

TOSHIBA Transistor Silicon NPN Triple Diffused Type

2SC5549

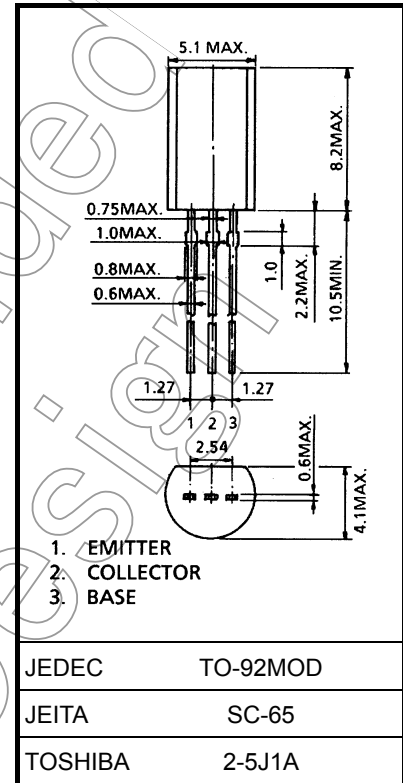
High-Speed Switching Application for Inverter Lighting System

Unit: mm

- Suitable for RCC circuits. (guaranteed small current h_{FE})
: $h_{FE} = 13$ (min) ($I_C = 1$ mA)
- High speed: $t_r = 0.5$ μ s (max), $t_f = 0.3$ μ s (max) ($I_C = 0.24$ A)
- High breakdown voltage: $V_{CEO} = 400$ V

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

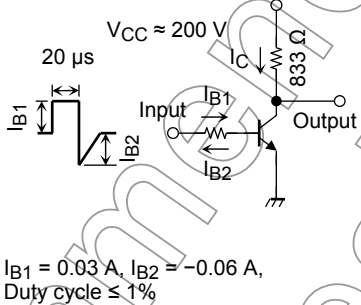
Characteristics		Symbol	Rating	Unit
Collector-base voltage		V_{CBO}	400	V
Collector-emitter voltage		V_{CEO}	400	V
Emitter-base voltage		V_{EBO}	7	V
Collector current	DC	I_C	1	A
	Pulse	I_{CP}	2	
Base current		I_B	0.5	A
Collector power dissipation		P_C	0.9	W
Junction temperature		T_j	150	$^\circ\text{C}$
Storage temperature range		T_{stg}	-55 to 150	$^\circ\text{C}$



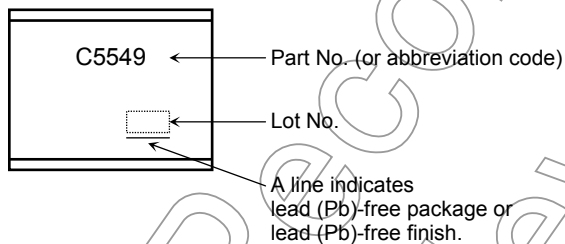
Weight: 0.36 g (typ.)

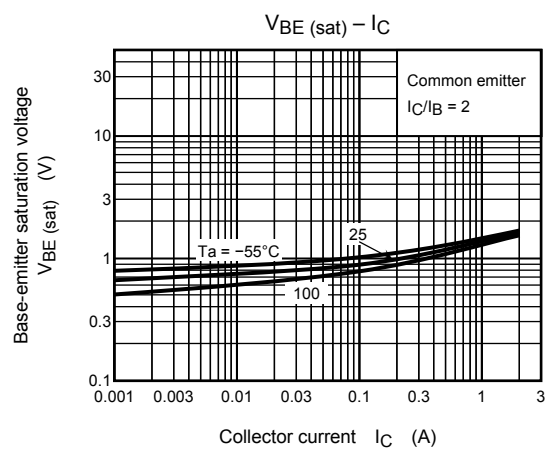
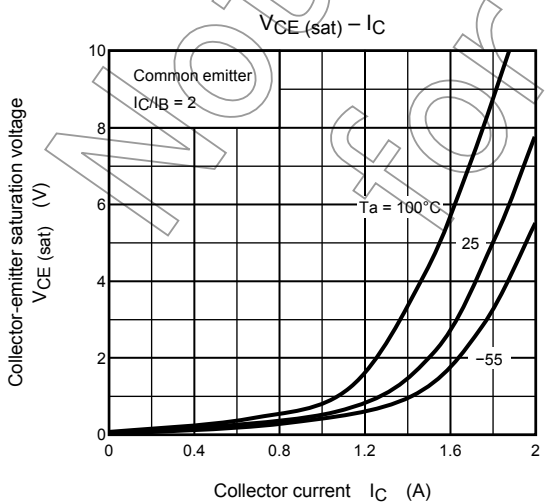
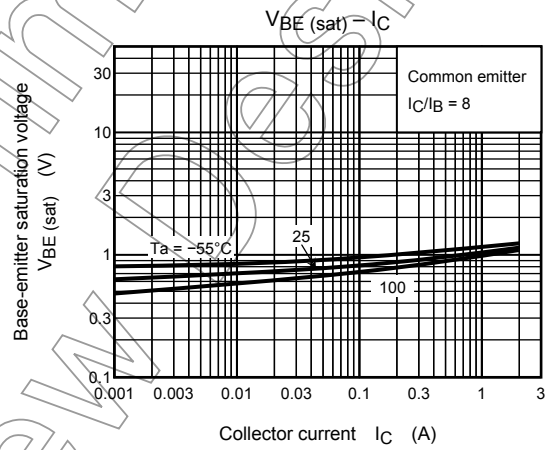
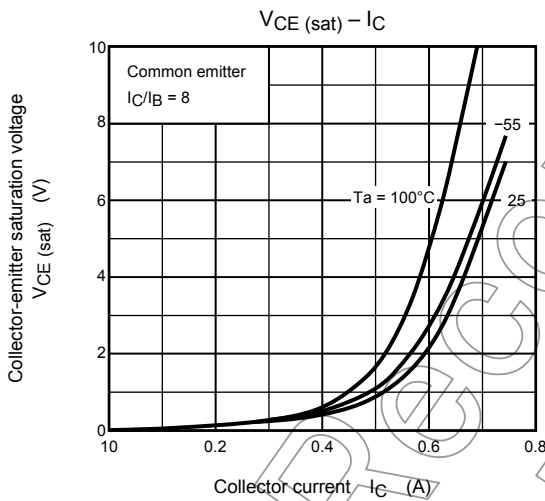
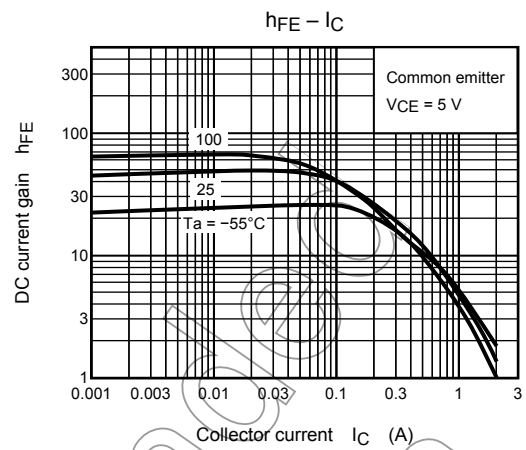
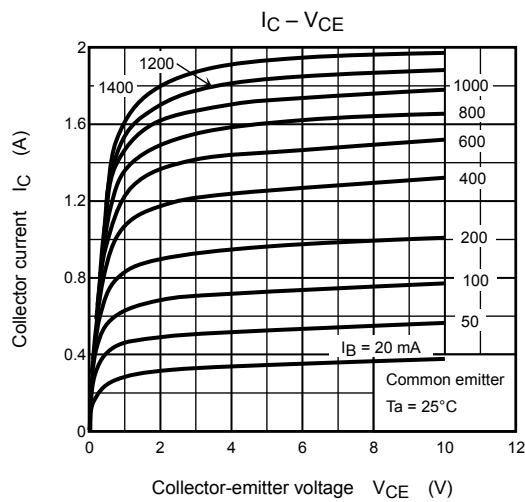
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

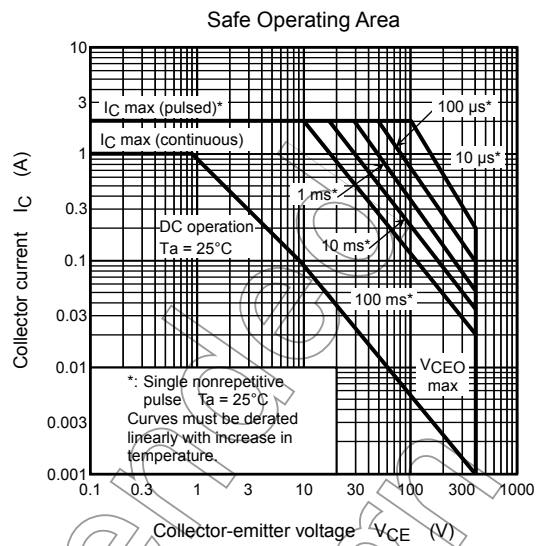
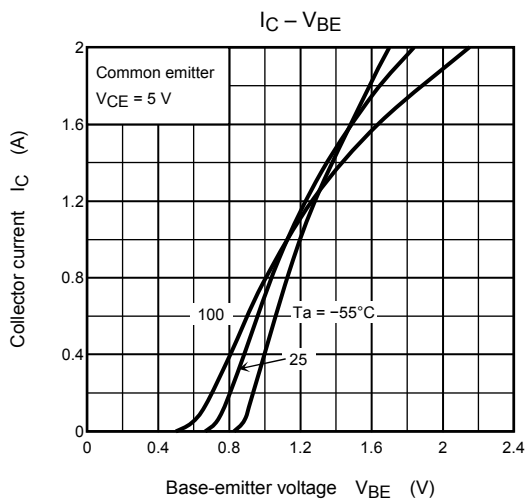
Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = 320 \text{ V}, I_E = 0$	—	—	100	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = 7 \text{ V}, I_C = 0$	—	—	100	μA
Collector-base breakdown voltage		$V_{(BR) CBO}$	$I_C = 1 \text{ mA}, I_E = 0$	400	—	—	V
Collector-emitter breakdown voltage		$V_{(BR) CEO}$	$I_C = 10 \text{ mA}, I_B = 0$	400	—	—	V
DC current gain		$h_{FE} (1)$	$V_{CE} = 5 \text{ V}, I_C = 1 \text{ mA}$	13	—	—	
		$h_{FE} (2)$	$V_{CE} = 5 \text{ V}, I_C = 0.04 \text{ A}$	20	—	65	
Collector-emitter saturation voltage		$V_{CE (sat)}$	$I_C = 0.2 \text{ A}, I_B = 25 \text{ mA}$	—	—	1.0	V
Base-emitter saturation voltage		$V_{BE (sat)}$	$I_C = 0.2 \text{ A}, I_B = 25 \text{ mA}$	—	—	1.3	V
Switching time	Rise time	t_r	 $V_{CC} \approx 200 \text{ V}$ $20 \mu\text{s}$ $I_{B1} = 0.03 \text{ A}, I_{B2} = -0.06 \text{ A}$ Duty cycle $\leq 1\%$	—	—	0.5	μs
	Storage time	t_{stg}		—	—	5.0	
	Fall time	t_f		—	—	0.3	

Marking







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