

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC5075

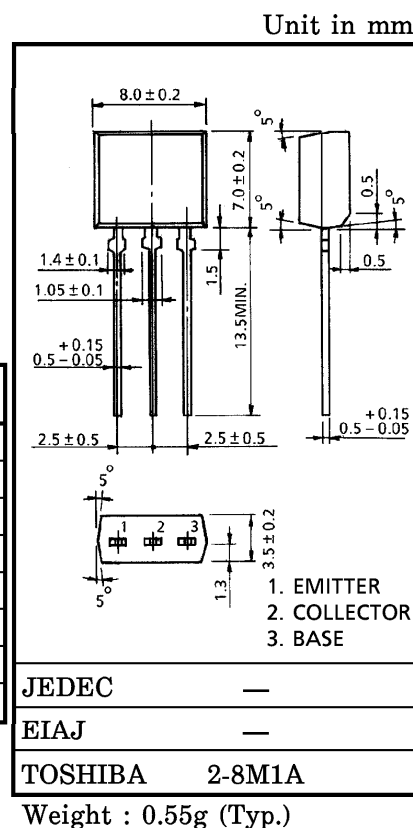
SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS

HIGH SPEED DC-DC CONVERTER APPLICATIONS

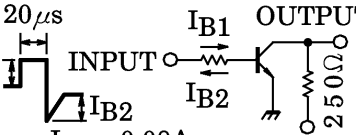
- High Speed Switching
: $t_r = 1.0 \mu s$ (Max.), $t_f = 1.0 \mu s$ (Max.)
- High Collector Breakdown Voltage : $V_{CEO} = 400V$

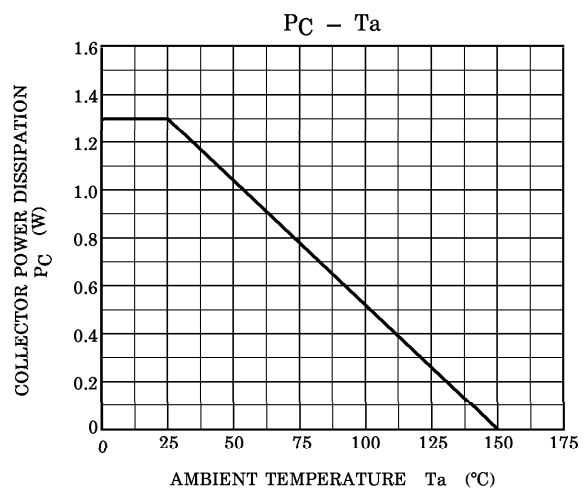
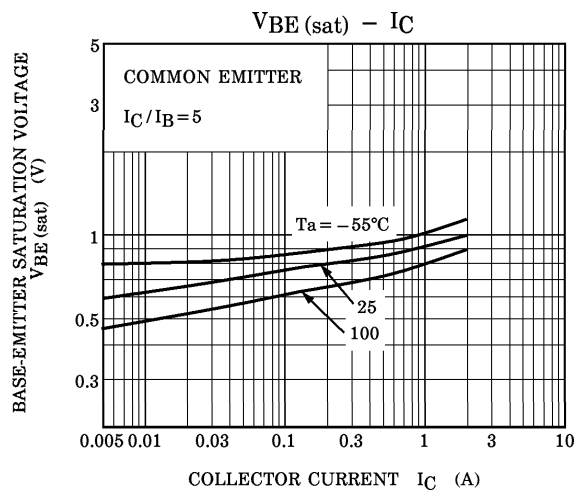
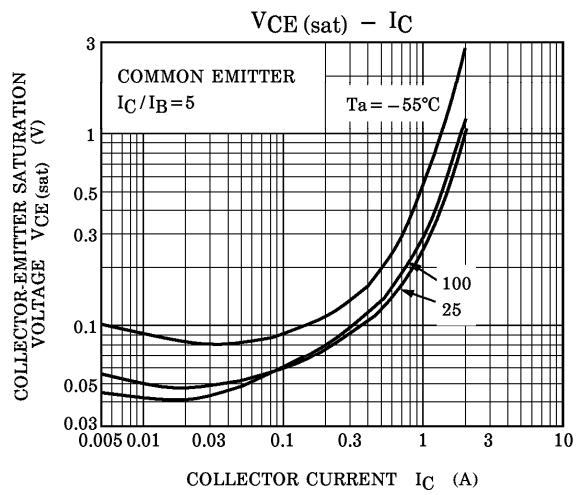
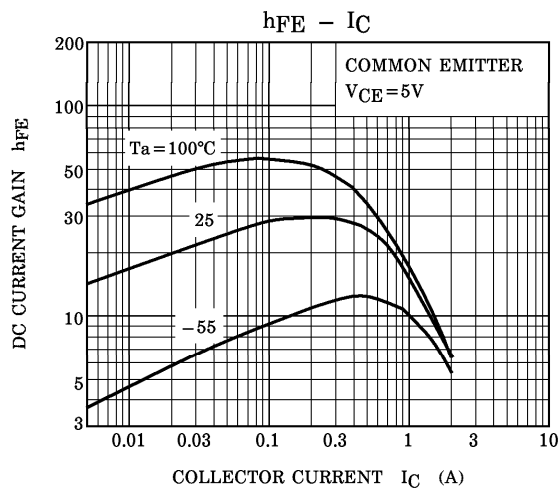
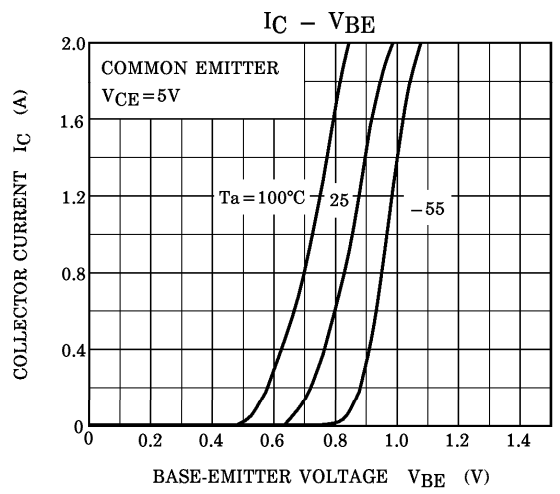
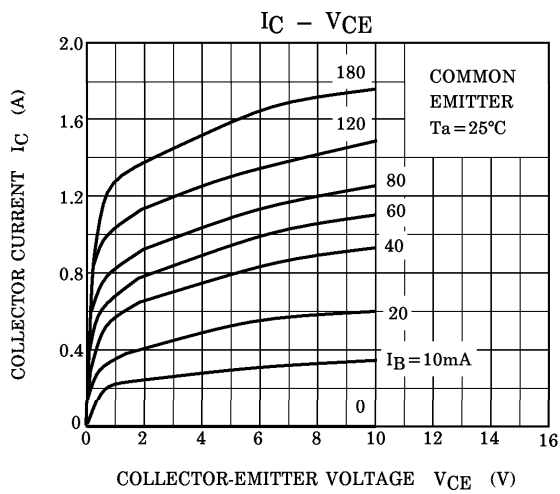
MAXIMUM RATINGS (T_a = 25°C)

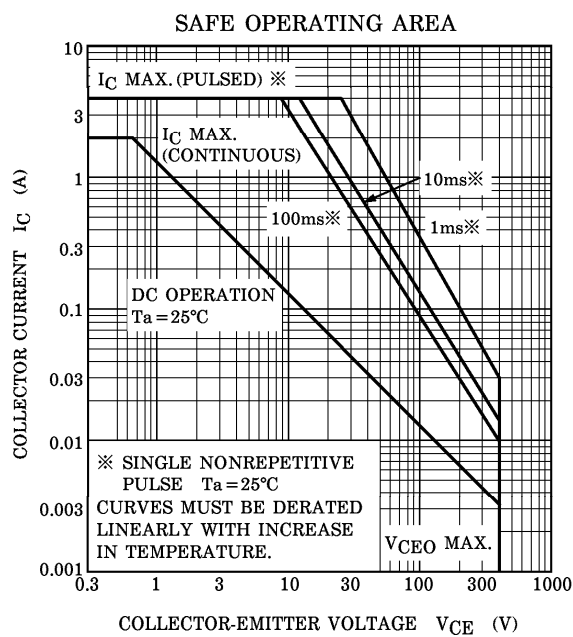
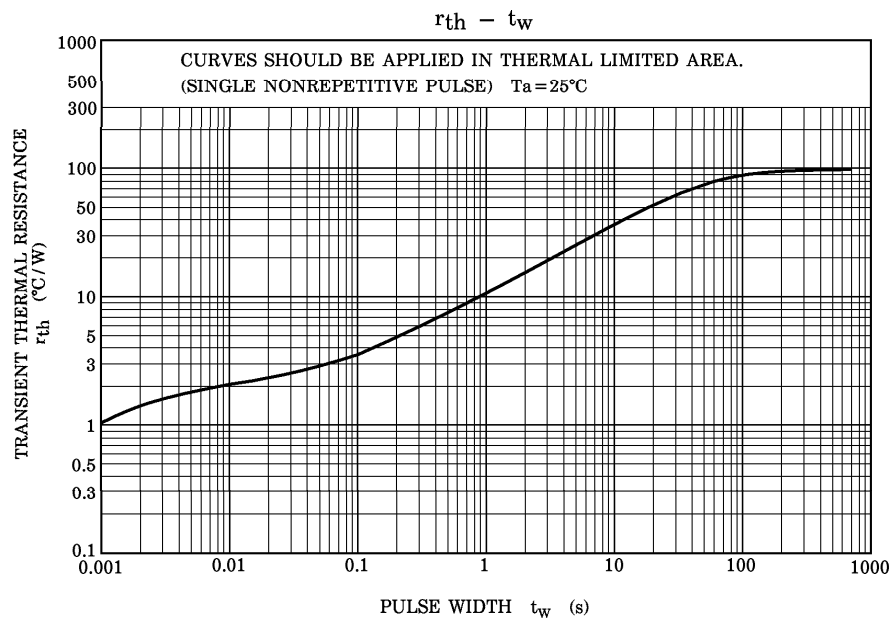
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	500	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	2	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	1.3	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} =400V, I _E =0	—	—	100	μA
Emitter Cut-off Current		I _{EBO}	V _{EB} =7V, I _C =0	—	—	1	mA
Collector-Base Breakdown Voltage		V (BR) CBO	I _C =1mA, I _E =0	500	—	—	V
Collector-Emitter Breakdown Voltage		V (BR) CEO	I _C =10mA, I _B =0	400	—	—	V
DC Current Gain		h _{FE} (1)	V _{CE} =5V, I _C =0.1A	20	—	—	
		h _{FE} (2)	V _{CE} =5V, I _C =1A	8	—	—	
Saturation Voltage	Collector-Emitter	V _{CE} (sat)	I _C =1A, I _B =0.2A	—	—	1.0	V
	Base-Emitter	V _{BE} (sat)	I _C =1A, I _B =0.2A	—	—	1.5	
Switching Time	Rise Time	t _r	 <p>20 μs I_{B1} INPUT I_{B2} OUTPUT 250 Ω V_{CC} ≐ 200V DUTY CYCLE < 1%</p>	—	—	1.0	μs
	Storage Time	t _{stg}		—	—	2.5	
	Fall Time	t _f			—	—	





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