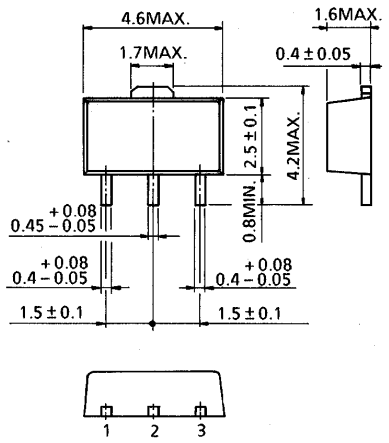
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1201

POWER AMPLIFIER APPLICATIONS

- High Voltage : $V_{CEO} = -120V$
- High Transition Frequency : $f_T = 120MHz$ (Typ.)
- $P_C = 1 \sim 2W$ (Mounted on Ceramic Substrate)
- Small Flat Package
- Complementary to 2SC2881

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

PW-MINI	
JEDEC	—
JEITA	SC-62
TOSHIBA	2-5K1A

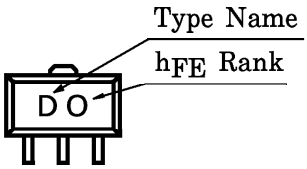
Weight : 0.05g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−120	V
Collector-Emitter Voltage	V_{CEO}	−120	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−800	mA
Base Current	I_B	−160	mA
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation	P_C (Note 1)	1000	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

(Note 1) : Mounted on ceramic substrate ($250mm^2 \times 0.8t$)

MARKING

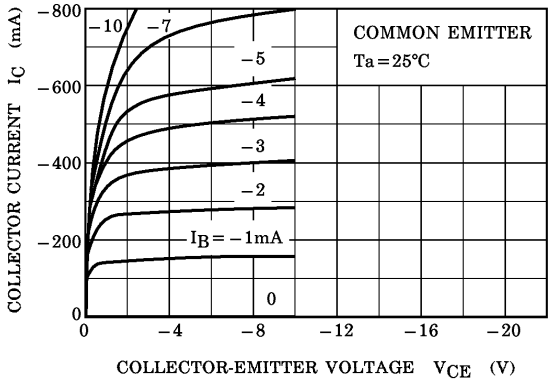


ELECTRICAL CHARACTERISTICS (Ta = 25°C)

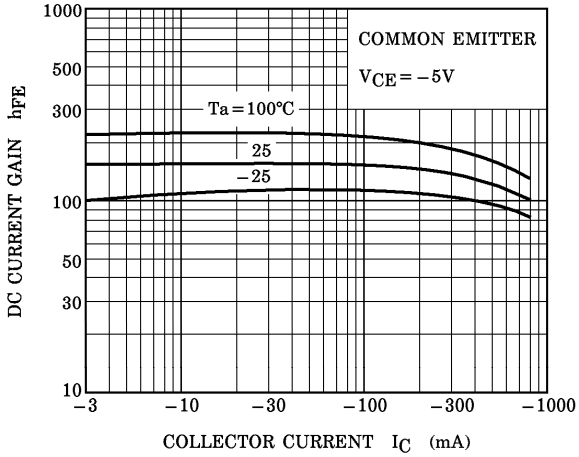
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -120V$, $I_E = 0$	—	—	−0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5V$, $I_C = 0$	—	—	−0.1	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10mA$, $I_B = 0$	−120	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -1mA$, $I_C = 0$	−5	—	—	V
DC Current Gain	h_{FE} (Note 2)	$V_{CE} = -5V$, $I_C = -100mA$	80	—	240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500mA$, $I_B = -50mA$	—	—	−1.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -5V$, $I_C = -500mA$	—	—	−1.0	V
Transition Frequency	f_T	$V_{CE} = -5V$, $I_C = -100mA$	—	120	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V$, $I_E = 0$, f = 1MHz	—	—	30	pF

(Note 2) : h_{FE} Classification O : 80~160, Y : 120~240

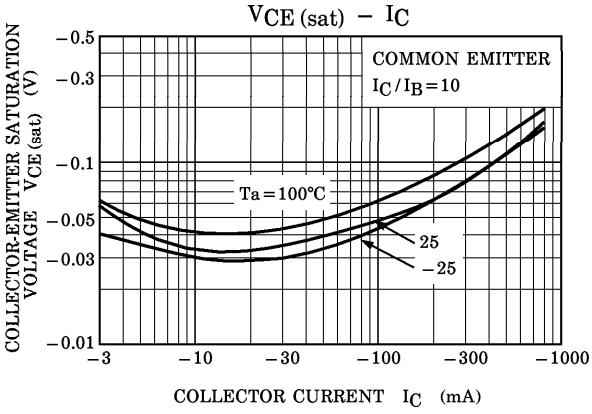
$I_C - V_{CE}$



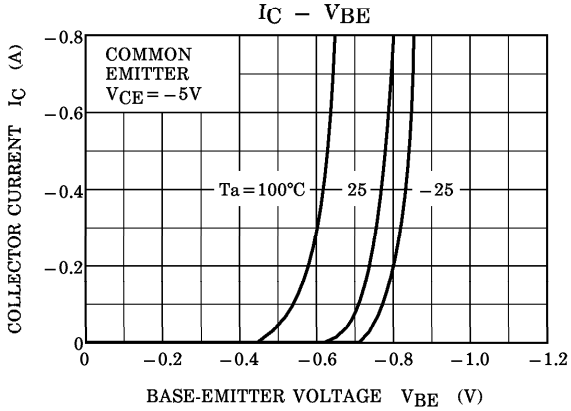
$h_{FE} - I_C$



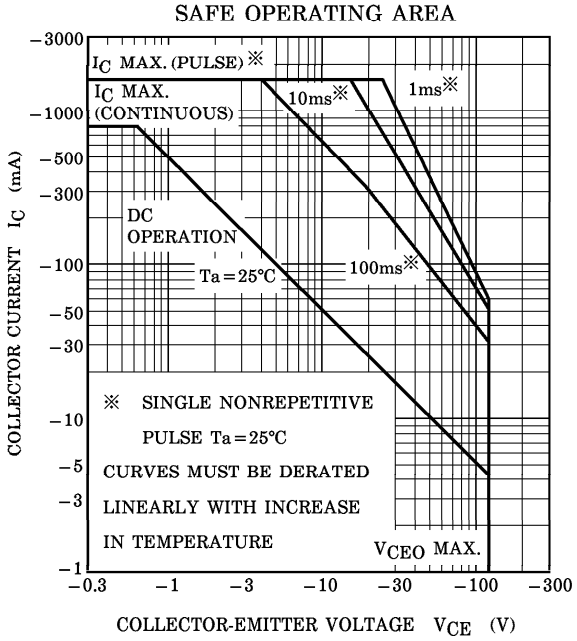
$V_{CE\,(sat)} - I_C$



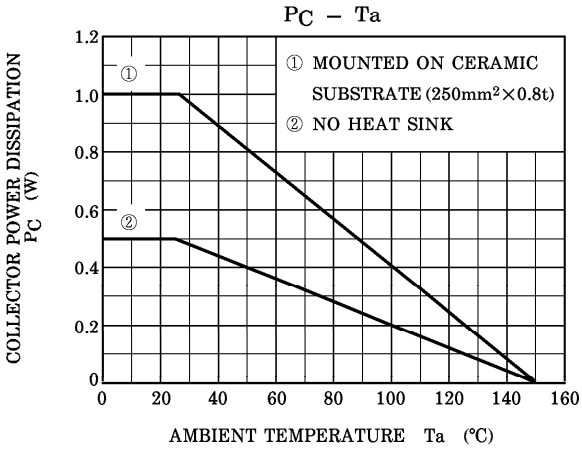
$I_C - V_{BE}$



SAFE OPERATING AREA



$P_C - Ta$



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