

Ordering number : ENN7397

SANYO

N-Channel IGBT

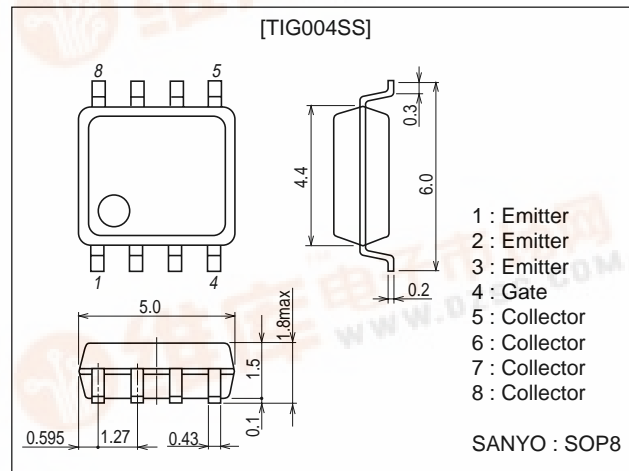
TIG004SS**Light-Controlling Strobe Applications****Features**

- 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≤500μs, duty cycle≤0.5%	150	A
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-40 to +150	°C

Electrical Characteristics at Ta=25°C

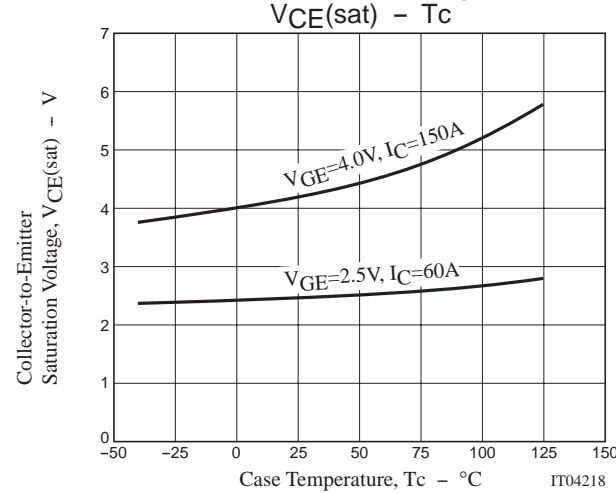
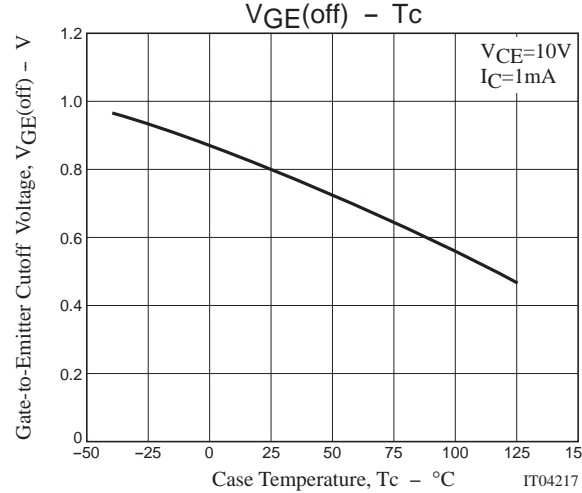
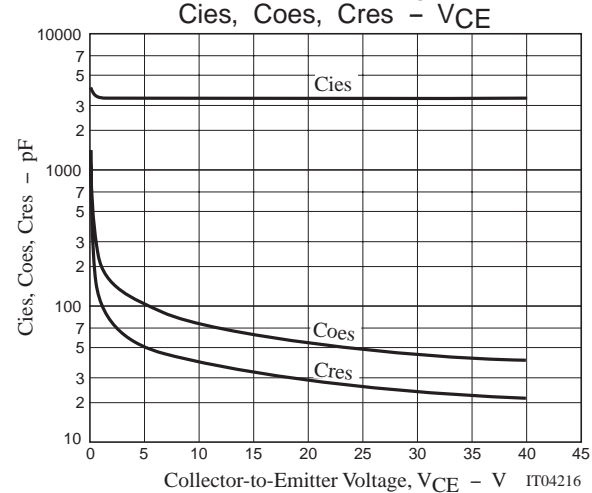
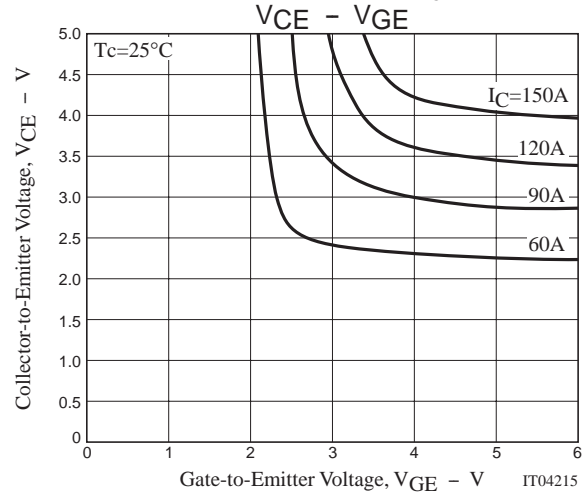
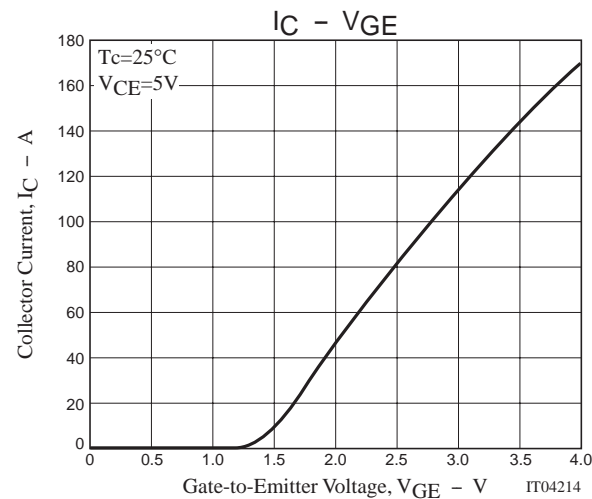
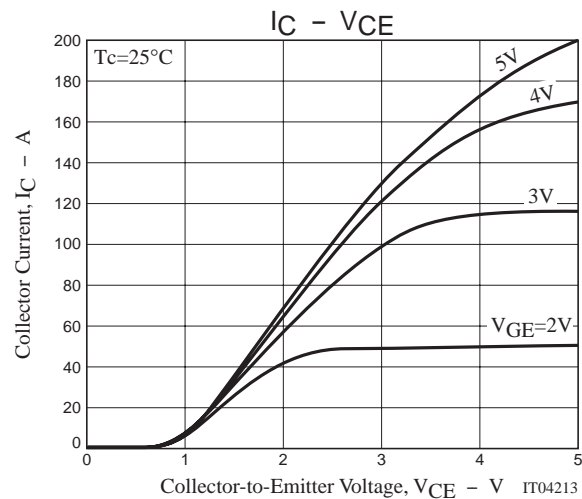
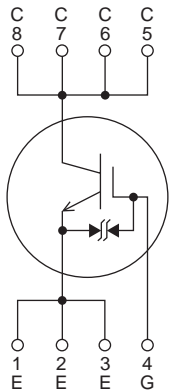
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Breakdown Voltage	V _{(BR)CES}	I _C =5mA, V _{GE} =0	400			V
Collector-to-Emitter Cutoff Current	I _{CES}	V _{CE} =320V, V _{GE} =0			10	μA
Gate-to-Emitter Leakage Current	I _{GES}	V _{GE} =±6V, V _{CE} =0			±10	μA
Gate-to-Emitter 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.

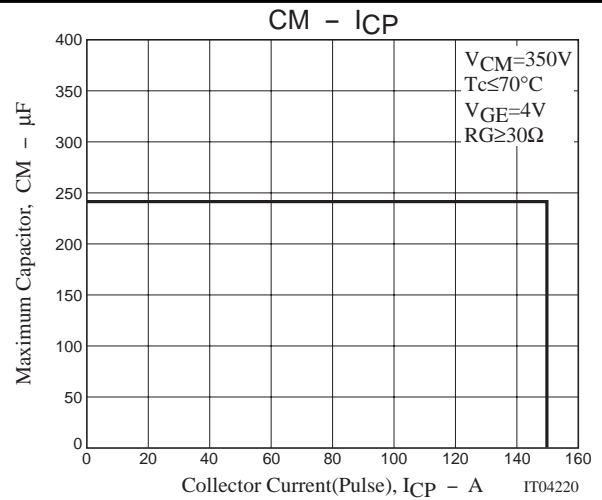
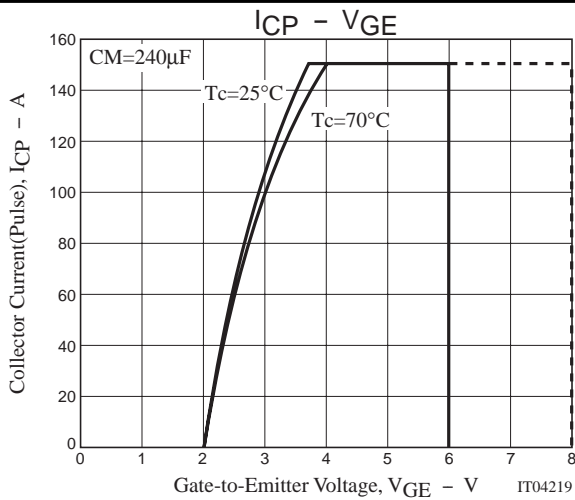
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TIG004SS

Electrical Connection



TIG004SS



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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