TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1315

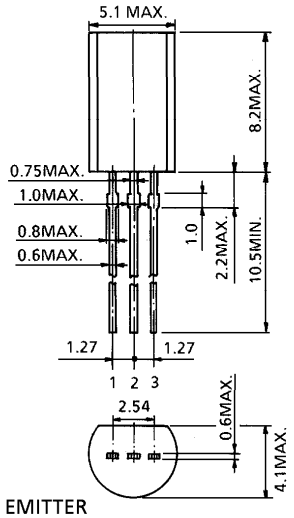
POWER AMPLIFIER APPLICATIONS.
POWER SWITCHING APPLICATIONS.

- Low Collector Saturation Voltage
  : $V_{CE(sat)} = -0.5V$ (Max.) ($I_C = -1A$)
- High Speed Switching Time : $t_{stg} = 1.0\mu s$ (Typ.)
- Complementary to 2SC3328

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−80	V
Collector-Emitter Voltage	V_{CEO}	−80	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−2	A
Base Current	I_B	1	A
Collector Power Dissipation	P_C	900	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

Unit in mm

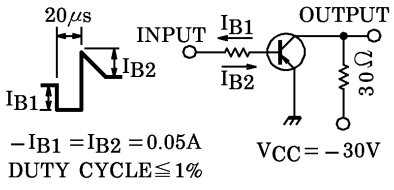


1. EMITTER
2. COLLECTOR
3. BASE

JEDEC	TO-92MOD
JEITA	—
TOSHIBA	2-5J1A

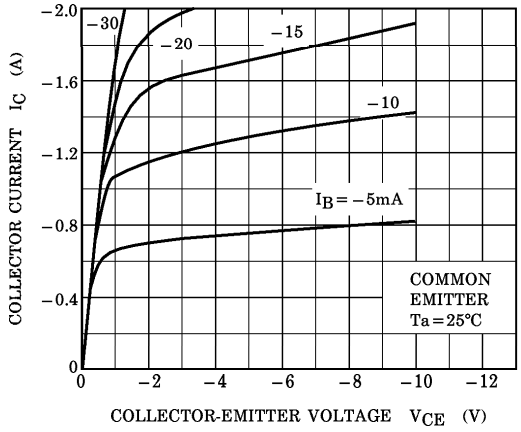
Weight : 0.36g (Typ.)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

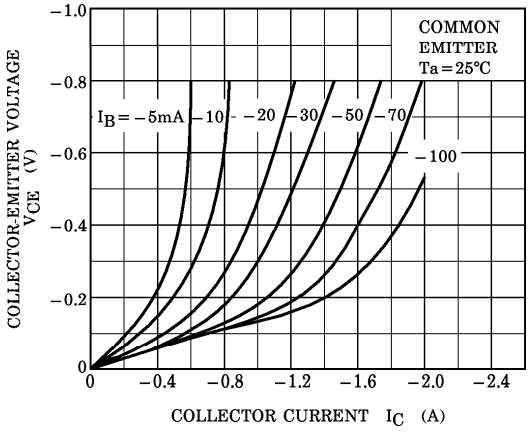
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=-80V$, $I_E=0$	—	—	−1.0	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=-5V$, $I_C=0$	—	—	−1.0	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=-10mA$, $I_B=0$	−80	—	—	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE}=-2V$, $I_C=-0.5A$	70	—	240	
		$h_{FE(2)}$	$V_{CE}=-2V$, $I_C=-1.5A$	40	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=-1A$, $I_B=-0.05A$	—	−0.2	−0.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=-1A$, $I_B=-0.05A$	—	−0.9	−1.2	V
Transition Frequency		f_T	$V_{CE}=-2V$, $I_C=-0.5A$	—	80	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=-10V$, $I_E=0$, f=1MHz	—	45	—	pF
Switching Time	Turn-on Time	t_{on}		—	0.2	—	μs
	Storage Time	t_{stg}		—	1.0	—	
	Fall Time	t_f		—	0.2	—	

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

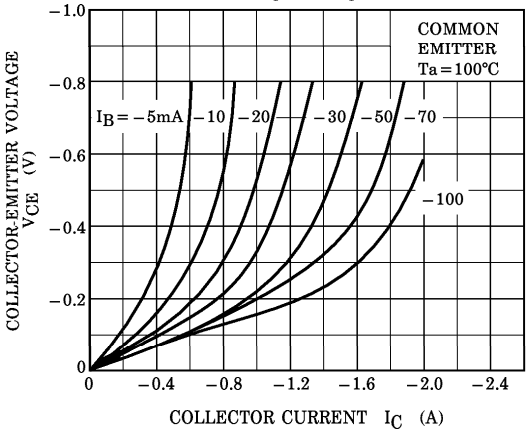
$I_C - V_{CE}$



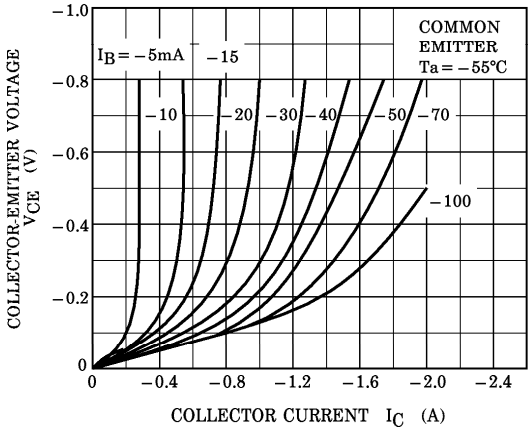
$V_{CE} - I_C$



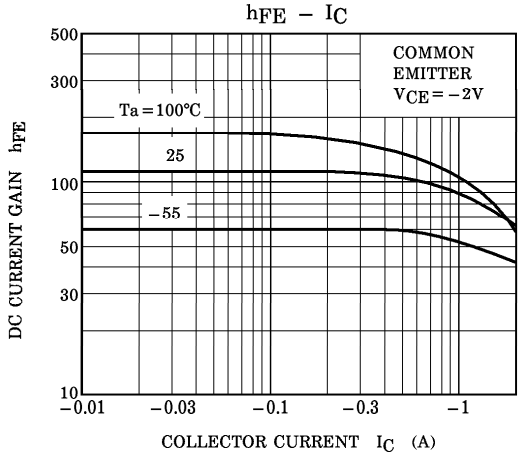
$V_{CE} - I_C$



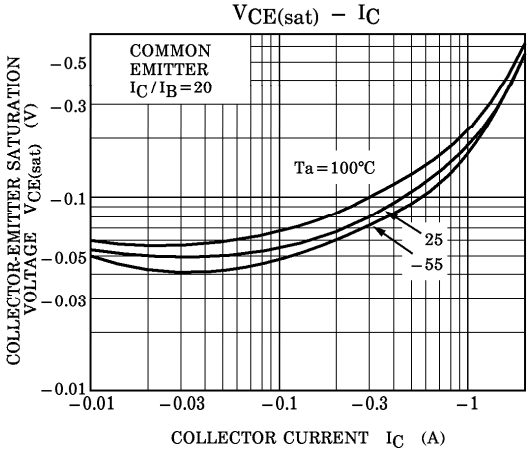
$V_{CE} - I_C$



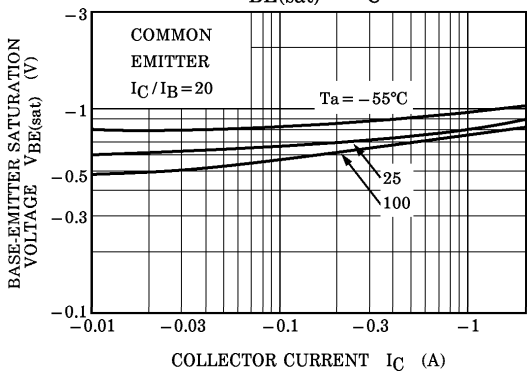
$h_{FE} - I_C$



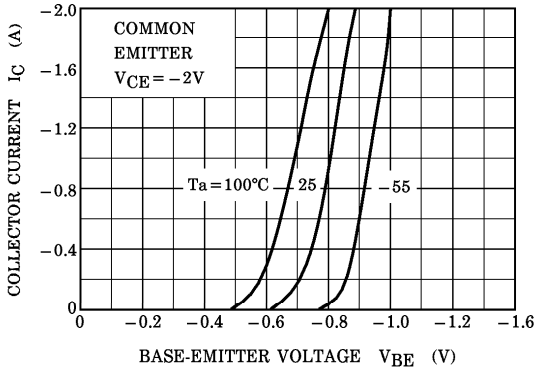
$V_{CE(sat)} - I_C$



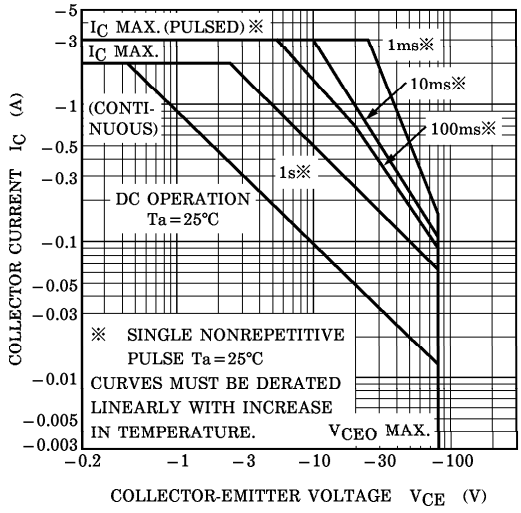
$V_{BE(sat)}$ – I_C



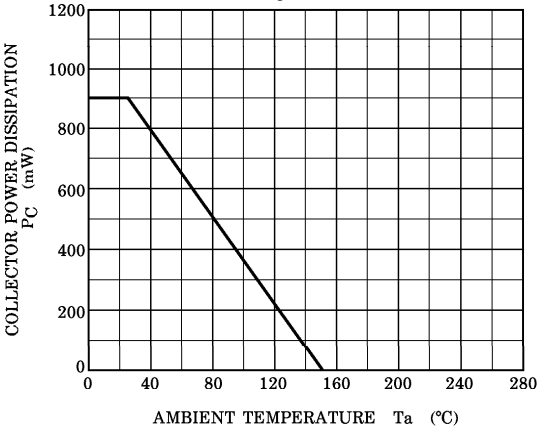
I_C – V_{BE}



SAFE OPERATING AREA



P_C – Ta



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