

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5351

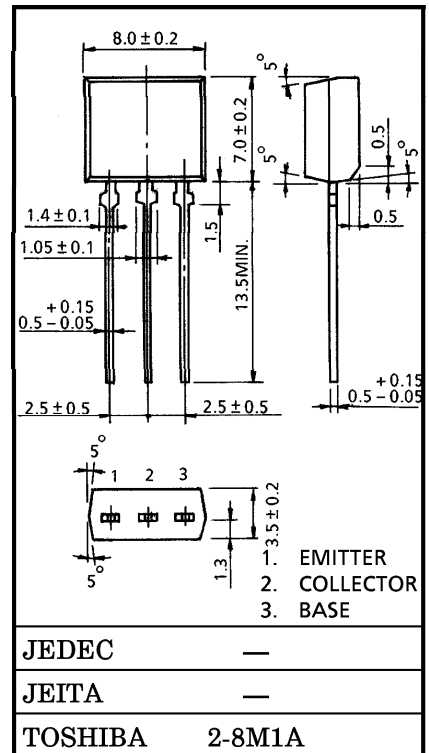
HIGH SPEED SWITCHING APPLICATIONS FOR BATTERY CHARGER AND POWER SUPPLY

- High Voltage :  $V_{CEO}=450V$
- High Speed :  $t_r=0.5\mu s$  (Max.),  $t_f=0.3\mu s$  (Max.) ( $I_C=0.8A$ )

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CB0}$	650	V
Collector-Emitter Voltage		$V_{CE0}$	450	V
Emitter-Base Voltage		$V_{EB0}$	7	V
Collector Current	DC	$I_C$	2	A
	Pulse	$I_{CP}$	4	
Base Current		$I_B$	0.5	A
Collector Power Dissipation		$P_C$	1.3	W
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$

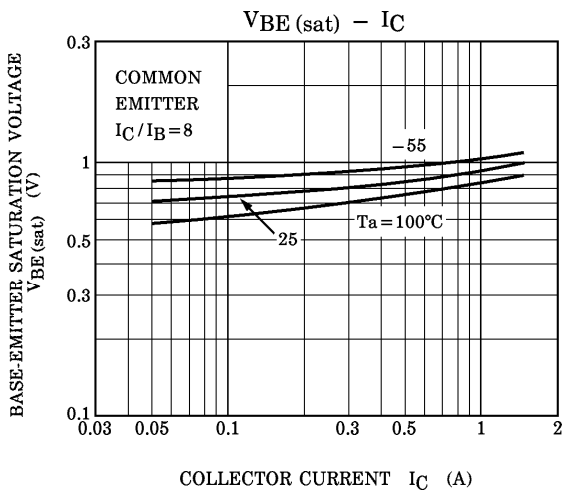
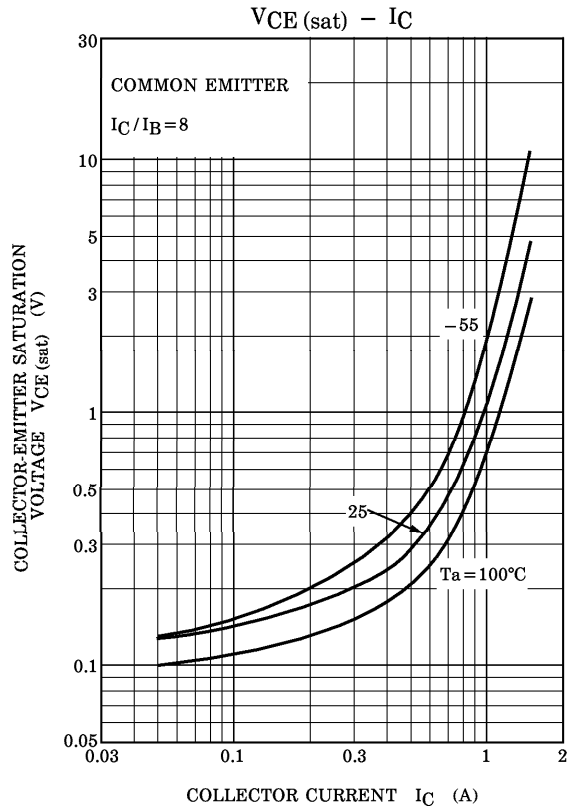
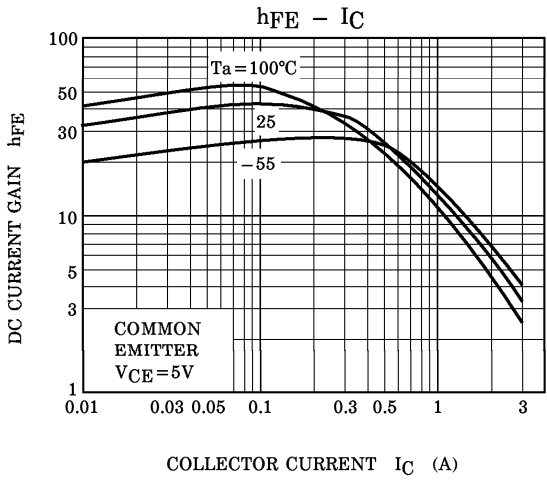
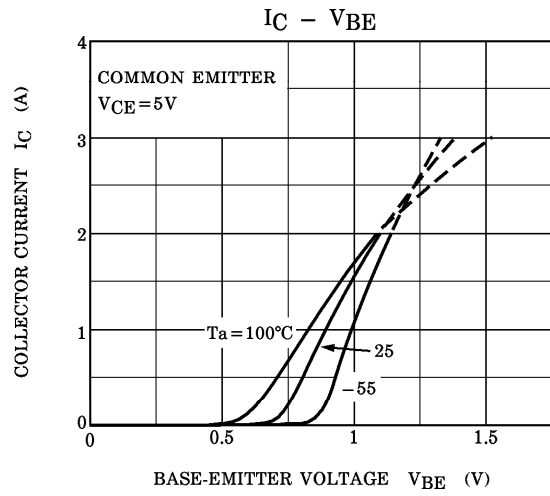
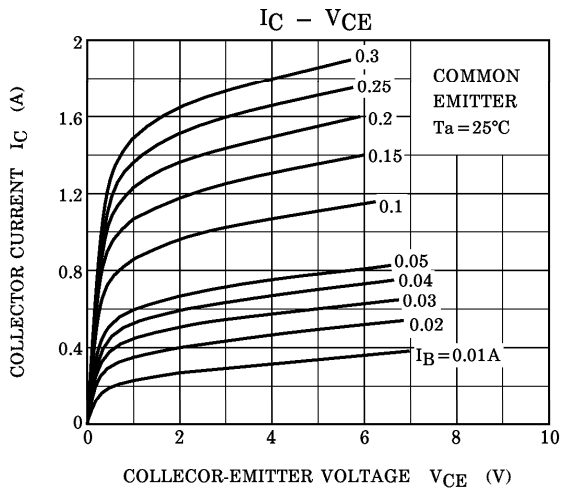
Unit in mm

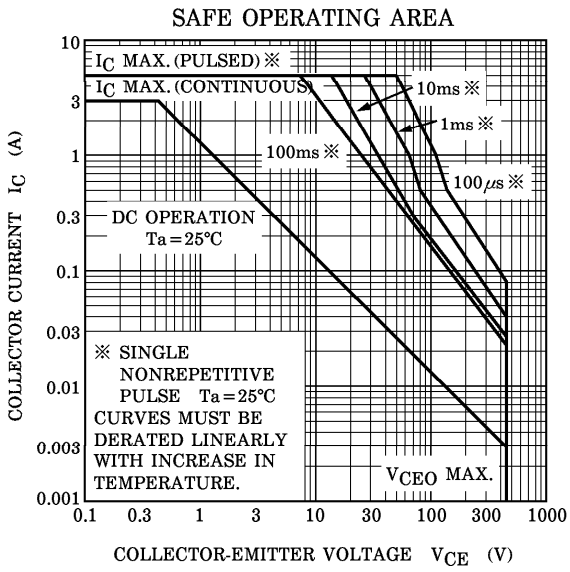


Weight : 0.55g (Typ.)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V <sub>CB</sub> = 520V, I <sub>E</sub> = 0	—	—	20	μA
Emitter Cut-off Current		IEBO	V <sub>EB</sub> = 7V, I <sub>C</sub> = 0	—	—	10	μA
Collector-Base Breakdown Voltage		V <sub>(BR) CBO</sub>	I <sub>C</sub> = 1mA, I <sub>E</sub> = 0	650	—	—	V
Collector-Emitter Breakdown Voltage		V <sub>(BR) CEO</sub>	I <sub>E</sub> = 10mA, I <sub>C</sub> = 0	450	—	—	V
DC Current Gain		h <sub>FE</sub> (1)	V <sub>CE</sub> = 5V, I <sub>C</sub> = 1mA	13	—	—	—
		h <sub>FE</sub> (2)	V <sub>CE</sub> = 5V, I <sub>C</sub> = 0.2A	20	—	65	
Collector-Emitter Saturation Voltage		V <sub>CE (sat)</sub>	I <sub>C</sub> = 0.8A, I <sub>B</sub> = 0.1A	—	—	1.0	V
Base-Emitter Saturation Voltage		V <sub>BE (sat)</sub>	I <sub>C</sub> = 0.8A, I <sub>B</sub> = 0.1A	—	—	1.3	V
Switching Time	Rise Time	t <sub>r</sub>	<p>V<sub>CC</sub> = 200V 250Ω I<sub>B1</sub>, I<sub>B2</sub>, I<sub>C</sub>, INPUT, OUTPUT</p>	—	—	0.5	μs
	Storage Time	t <sub>stg</sub>		—	—	2.0	
	Fall Time	t <sub>f</sub>		I <sub>B1</sub> = 0.1A, I <sub>B2</sub> = -0.2A DUTY CYCLE ≤ 1%	—	—	





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