.
- Enhansment type.
- Built-in Gate-to-Emitter protection diode.

Package Dimensions

unit : mm

2203



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Emitter Voltage	V_{CES}		400	V
Gate-to-Emitter Voltage (DC)	V_{GES}		± 6	V
Gate-to-Emitter Voltage (Pulse)	V_{GES}		± 8	V
Collector Current (Pulse)	I_{CP}	PW $\leq 500\mu s$, duty cycle $\leq 0.5\%$	150	A
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-40 to +150	°C

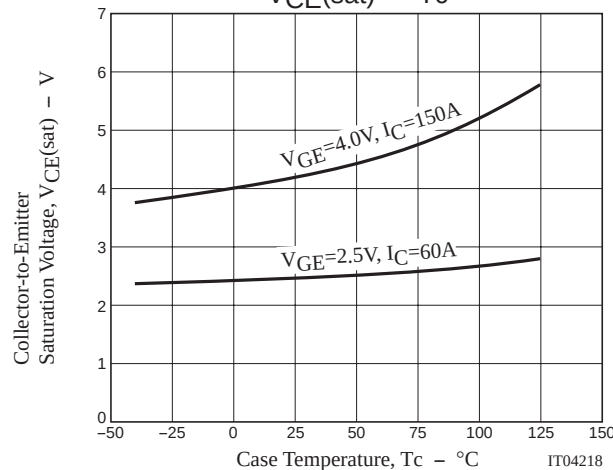
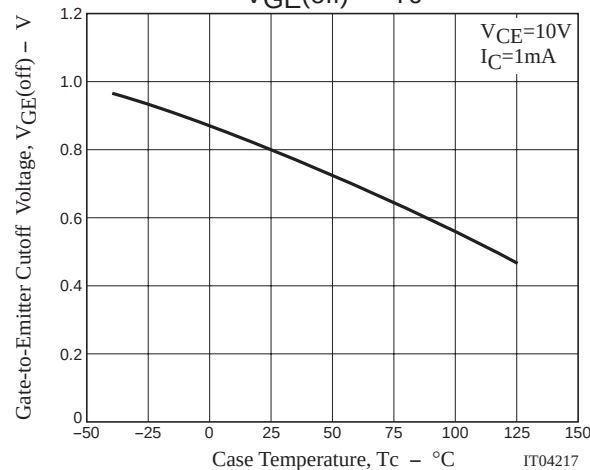
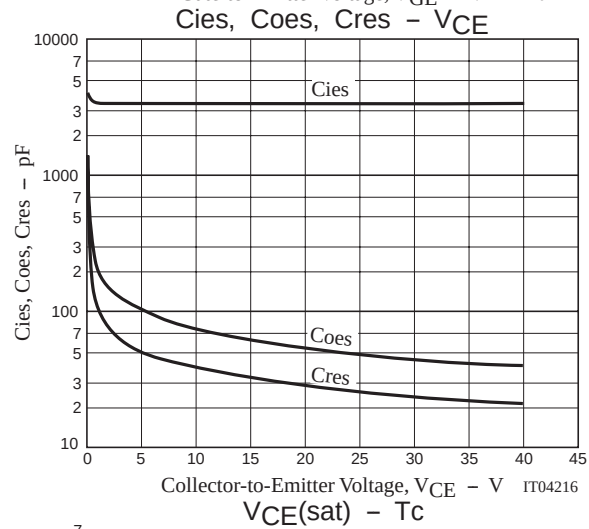
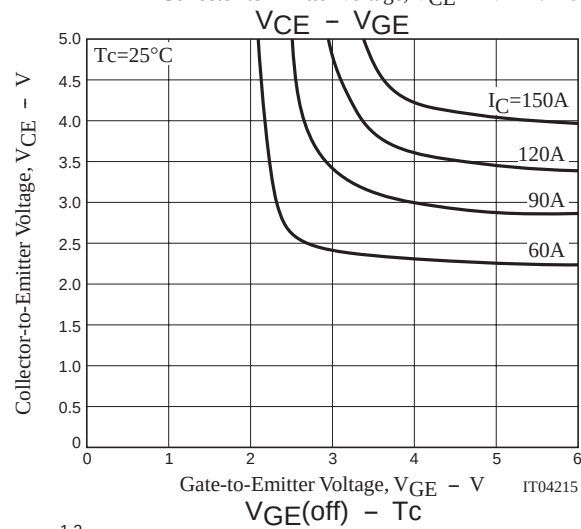
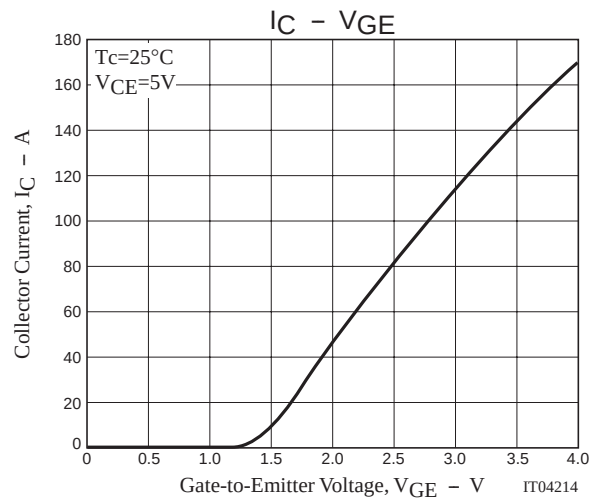
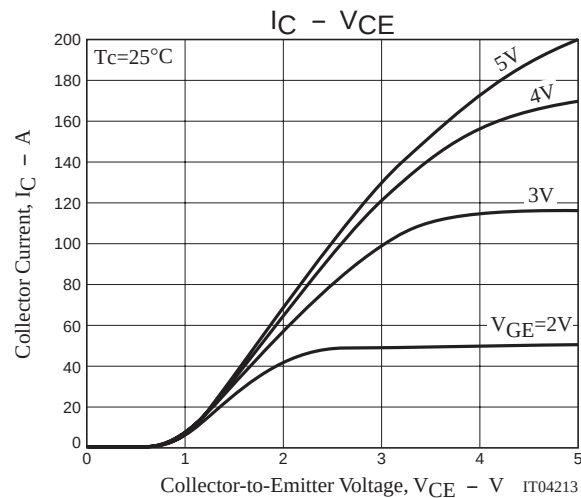
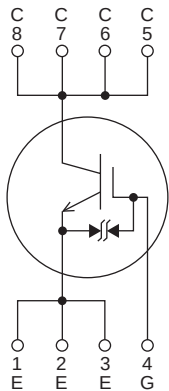
Electrical Characteristics at Ta=25°C

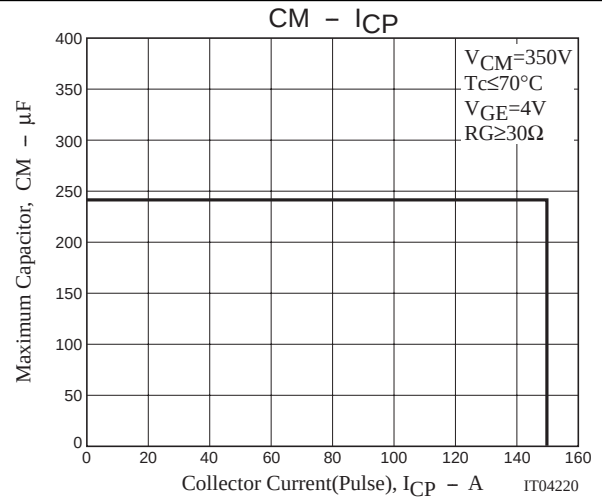
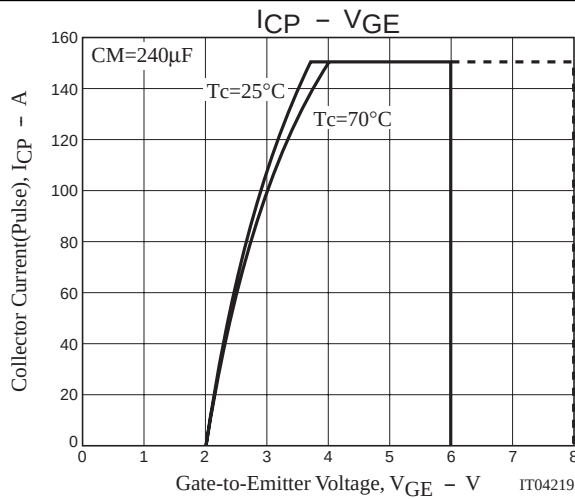
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C=5mA$, $V_{GE}=0$	400			V
Collector-to-Emitter Cutoff Current	I_{CES}	$V_{CE}=320V$, $V_{GE}=0$			10	μA
Gate-to-Emitter Leakage Current	I_{GES}	$V_{GE}=\pm 6V$, $V_{CE}=0$			± 10	μA
Gate-to-Emitter Threshold Voltage	$V_{GE(off)}$	$V_{CE}=10V$, $I_C=1mA$	0.5		1.2	V
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=150A$, $V_{GE}=4V$		4.2	5.5	V
	$V_{CE(sat)2}$	$I_C=60A$, $V_{GE}=2.5V$		2.4	3.4	V
Input Capacitance	C_{ies}	$V_{CE}=10V$, $f=1MHz$		3300		pF
Output Capacitance	C_{oes}	$V_{CE}=10V$, $f=1MHz$		75		pF
Reverse Transfer Capacitance	C_{res}	$V_{CE}=10V$, $f=1MHz$		40		pF

Note : TIG004SS has protection diode between gate and emitter but handling it requires sufficient care to be taken.

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Electrical Connection





Note 1 : The gate series resistance R_G must be 30Ω or more to protect the device when it is turned off.

Note 2 : The collector current gradient di/dt must be smaller than $150\text{A}/\mu\text{s}$ and the collector voltage gradient dv/dt must be smaller than $400\text{V}/\mu\text{s}$ to protect the device when it is turned off.

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