

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5352

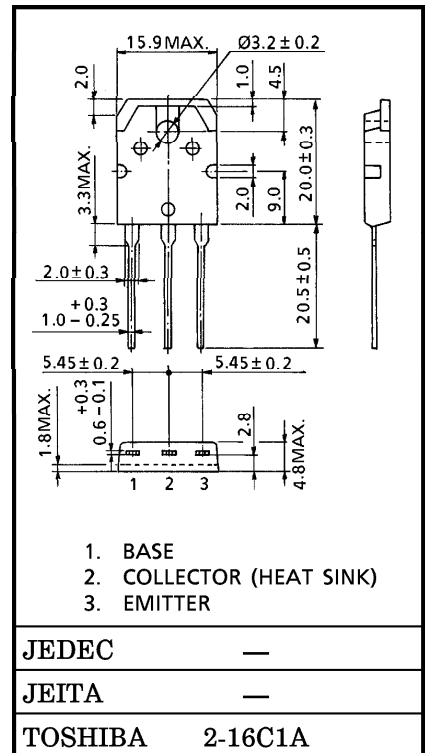
SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS  
HIGH SPEED DC-DC CONVERTER APPLICATIONS

- Excellent Switching Times  
:  $t_r = 0.5 \mu s$  (Max.),  $t_f = 0.3 \mu s$  (Max.) ( $I_C = 4 A$ )
- High Collectors Breakdown Voltage :  $V_{CEO} = 400 V$

MAXIMUM RATINGS ( $T_c = 25^\circ C$ )

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CB0}$	600	V
Collector-Emitter Voltage		$V_{CE0}$	400	V
Emitter-Base Voltage		$V_{EB0}$	7	V
Collector Current	DC	$I_C$	10	A
	Pulse	$I_{CP}$	15	
Base Current		$I_B$	5	A
Collector Power Dissipation ( $T_c = 25^\circ C$ )		$P_C$	80	W
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$

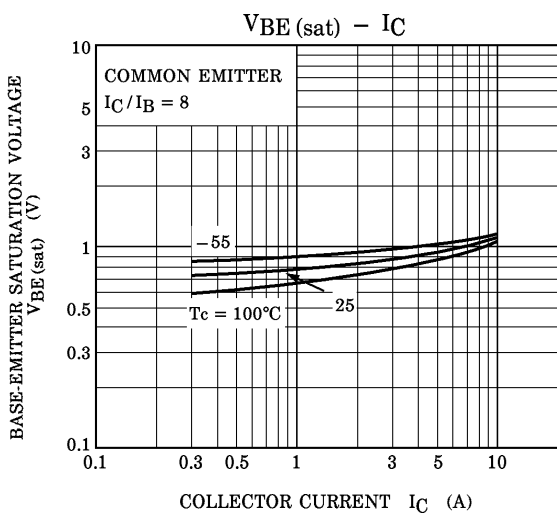
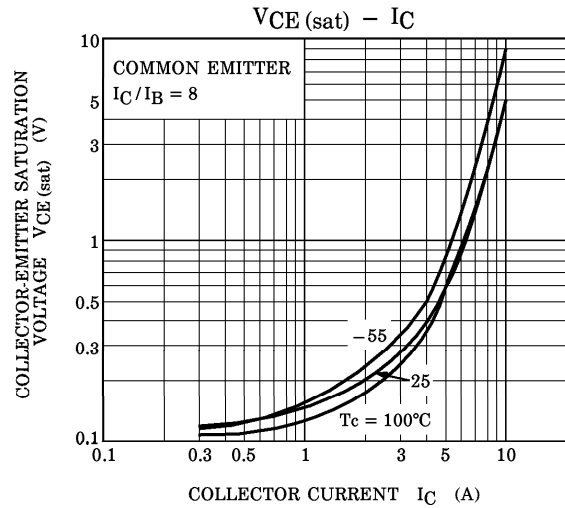
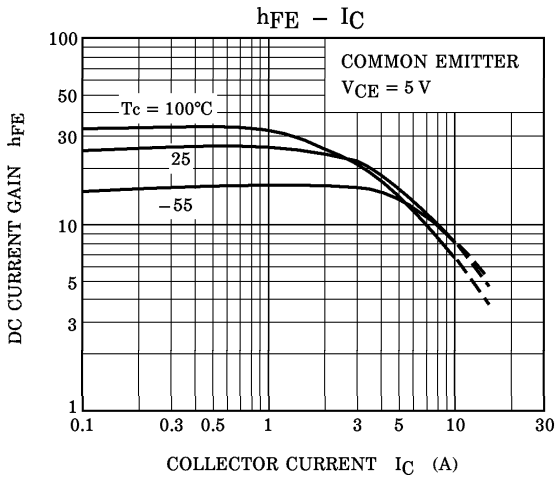
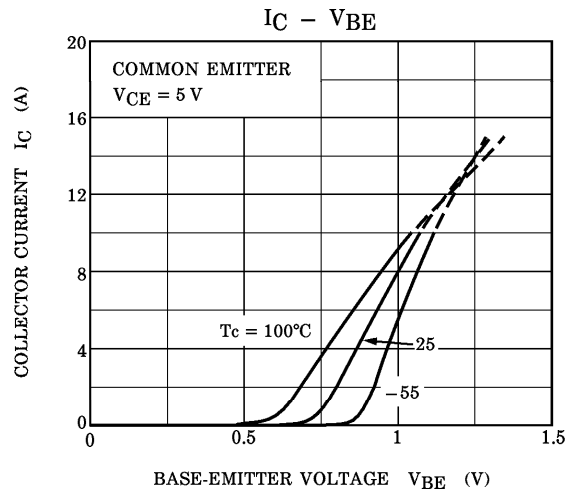
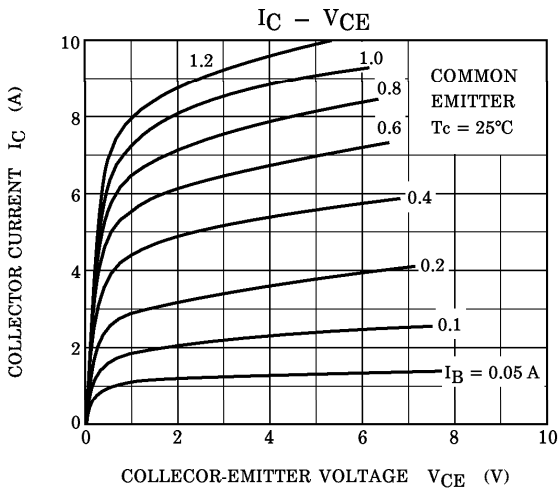
Unit in mm

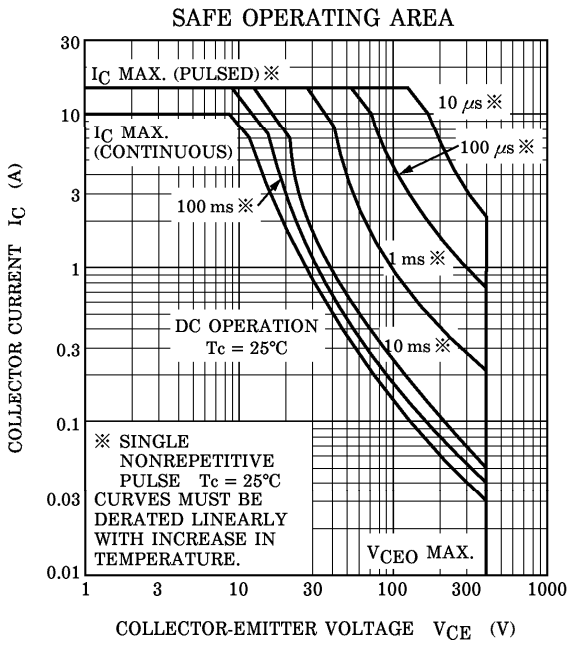


Weight : 4.7 g (Typ.)

ELECTRICAL CHARACTERISTICS (T<sub>c</sub> = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I <sub>CBO</sub>	V <sub>CB</sub> = 480 V, I <sub>E</sub> = 0	—	—	100	μA
Emitter Cut-off Current		I <sub>EBO</sub>	V <sub>EB</sub> = 7 V, I <sub>C</sub> = 0	—	—	1	mA
Collector-Base Breakdown Voltage		V <sub>(BR) CBO</sub>	I <sub>C</sub> = 1 mA, I <sub>E</sub> = 0	600	—	—	V
Collector-Emitter Breakdown Voltage		V <sub>(BR) CEO</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0	400	—	—	V
DC Current Gain		h <sub>FE</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 A	20	—	—	
Collector-Emitter Saturation Voltage		V <sub>CE (sat)</sub>	I <sub>C</sub> = 4 A, I <sub>B</sub> = 0.5 A	—	—	1.0	V
Base-Emitter Saturation Voltage		V <sub>BE (sat)</sub>	I <sub>C</sub> = 4 A, I <sub>B</sub> = 0.5 A	—	—	1.3	V
Switching Time	Rise Time	t <sub>r</sub>	<p>20 μs V<sub>CC</sub> = 200 V I<sub>B1</sub> I<sub>B2</sub> I<sub>C</sub> 100 Ω 50 Ω INPUT OUTPUT I<sub>B1</sub> = 0.5 A, I<sub>B2</sub> = -1 A DUTY CYCLE ≤ 1%</p>	—	—	0.5	μs
	Storage Time	t <sub>stg</sub>		—	—	2.0	
	Fall Time	t <sub>f</sub>		—	—	0.3	





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