

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1905

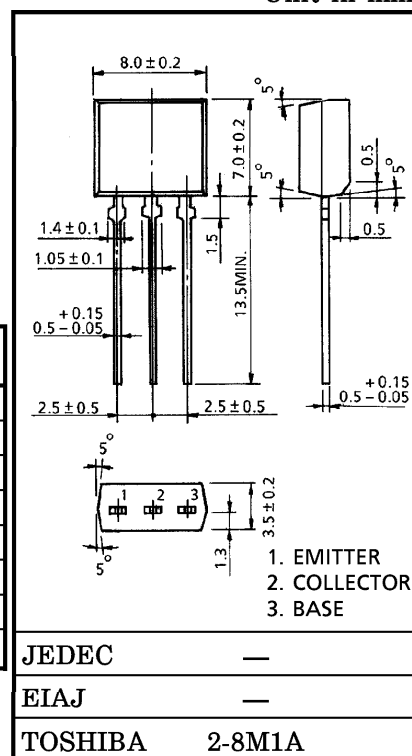
HIGH CURRENT SWITCHING APPLICATIONS

Unit in mm

- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.4V$ (Max.)
- High Speed Switching : $t_{stg} = 1.0\mu s$ (Typ.)
- Complementary to 2SC5076

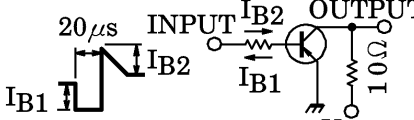
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-5	A
Base Current	I_B	-1	A
Collector Power Dissipation	P_C	1.3	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

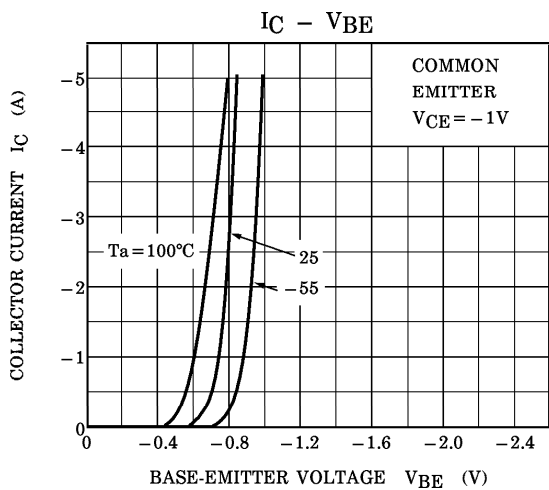
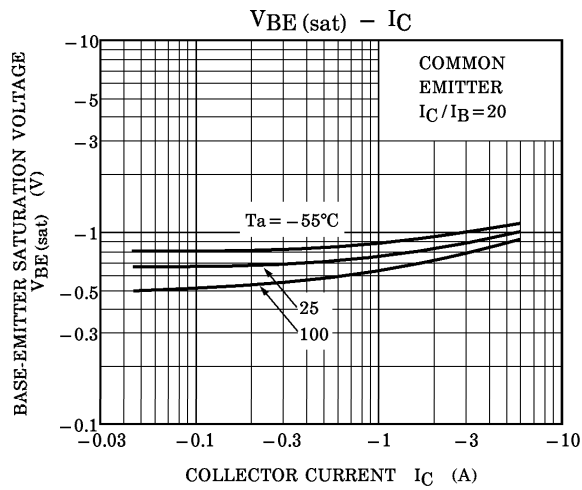
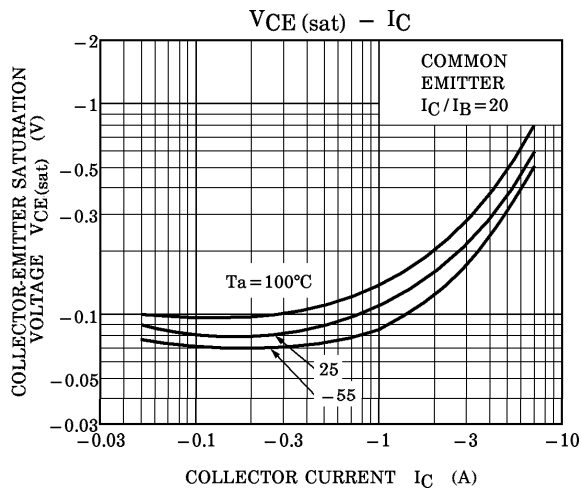
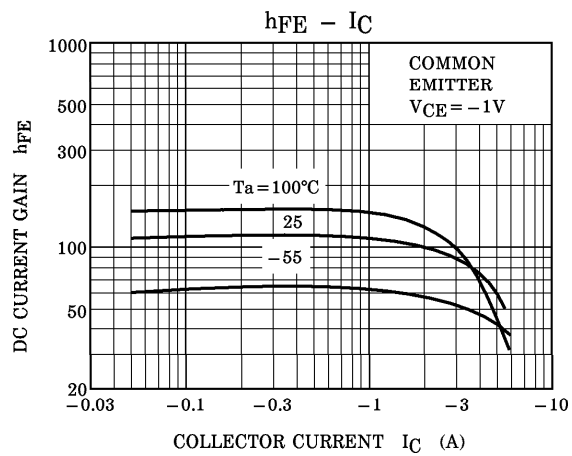
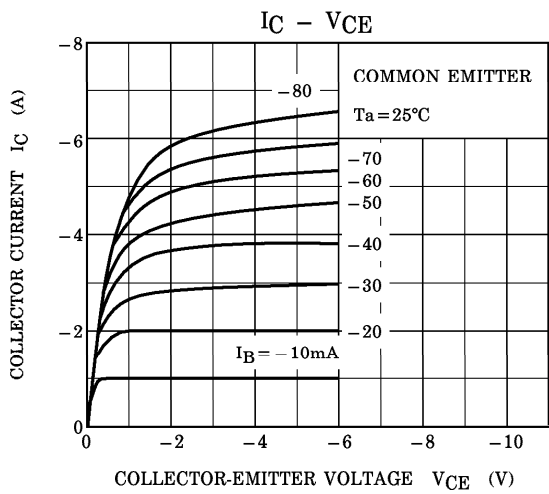


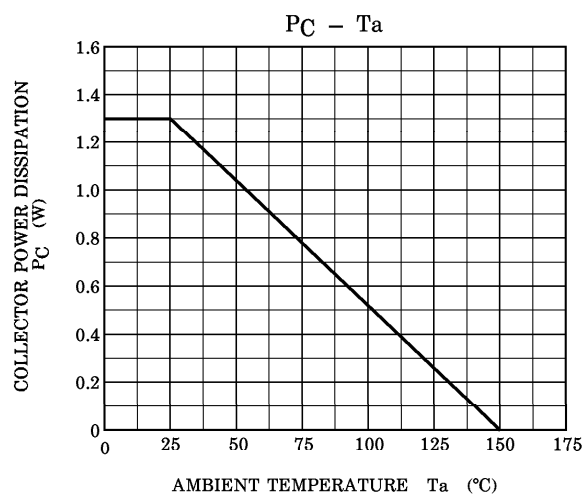
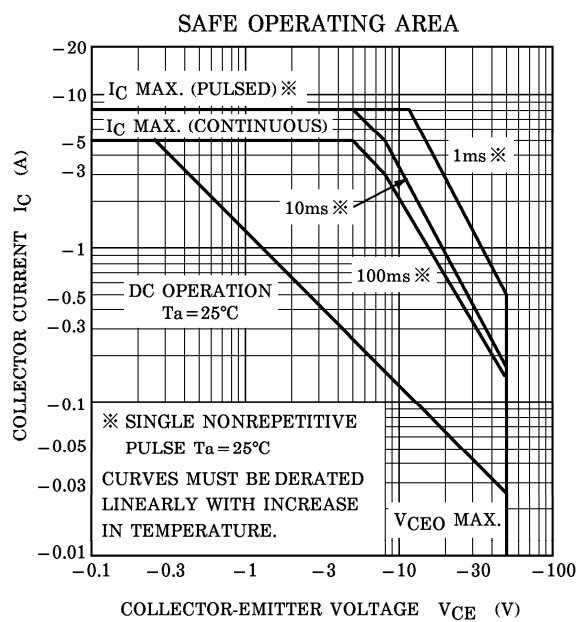
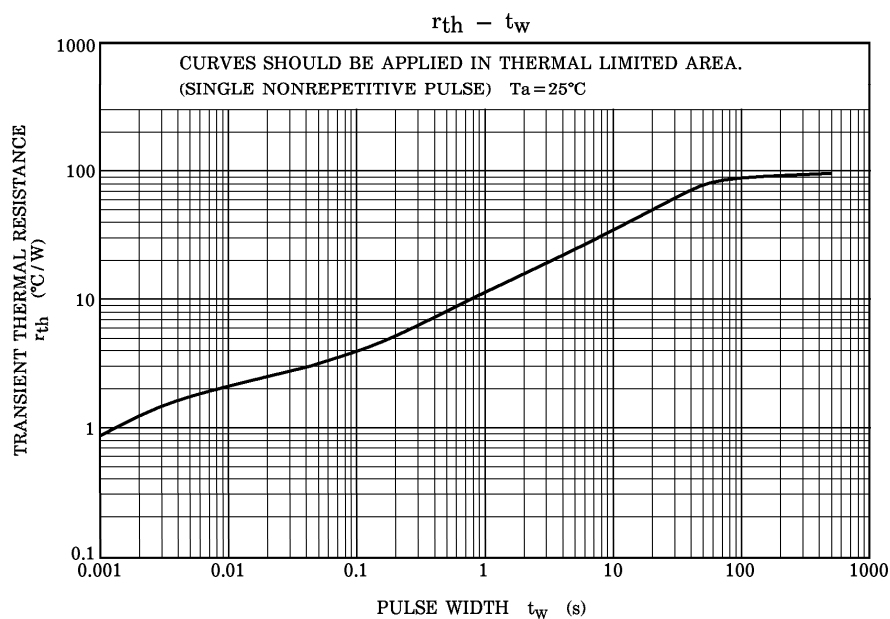
Weight : 0.55g (Typ.)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -50V, I_E = 0$	—	—	-1	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -5V, I_C = 0$	—	—	-1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR) CEO}$	$I_C = -10mA, I_B = 0$	-50	—	—	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE} = -1V, I_C = -1A$	70	—	240	
		$h_{FE(2)}$	$V_{CE} = -1V, I_C = -3A$	30	—	—	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = -3A, I_B = -0.15A$	—	-0.2	-0.4	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = -3A, I_B = -0.15A$	—	-0.9	-1.2	
Transition Frequency		f_T	$V_{CE} = -4V, I_C = -1A$	—	60	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	170	—	pF
Switching Time	Turn-on Time	t_{on}	 <p>20 μs INPUT I_{B2} OUTPUT I_{B1} I_{B1} $V_{CC} = -30V$</p>	—	0.1	—	μs
	Storage Time	t_{stg}		—	1.0	—	
	Fall Time	t_f		$-I_{B1} = I_{B2} = 0.15A$, DUTY CYCLE $\leq 1\%$	—	0.1	

Note : h_{FE}(1) Classification O : 70~140, Y : 120~240





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