

TOSHIBA Transistor Silicon NPN Triple Diffused Type

# 2SC5548

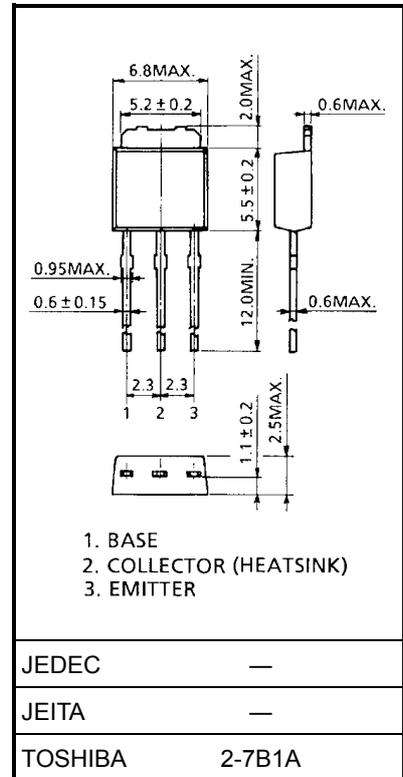
High Voltage Switching Applications  
 Switching Regulator Applications  
 DC-DC Converter Applications

- 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) ( $I_C = 0.2 A$ )

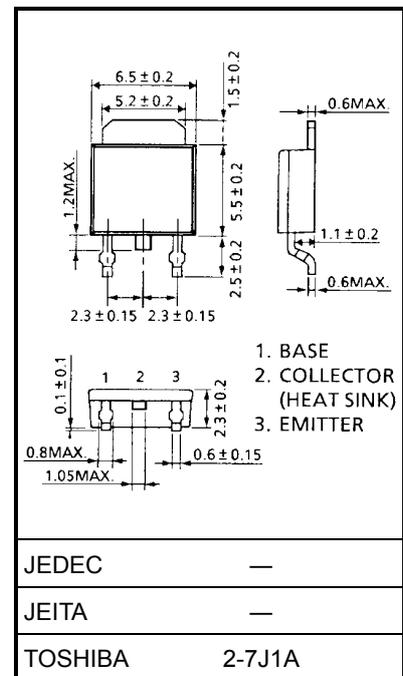
### Maximum Ratings (Ta = 25°C)

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	A
	Pulse	$I_{CP}$	4	
Base current		$I_B$	0.5	A
Collector power dissipation	Ta = 25°C	$P_C$	1.0	W
	Tc = 25°C		15	
Junction temperature		$T_j$	150	°C
Storage temperature range		$T_{stg}$	-55 to 150	°C

Unit: mm



Weight: 0.36 g (typ.)

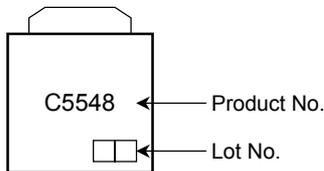


Weight: 0.36 g (typ.)

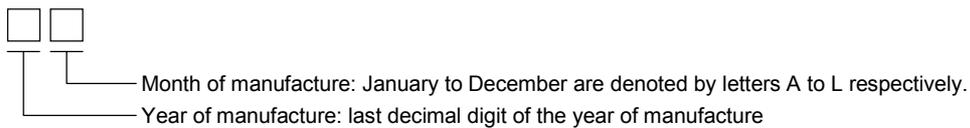
## Electrical Characteristics (Ta = 25°C)

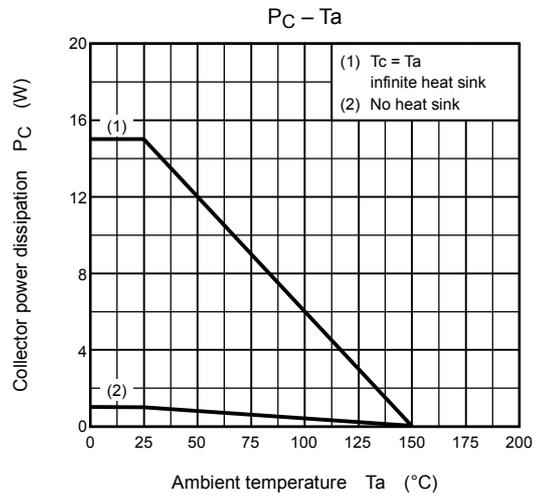
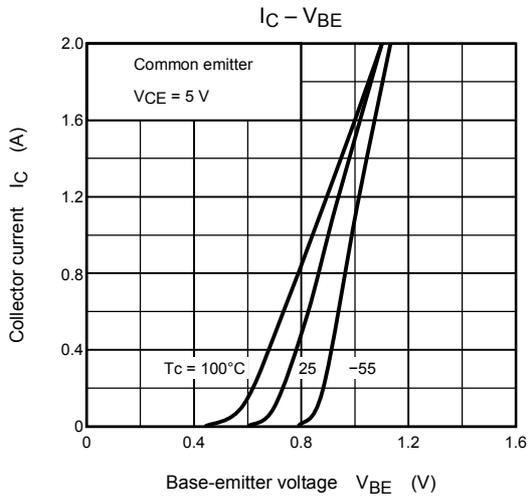
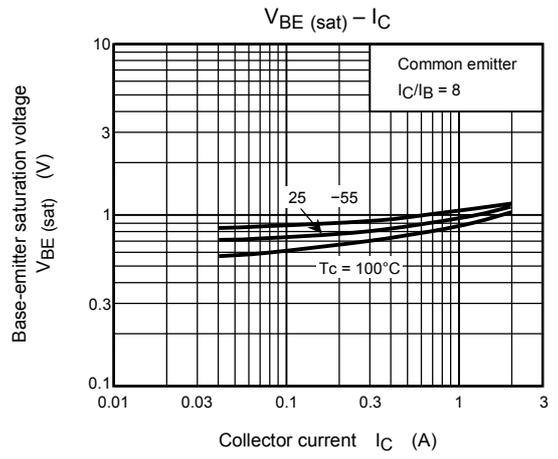
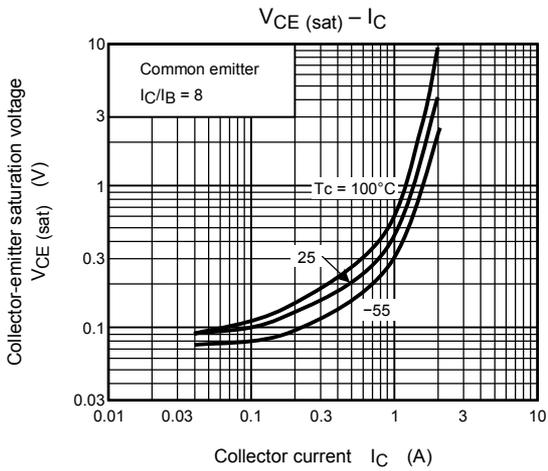
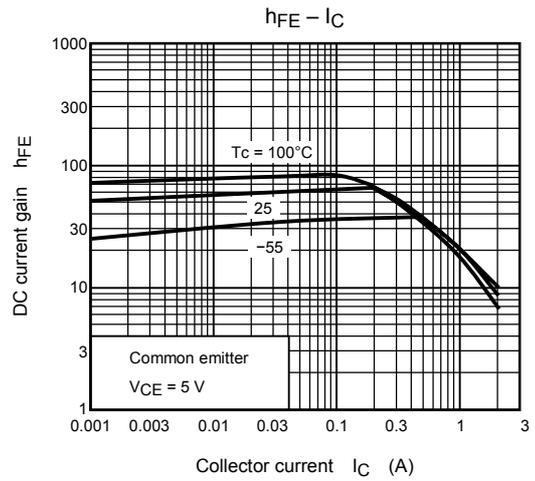
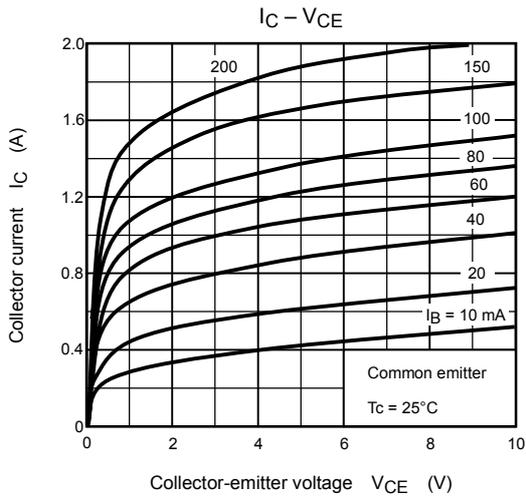
Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		$I_{CBO}$	$V_{CB} = 480\text{ V}, I_E = 0$	—	—	20	$\mu\text{A}$
Emitter cut-off current		$I_{EBO}$	$V_{EB} = 7\text{ V}, I_C = 0$	—	—	10	$\mu\text{A}$
Collector-base breakdown voltage		$V_{(BR)CBO}$	$I_C = 1\text{ mA}, I_E = 0$	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	$t_r$	<p>20 <math>\mu\text{s}</math> <math>V_{CC} \approx 200\text{ V}</math></p> <p><math>I_{B1}</math> <math>I_{B2}</math> <math>I_{B21}</math> <math>I_C</math></p> <p>INPUT OUTPUT</p> <p>250 <math>\Omega</math></p>	—	—	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 $\leq 1\%$	—	—	

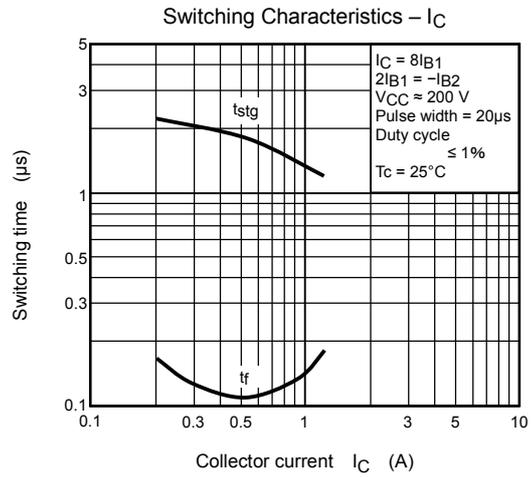
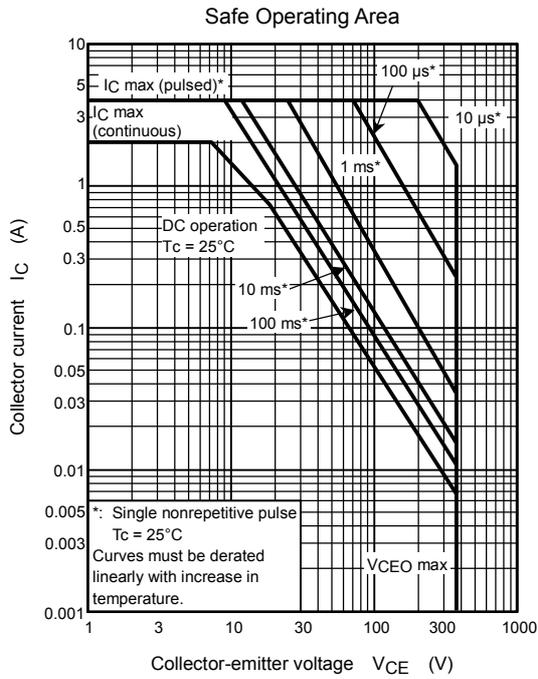
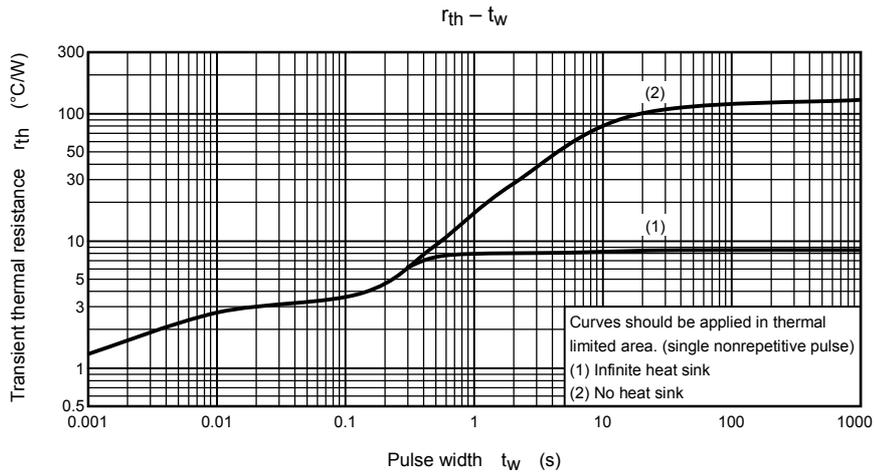
## Marking



## Explanation of Lot No.







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