

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

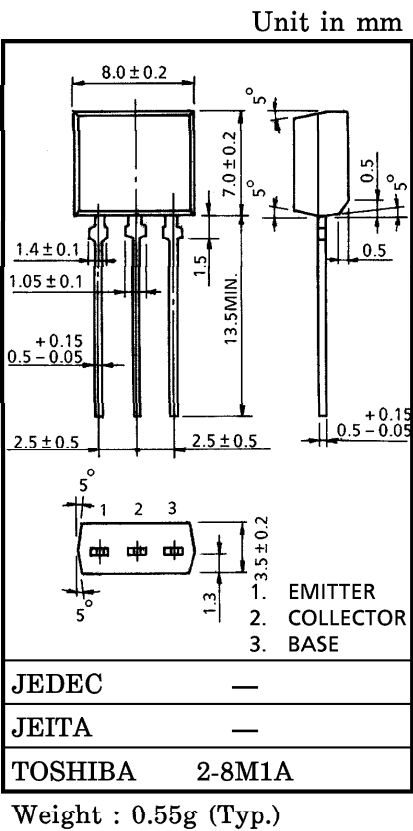
2SC5351

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.) ($I_C=0.8A$)

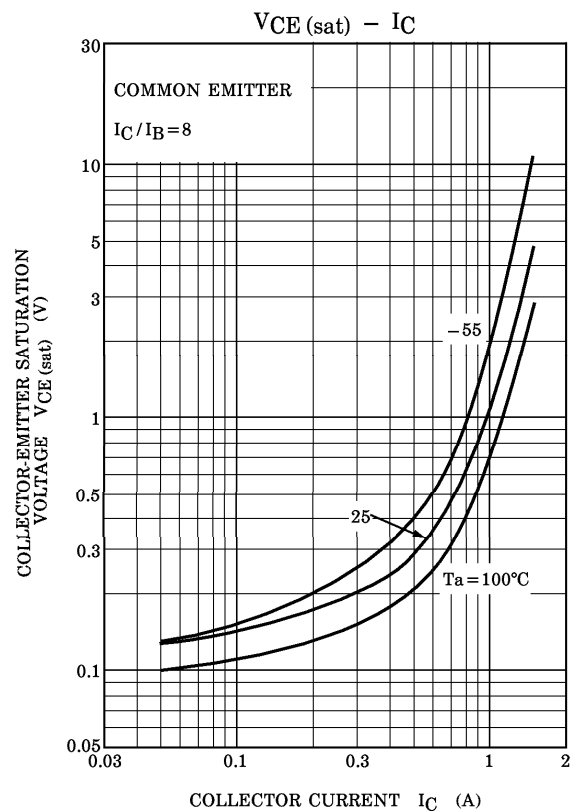
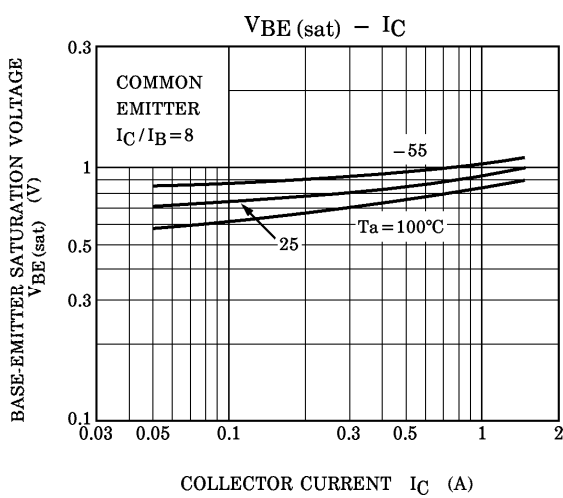
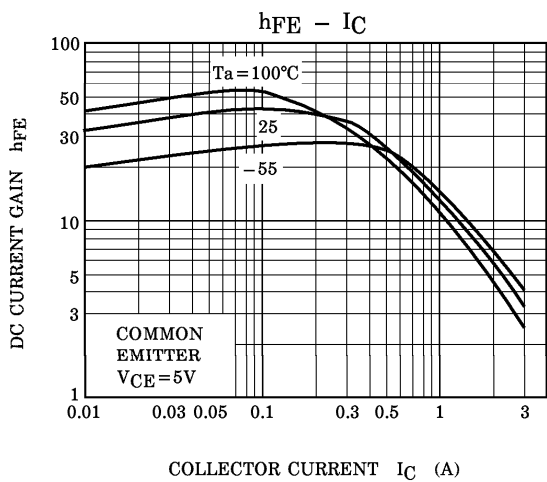
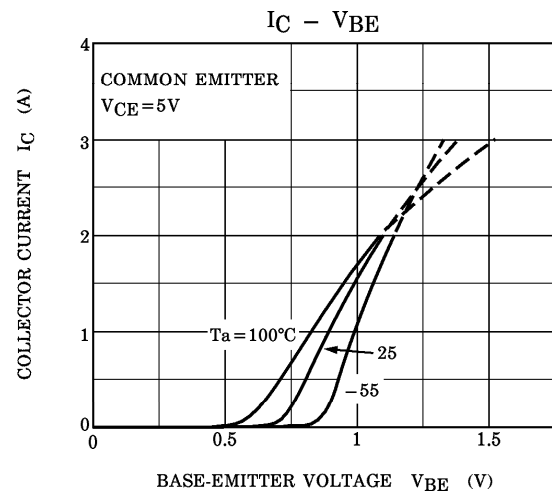
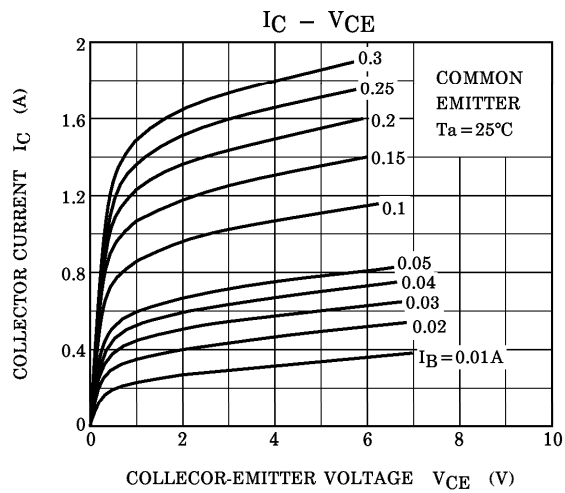
MAXIMUM RATINGS (Ta = 25°C)

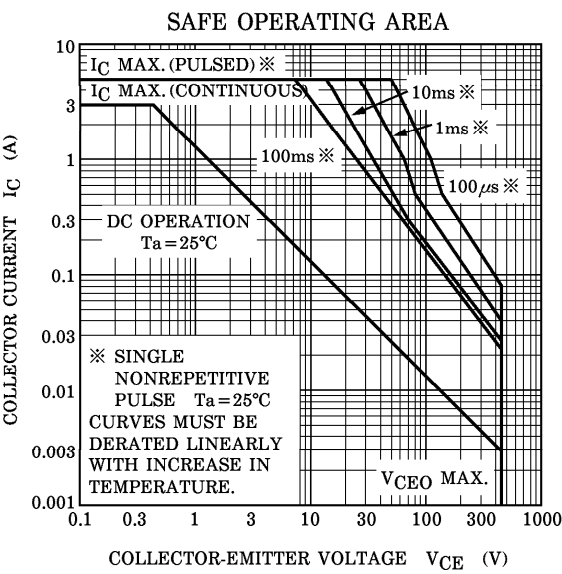
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	650	V
Collector-Emitter Voltage		V_{CEO}	450	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	2	A
	Pulse	I_{CP}	4	
Base Current		I_B	0.5	A
Collector Power Dissipation		P_C	1.3	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=520V, I_E=0$	—	—	20	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=7V, I_C=0$	—	—	10	μA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	650	—	—	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_E=10mA, I_C=0$	450	—	—	V
DC Current Gain		$h_{FE}(1)$	$V_{CE}=5V, I_C=1mA$	13	—	—	—
		$h_{FE}(2)$	$V_{CE}=5V, I_C=0.2A$	20	—	65	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=0.8A, I_B=0.1A$	—	—	1.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=0.8A, I_B=0.1A$	—	—	1.3	V
Switching Time	Rise Time	t_r	$20\mu s$ $V_{CC}=200V$ 250Ω I_{B1} I_{B2} I_C $INPUT$ $OUTPUT$ I_{B2}	—	—	0.5	μs
	Storage Time	t_{stg}		—	—	2.0	
	Fall Time	t_f		$I_{B1}=0.1A, I_{B2}=-0.2A$ $DUTY\ CYCLE\leq 1\%$	—	—	





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