

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

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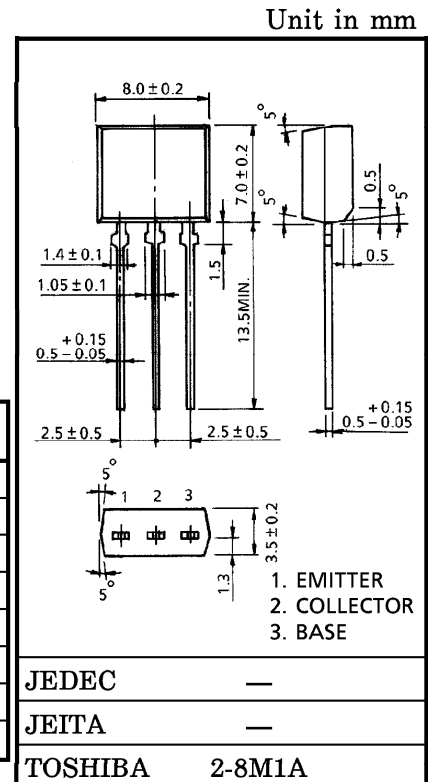
POWER AMPLIFIER APPLICATIONS

POWER SWITCHING APPLICATIONS

- Low Collector Saturation Voltage : $V_{CE(sat)} = -0.5V$ (Max.)
- High Collector Power Dissipation : $P_C = 1.3W$ ($T_a = 25^\circ C$)
- High Speed Switching Time : $t_{stg} = 500ns$ (Typ.)
- Complementary to 2SA1891

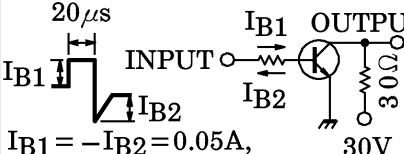
MAXIMUM RATINGS (Ta = 25°C)

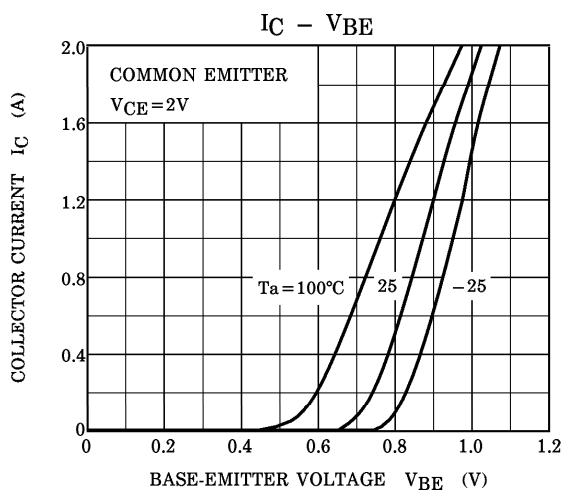
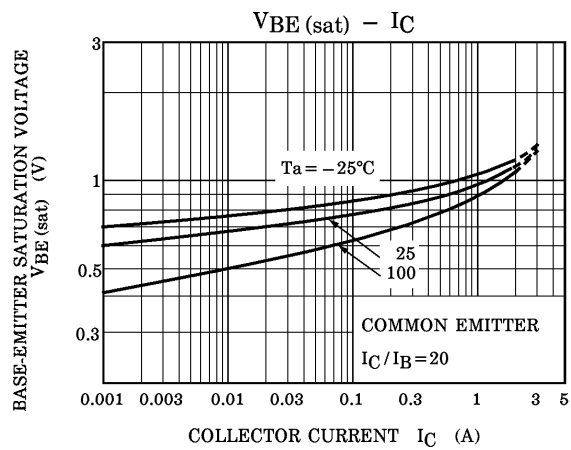
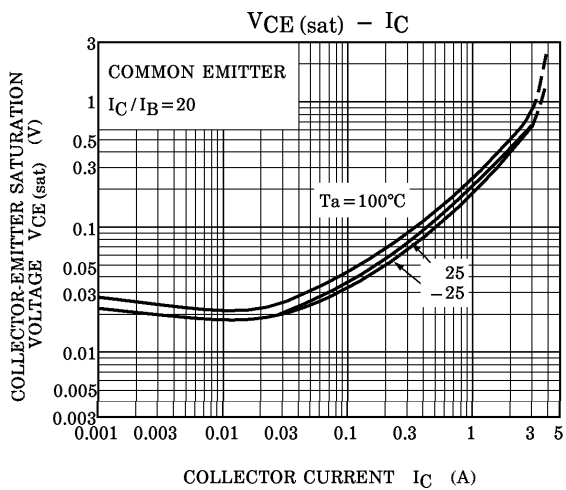
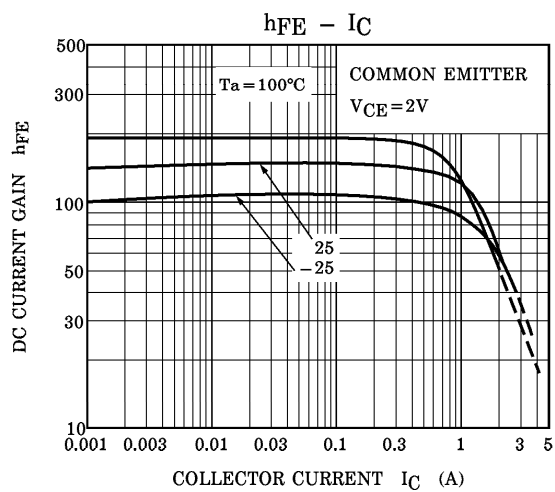
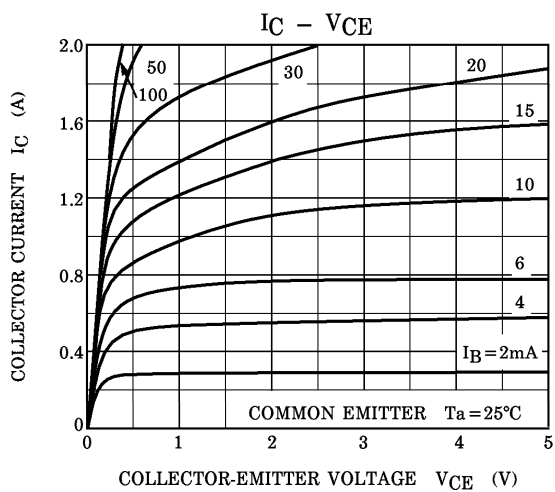
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	2	A
Base Current	I_B	0.2	A
Collector Power Dissipation	P_C	1.3	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

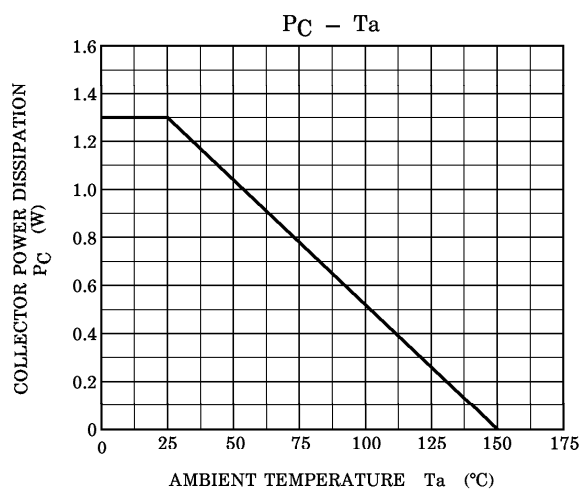
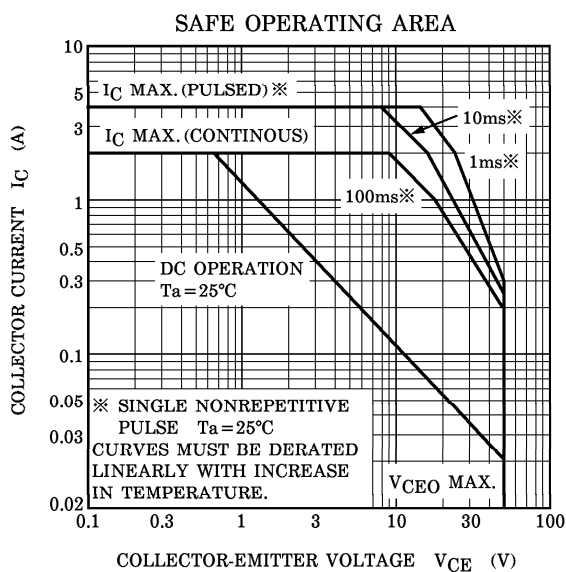
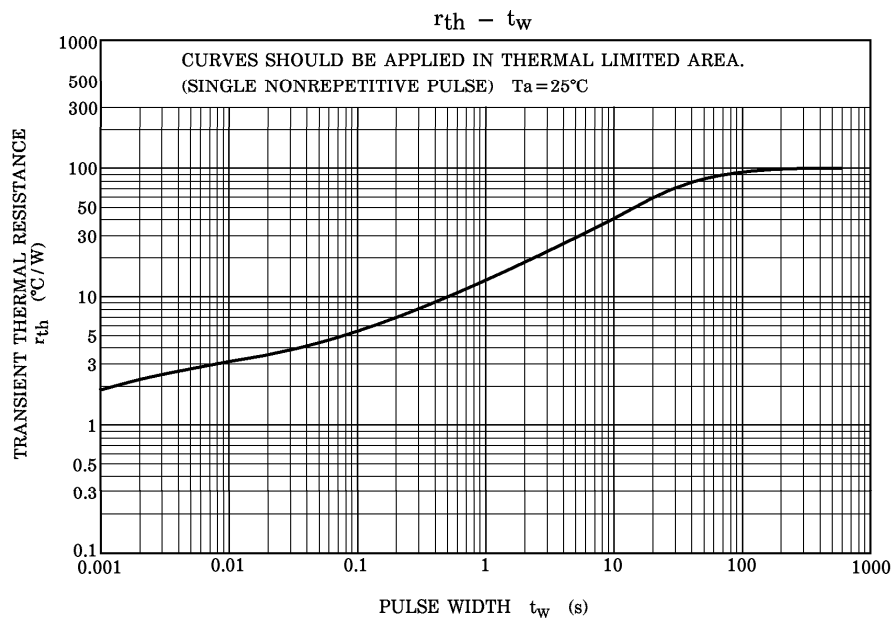


Weight : 0.55g (Typ.)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} =80V, I _E =0	—	—	1.0	μA
Emitter Cut-off Current		I _{EBO}	V _{EB} =6V, I _C =0	—	—	1.0	μA
Collector-Emitter Breakdown Voltage		V (BR) CEO	I _C =10mA, I _B =0	50	—	—	V
DC Current Gain		h _{FE} (1)	V _{CE} =2V, I _C =100mA	120	—	400	
		h _{FE} (2)	V _{CE} =2V, I _C =1.5A	40	—	—	
Saturation Voltage	Collector-Emitter	V _{CE} (sat)	I _C =1A, I _B =0.05A	—	—	0.5	V
	Base-Emitter	V _{BE} (sat)	I _C =1A, I _B =0.05A	—	—	1.2	
Transition Frequency		f _T	V _{CE} =2V, I _C =100mA	—	100	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	—	14	—	pF
Switching Time	Turn-on Time	t _{on}	 I_{B1} = −I_{B2} = 0.05A, DUTY CYCLE ≤ 1%	—	0.1	—	μs
	Storage Time	t _{stg}		—	0.5	—	
	Fall Time	t _f		—	0.1	—	





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