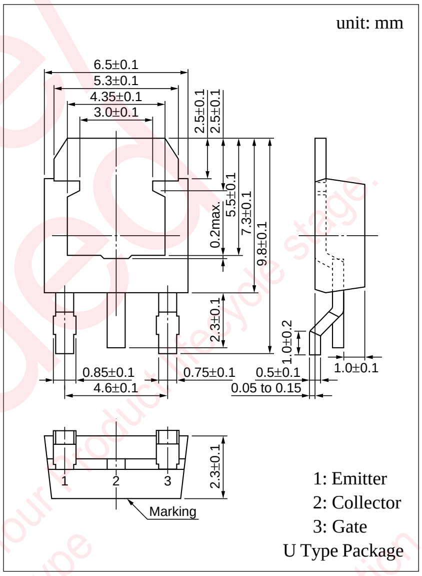
2PG353

Insulated Gate Bipolar Transistor

■ Features

- High breakdown voltage: V_{CES} = 400V
- Allowing to control large current: $I_{C(peak)}$ = 150A
- Housed in the surface mounting package



■ Applications

- For flash-light for use in a camera

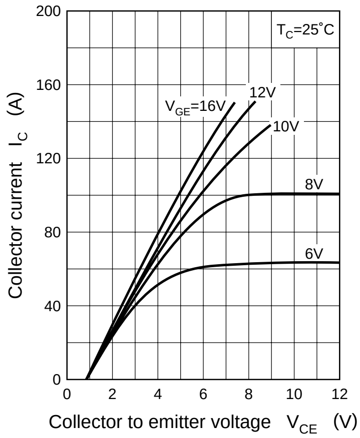
■ Absolute Maximum Ratings (T_C = 25°C)

Parameter		Symbol	Ratings	Unit
Collector to emitter voltage		V_{CES}	400	V
Gate to emitter voltage		V_{GES}	±16	V
Collector current	DC	I_C	5	A
	Pulse	I_{CP}	150	A
Allowable power dissipation	T_C = 25°C	P_C	10	W
	Ta = 25°C		1	
Channel temperature		T_{ch}	150	°C
Storage temperature		T_{stg}	–55 to +150	°C

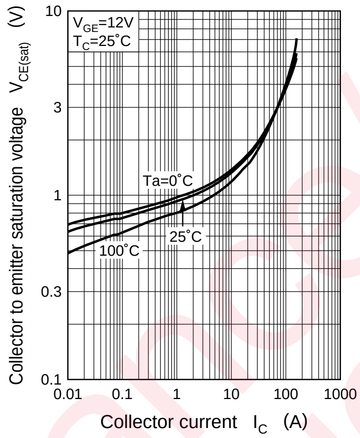
■ Electrical Characteristics (T_C = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to emitter cut-off current	I_{CES}	V_{CE} = 320V, V_{GE} = 0			10	μA
Gate to emitter leakage current	I_{GES}	V_{GE} = ±12V, V_{CE} = 0			±1	μA
Collector to emitter breakdown voltage	V_{CES}	I_C = 1mA, V_{GE} = 0	400			V
Gate threshold voltage	$V_{GE(th)}$	V_{CE} = 10V, I_C = 1mA	1	2	5	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	V_{GE} = 12V, I_C = 5A			2	V
		V_{GE} = 12V, I_C = 150A			10	
Input capacitance (Common Emitter)	C_{ies}	V_{CE} = 10V, V_{GE} = 0, f = 1MHz		1370		pF
Turn-on time (delay time)	$t_{d(on)}$	V_{CC} = 300V, I_C = 130A V_{GE} = 12V, R_g = 25Ω		20		ns
Rise time	t_r			250		ns
Turn-off time (delay time)	$t_{d(off)}$			150		ns
Fall time	t_f			700		ns

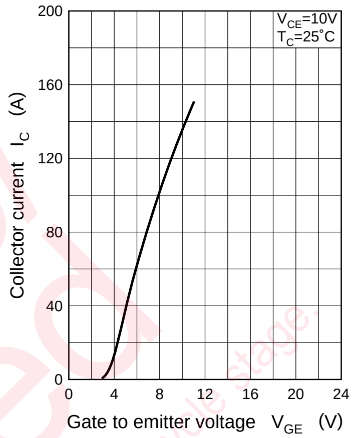
I_C — V_{CE}



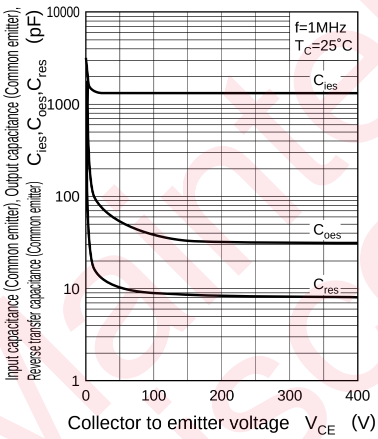
$V_{CE(sat)}$ — I_C



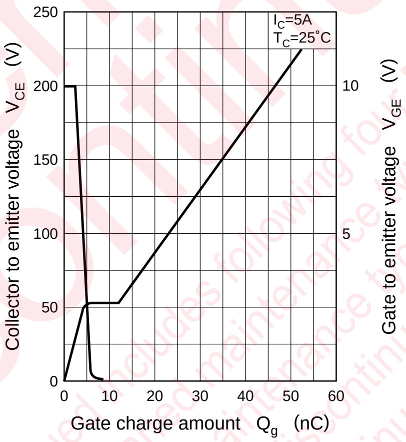
I_C — V_{GE}



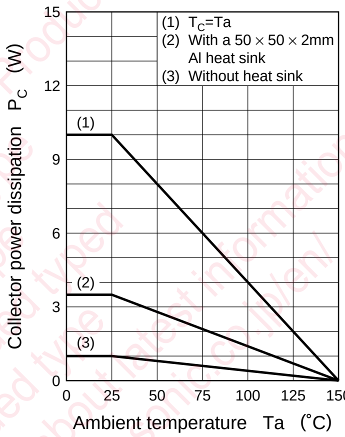
C_{ies}, C_{oes}, C_{res} — V_{CE}



V_{CE}, V_{GE} — Q_g



P_C — Ta



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⚠DANGER

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(6) Comply with the instructions for use in order to prevent breakdown and characteristics change due to external factors (ESD, EOS, thermal stress and mechanical stress) at the time of handling, mounting or at customer's process. When using products for which damp-proof packing is required, satisfy the conditions, such as shelf life and the elapsed time since first opening the packages.

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