

2PG353

Insulated Gate Bipolar Transistor

■ Features

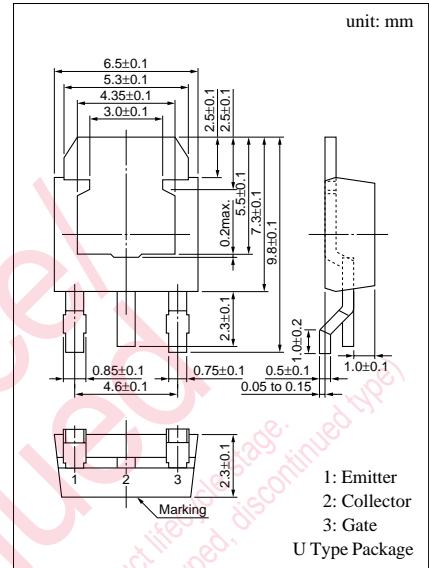
- High breakdown voltage: $V_{CES} = 400V$
- Allowing to control large current: $I_{C(peak)} = 150A$
- Housed in the surface mounting package

■ Applications

- For flash-light for use in a camera

■ Absolute Maximum Ratings ($T_C = 25^\circ C$)

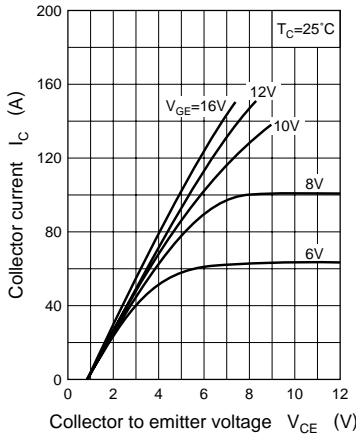
Parameter	Symbol	Rated	Unit
Collector to emitter voltage	V_{CES}	400	V
Gate to emitter voltage	V_{GES}	± 16	V
Collector current	DC	I_C	5 A
	Pulse	I_{CP}	150 A
Allowable power dissipation	$T_C = 25^\circ C$	P_C	10 W
	$T_a = 25^\circ C$		1 W
Channel temperature	T_{ch}	150	$^\circ C$
Storage temperature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



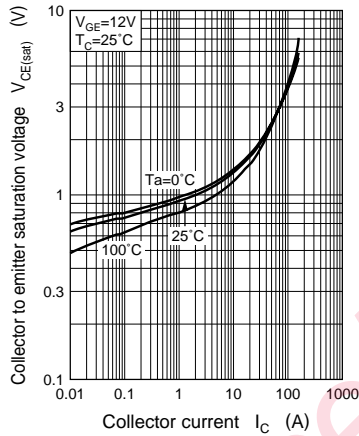
■ Electrical Characteristics ($T_C = 25^\circ C$)

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}	$V_{GE} = \pm 12V, V_{CE} = 0$			± 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)	$t_{d(on)}$	$V_{CC} = 300V, I_C = 130A$ $V_{GE} = 12V, R_g = 25\Omega$		20		ns
Rise time	t_r			250		ns
Turn-off time (delay time)	$t_{d(off)}$			150		ns
Fall time	t_f			700		ns

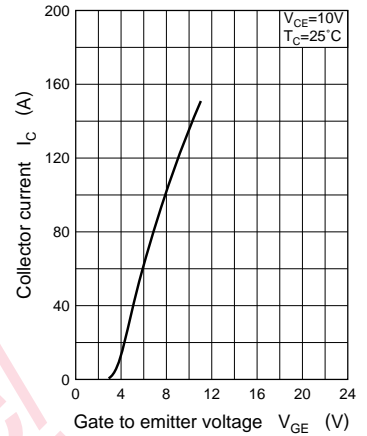
$I_C - V_{CE}$



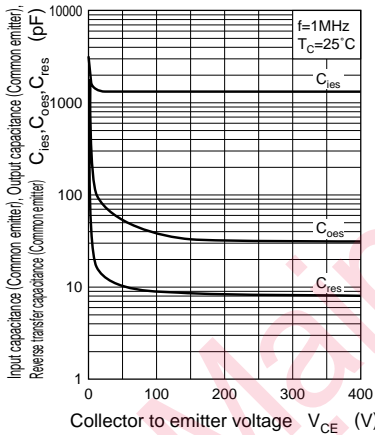
$V_{CE(sat)} - I_C$



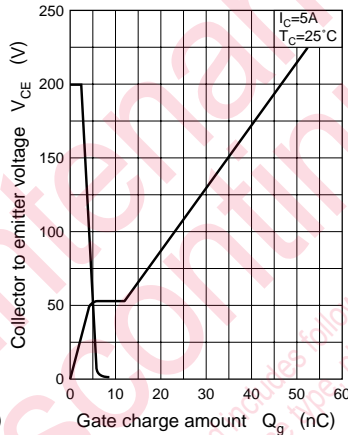
$I_C - V_{GE}$



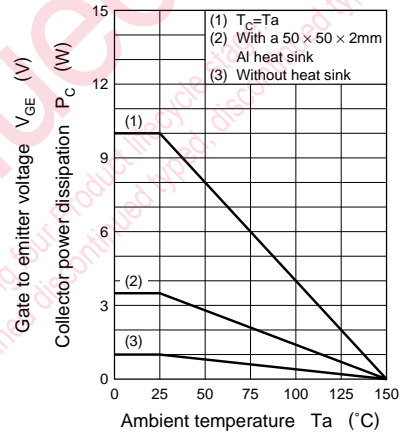
$C_{ies}, C_{oes}, C_{res} - V_{CE}$



$V_{CE}, V_{GE} - Q_g$



$P_C - T_a$



Caution for Safety

 **DANGER**

■ This product contains Gallium Arsenide (GaAs).

GaAs powder and vapor are hazardous to human health if inhaled or ingested. Do not burn, destroy, cut, cleave off, or chemically dissolve the product. Follow related laws and ordinances for disposal. The product should be excluded from general industrial waste or household garbage.

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