

2PG301

Insulated Gate Bipolar Transistor

■ Features

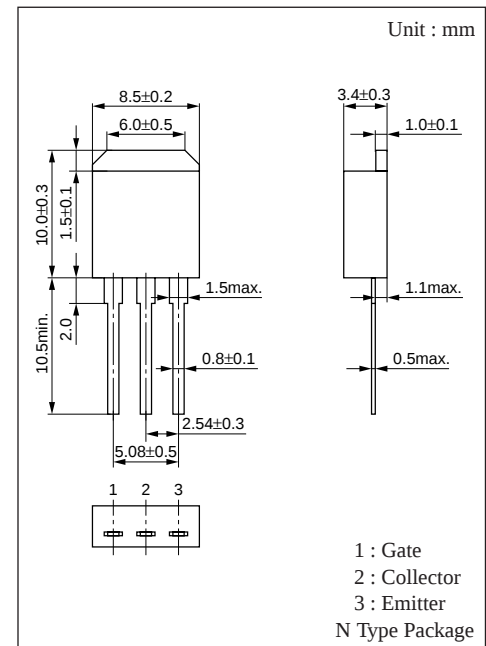
- High breakdown voltage : $V_{CES} = 400V$
- Large current control possible : $I_{C(peak)} = 130A$
- Housing in the surface mounting package possible

■ Applications

- For camera flash-light

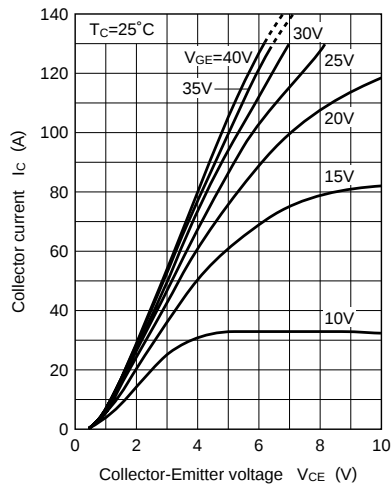
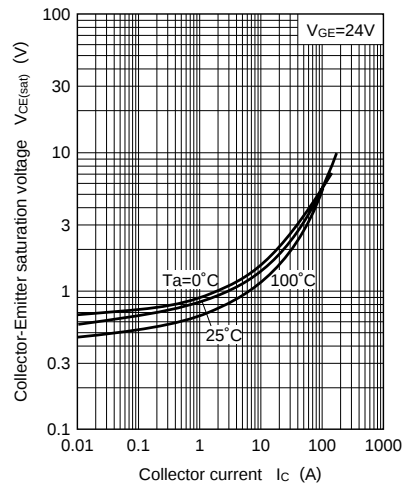
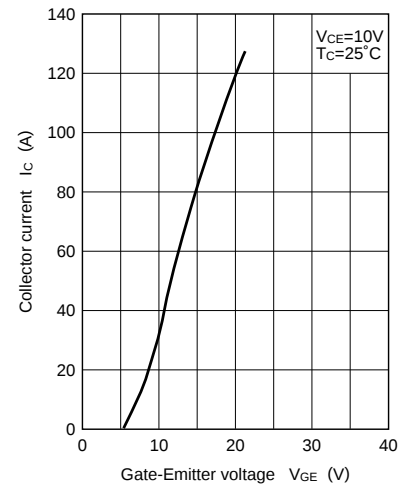
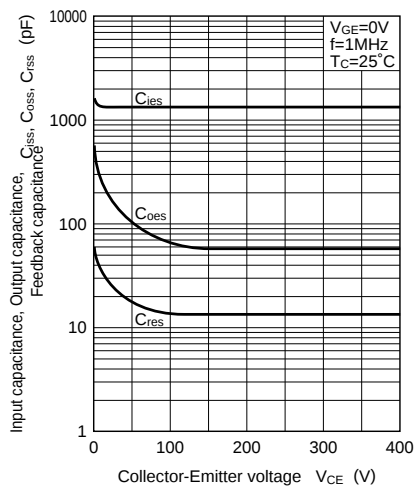
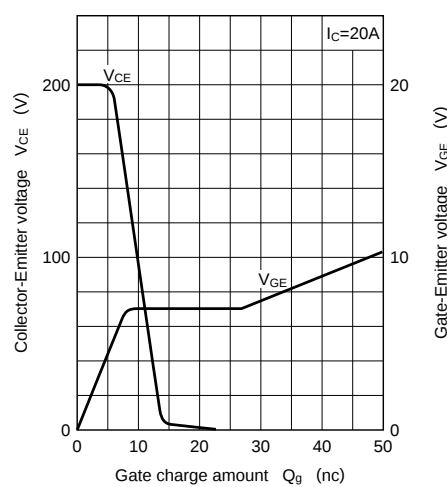
■ Absolute Maximum Ratings ($T_c = 25^\circ C$)

Parameter		Symbol	Rating	Unit
Collector-Emitter voltage		V_{CES}	400	V
Gate-Emitter voltage		V_{GES}	± 40	V
Collector current	DC	I_C	20	A
	Pulse	I_{CP}	130	A
Allowable power dissipation	$T_c = 25^\circ C$	P_C	45	W
	$T_a = 25^\circ C$		1.3	
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	Condition	Min	Typ	Max	Unit
Collector-Emitter cut-off current	I_{CES}	$V_{CE} = 320V, V_{GE} = 0$			10	μA
Gate-Emitter leakage current	I_{GES}	$V_{GE} = \pm 40V, V_{CE} = 0$			± 1	μA
Collector-Emitter breakdown voltage	V_{CES}	$I_C = 1mA, V_{GE} = 0$	400			V
Gate threshold voltage	$V_{GE(th)}$	$V_{CE} = 10V, I_C = 1mA$	3	5.5	7	V
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$V_{GE} = 24V, I_C = 20A$			2.25	V
		$V_{GE} = 24V, I_C = 130A$			10	
Input capacitance	C_{ies}	$V_{CE} = 10V, V_{GE} = 0, f = 1MHz$		1450		pF
Turn-on time (delay time)	$t_{d(on)}$	$V_{CC} = 340V, I_C = 130A$ $V_{GE} = 24V, R_g = 25\Omega$		25		ns
Rise time	t_r			300		ns
Turn-off time (delay time)	$t_{d(off)}$			250		ns
Fall time	t_f			2.0		μs

$I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $I_C - V_{GE}$  $C_{ies}, C_{oes}, C_{res} - V_{CE}$  $V_{CE}, V_{GE} - Q_g$  $P_C - T_a$ 