

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC3783

HIGH SPEED AND HIGH VOLTAGE SWITCHING APPLICATIONS

SWITCHING REGULATOR APPLICATIONS

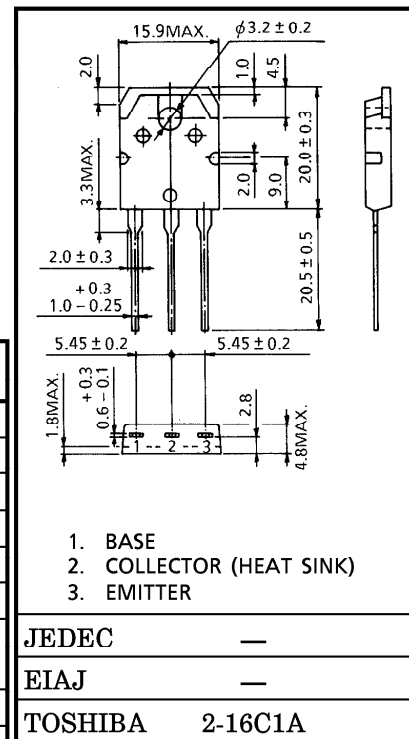
HIGH SPEED DC-DC CONVERTER APPLICATIONS

- Excellent Switching Times
: $t_r = 1.0\mu s$ (Max.), $t_f = 1.0\mu s$ (Max.)
- High Collector Breakdown Voltage : $V_{CEO} = 800V$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	900	V
Collector-Emitter Voltage	V_{CEO}	800	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	DC	I_C	5 A
	Pulse	I_{CP}	7 A
Base Current	I_B	3	A
Collector Power Dissipation ($T_c = 25^\circ C$)	P_C	100	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

Unit in mm



Weight : 4.7g (Typ.)

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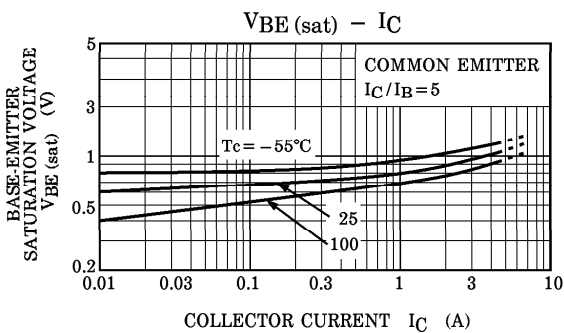
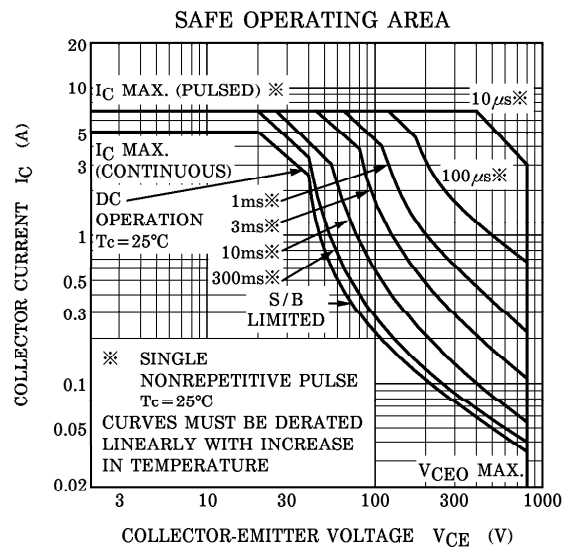
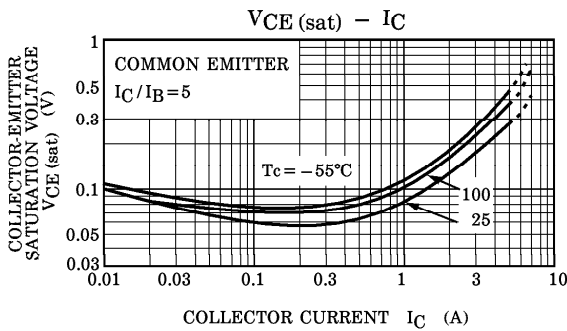
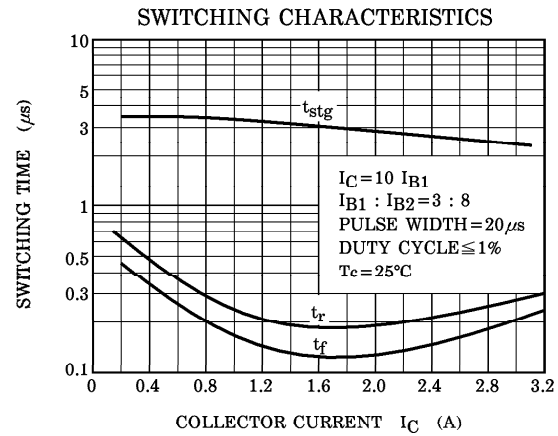
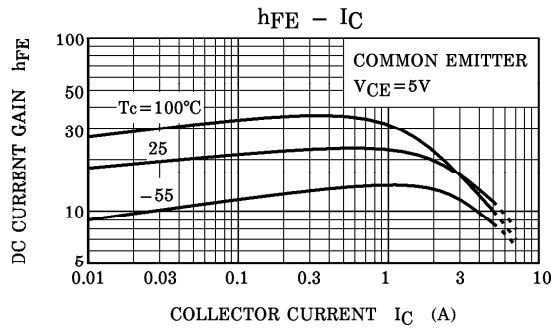
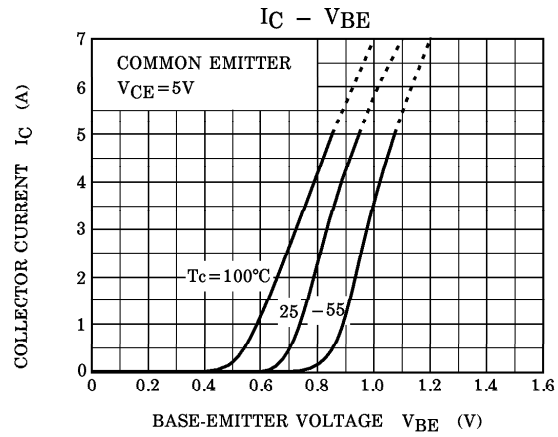
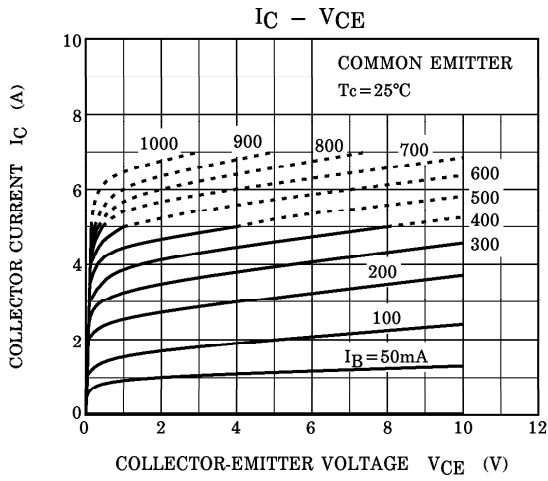
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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 800V, I _E = 0	—	—	100	μA
Emitter Cut-off Current		IEBO	V _{EB} = 7V, I _C = 0	—	—	1	mA
Collector-Base Breakdown Voltage		V (BR) CBO	I _C = 1mA, I _E = 0	900	—	—	V
Collector-Emitter Breakdown Voltage		V (BR) CEO	I _C = 10mA, I _B = 0	800	—	—	V
DC Current Gain		hFE (1)	V _{CE} = 5V, I _C = 10mA	10	—	—	
		hFE (2)	V _{CE} = 5V, I _C = 3A	10	—	—	
Collector-Emitter Saturation Voltage		V _{CE (sat)}	I _C = 3A, I _B = 0.6A	—	—	1.0	V
Base-Emitter Saturation Voltage		V _{BE (sat)}	I _C = 3A, I _B = 0.6A	—	—	1.5	V
Switching Time	Rise Time	t _r	<p> $20\mu s$ $V_{CC} = 400V$ $I_C = 4A$ $I_{B1} = 0.3A$ $I_{B2} = -0.8A$ $DUTY\ CYCLE \leq 1\%$ </p>	—	—	1.0	μs
	Storage Time	t _{stg}		—	—	3.5	
	Fall Time	t _f		—	—	1.0	



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