TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

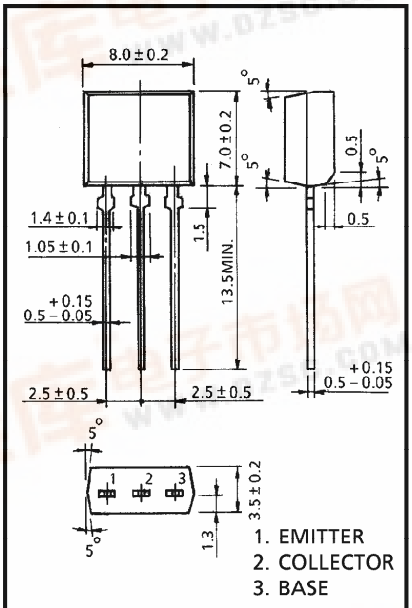
2SA1892

POWER AMPLIFIER APPLICATIONS

POWER SWITCHING APPLICATIONS

- Low Collector Saturation Voltage : $V_{CE\ (sat)} = -0.5V$ (Max.)
- High Power Dissipation : $P_C = 1.3W$
- High Speed Switching Time : $t_{stg} = 1.0\mu s$ (Typ.)
- Complementary to 2SC5029

Unit in mm



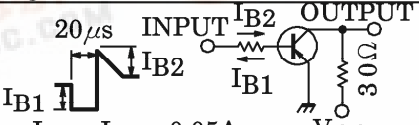
JEDEC	—
EIAJ	—
TOSHIBA	2-8M1A

Weight : 0.55g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−50	V
Collector-Emitter Voltage	V_{CEO}	−50	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−3	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

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -50V$, $I_E = 0$	—	—	−1.0	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -5V$, $I_C = 0$	—	—	−1.0	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)\ CEO}$	$I_C = -10mA$, $I_B = 0$	−50	—	—	V
DC Current Gain		$h_{FE\ (1)}$ (NOTE)	$V_{CE} = -2V$, $I_C = -0.5A$	70	—	240	
		$h_{FE\ (2)}$	$V_{CE} = -2V$, $I_C = -1.5A$	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	$V_{CE} = -2V$, $I_C = -0.5A$	—	100	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V$, $I_E = 0$, f = 1MHz	—	40	—	pF
Switching Time	Turn-on Time	t_{on}		—	0.1	—	μs
	Storage Time	t_{stg}		—	1.0	—	
	Fall Time	t_f		—	0.1	—	

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

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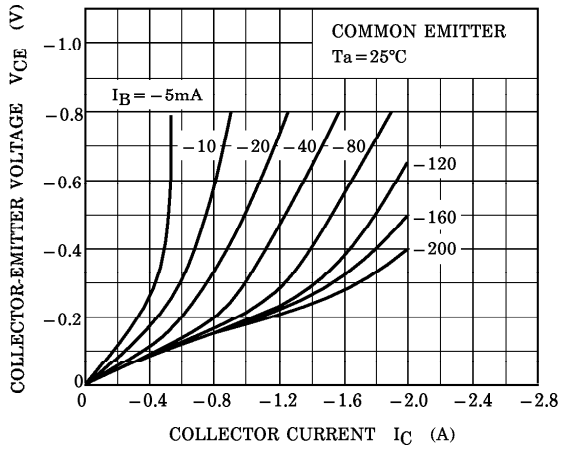
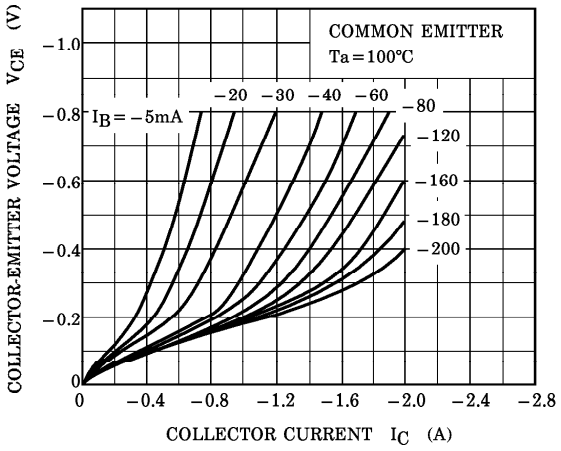
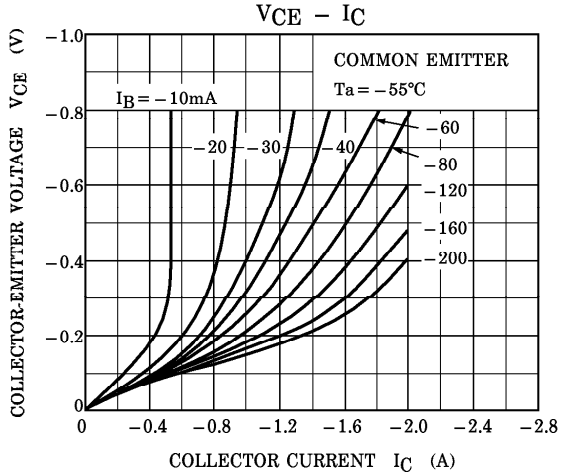
V_{CE} – I_C



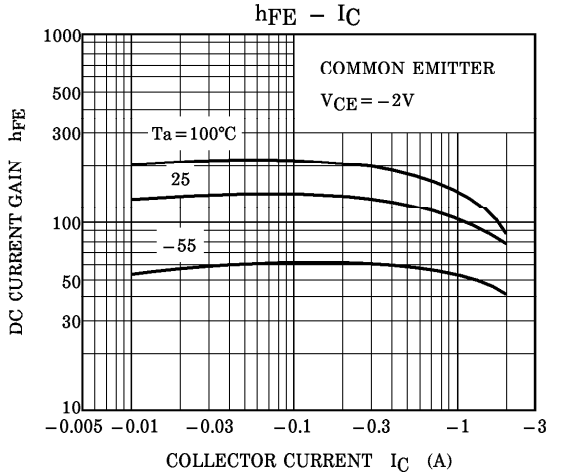
V_{CE} – I_C



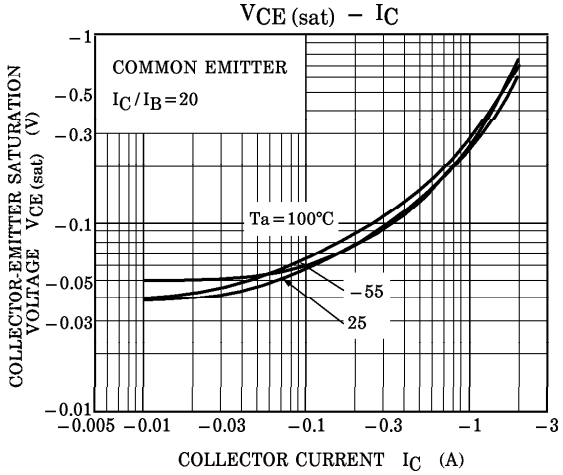
V_{CE} – I_C



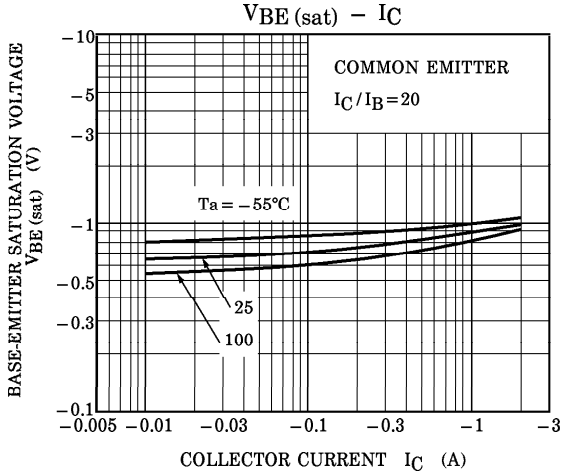
h_{FE} – I_C



$V_{CE\,(sat)}$ – I_C



$V_{BE\,(sat)}$ – I_C



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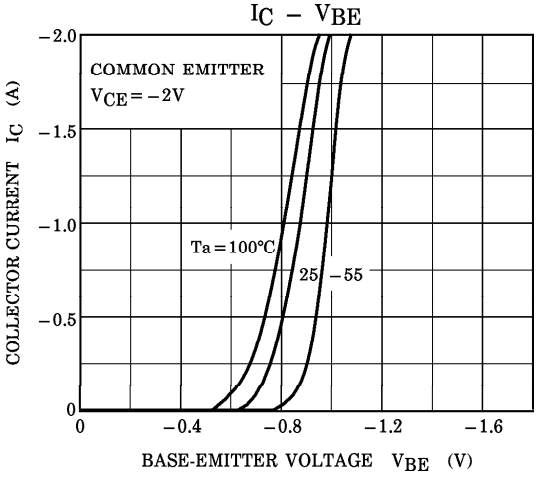
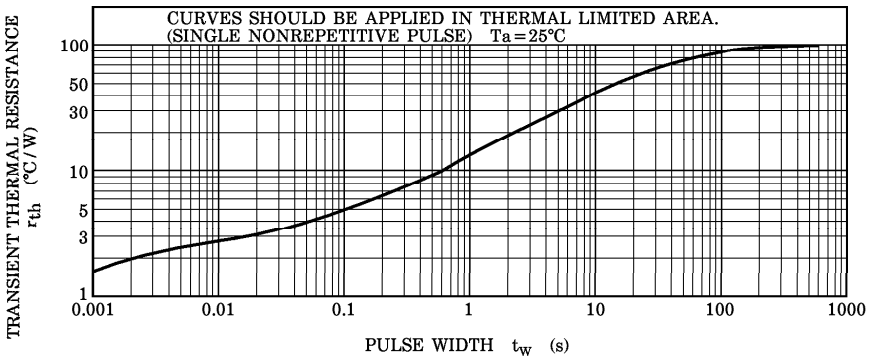
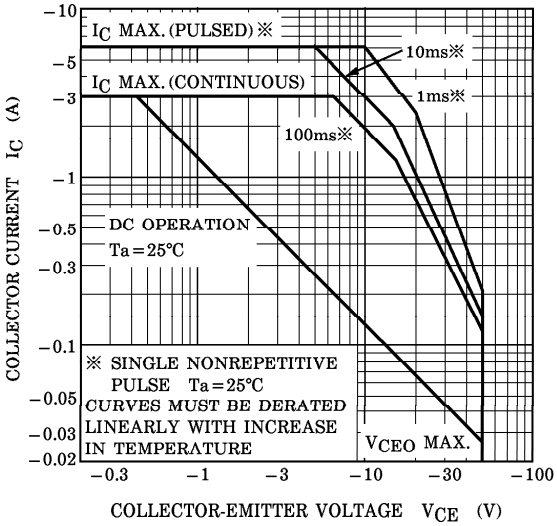
$I_C - V_{BE}$



$r_{th} - t_w$



SAFE OPERATING AREA



$P_C - Ta$