

TOSHIBA Transistor Silicon NPN Triple Diffused Type

# 2SC5548

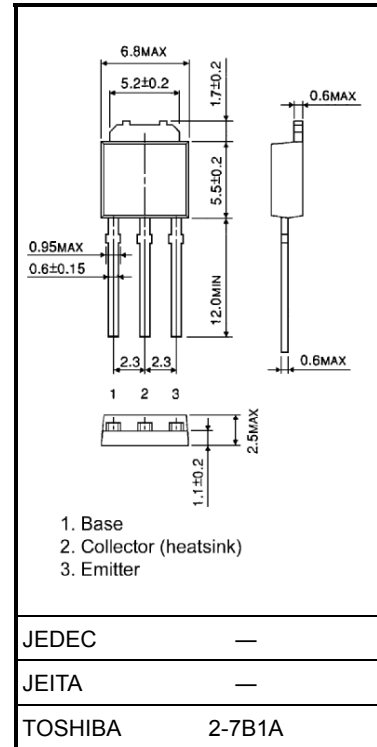
High Voltage Switching Applications  
 Switching Regulator Applications  
 DC-DC Converter Applications

- High speed switching:  $t_r = 0.5 \mu s$  (max),  $t_f = 0.3 \mu s$  (max) ( $I_C = 0.8 A$ )
- High collector breakdown voltage:  $V_{CEO} = 370 V$
- High DC current gain:  $h_{FE} = 60$  (min) ( $I_C = 0.2 A$ )

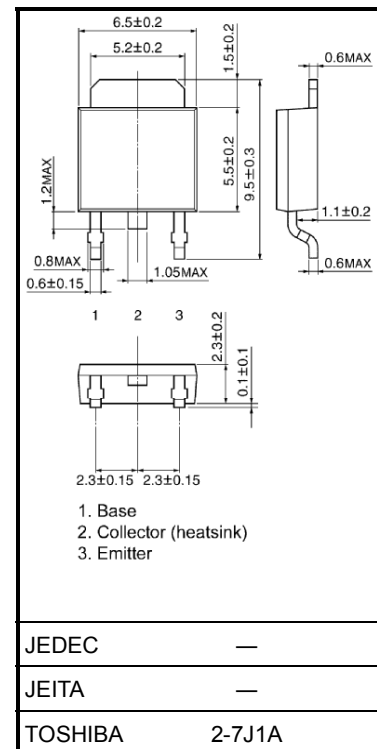
### Maximum Ratings ( $T_a = 25^\circ C$ )

Characteristics	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	600	V
Collector-emitter voltage	$V_{CEO}$	370	V
Emitter-base voltage	$V_{EBO}$	7	V
Collector current	DC	$I_C$	2
	Pulse	$I_{CP}$	4
Base current	$I_B$	0.5	A
Collector power dissipation	$T_a = 25^\circ C$	$P_C$	1.0
	$T_c = 25^\circ C$		15
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature range	$T_{stg}$	-55 to 150	$^\circ C$

Unit: mm



Weight: 0.36 g (typ.)

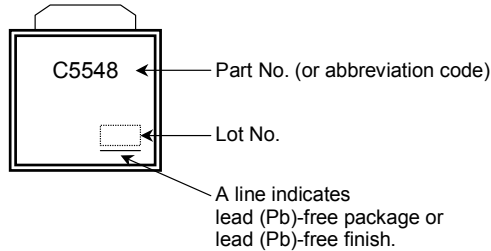


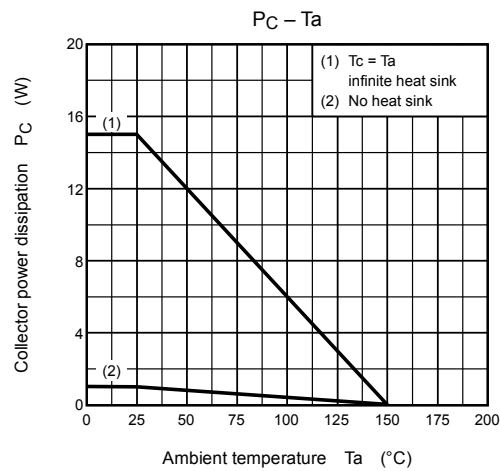
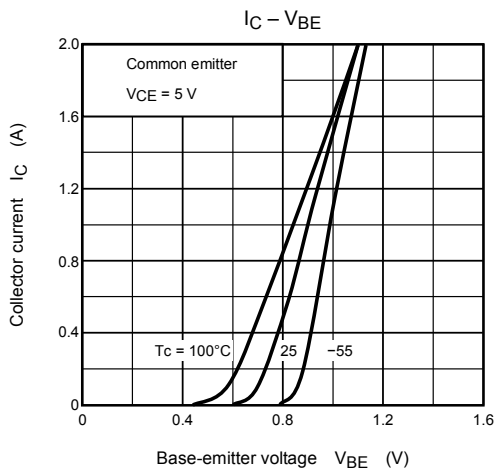
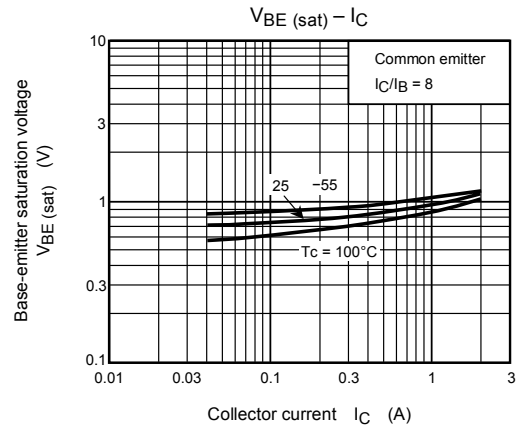
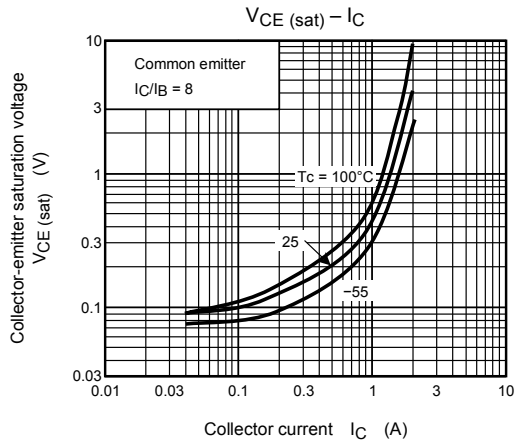
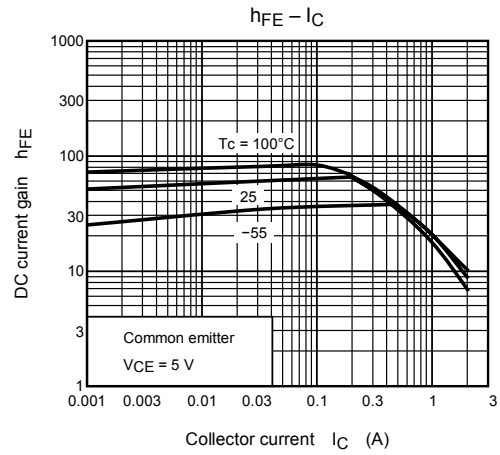
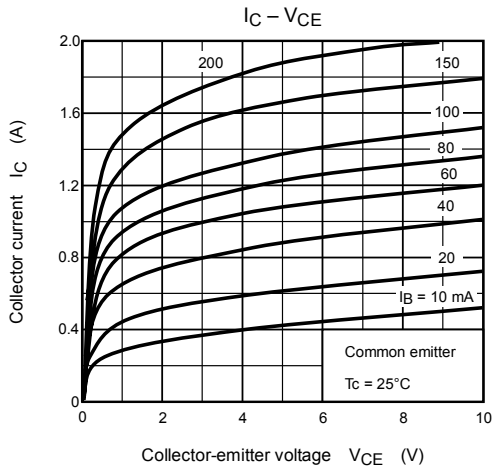
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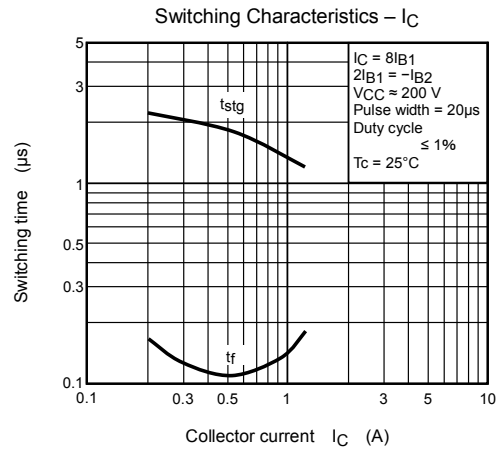
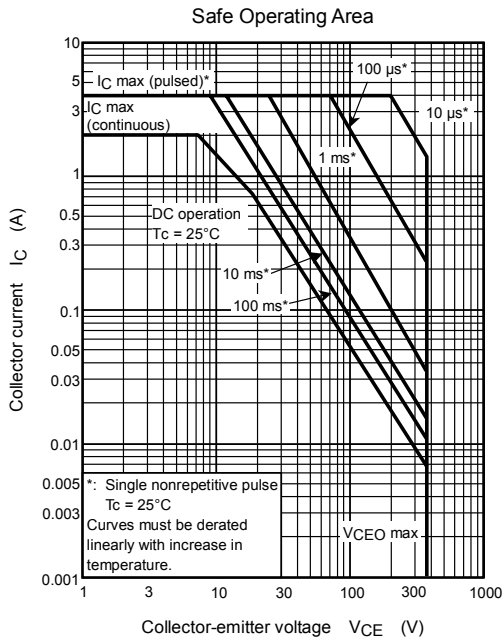
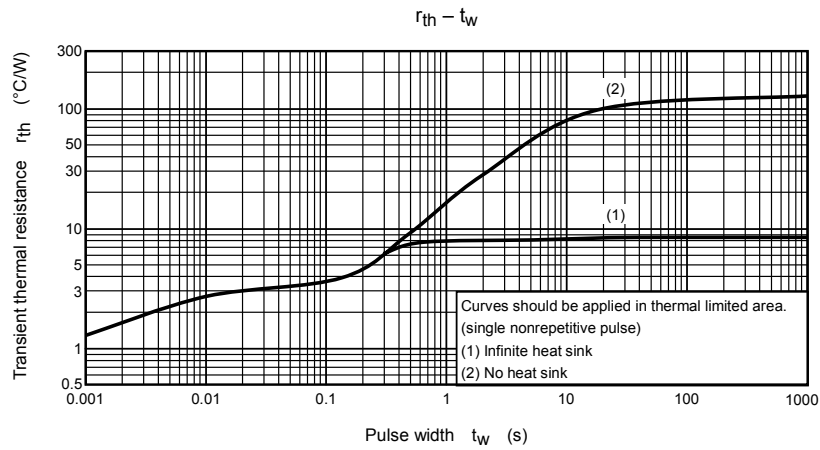
## Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		$I_{CBO}$	$V_{CB} = 480 \text{ V}, I_E = 0$	—	—	20	$\mu\text{A}$
Emitter cut-off current		$I_{EBO}$	$V_{EB} = 7 \text{ V}, I_C = 0$	—	—	10	$\mu\text{A}$
Collector-base breakdown voltage		$V_{(BR) CBO}$	$I_C = 1 \text{ mA}, I_E = 0$	600	—	—	V
Collector-emitter breakdown voltage		$V_{(BR) CEO}$	$I_C = 10 \text{ mA}, I_B = 0$	370	—	—	V
DC current gain		$h_{FE (1)}$	$V_{CE} = 5 \text{ V}, I_C = 1 \text{ mA}$	50	—	120	
		$h_{FE (2)}$	$V_{CE} = 5 \text{ V}, I_C = 0.2 \text{ A}$	60	—	120	
Collector emitter saturation voltage		$V_{CE (sat)}$	$I_C = 0.8 \text{ A}, I_B = 0.1 \text{ A}$	—	—	1.0	V
Base-emitter saturation voltage		$V_{BE (sat)}$	$I_C = 0.8 \text{ A}, I_B = 0.1 \text{ A}$	—	—	1.3	V
Switching time	Rise time	$t_r$		—	—	0.5	$\mu\text{s}$
	Storage time	$t_{stg}$		—	—	3.0	
	Fall time	$t_f$		$I_{B1} = 0.1 \text{ A}, I_{B2} = -0.2 \text{ A}$ DUTY CYCLE $\leq 1\%$	—	—	

## Marking







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