2SB552

SILICON PNP TRIPLE DIFFUSED TYPE

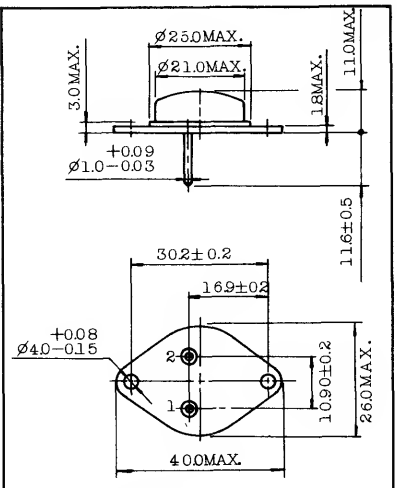
HGIH POWER AMPLIFIER APPLICATIONS.
HIGH POWER SWITCHING APPLICATIONS.
DC-DC CONVERTER APPLICATIONS.
REGULATOR APPLICATIONS.

FEATURES:

- High Collector Power Dissipation : P_C=150W (Tc=25°C)
- High Collector Current : I_C=-15A
- High Voltage : V_{CEO}=-180V
- Complementary to 2SD552.

INDUSTRIAL APPLICATIONS

Unit in mm



1. BASE
2. EMITTER
COLLECTOR (CASE)

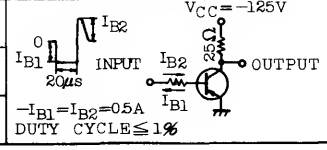
JEDEC	TO-3
EIAJ	TC-3, TB-3
TOSHIBA	2-21A1A

Mounting Kit No. AC73
Weight : 12.9g

MAXIMUM RATINGS (Ta=25°C)

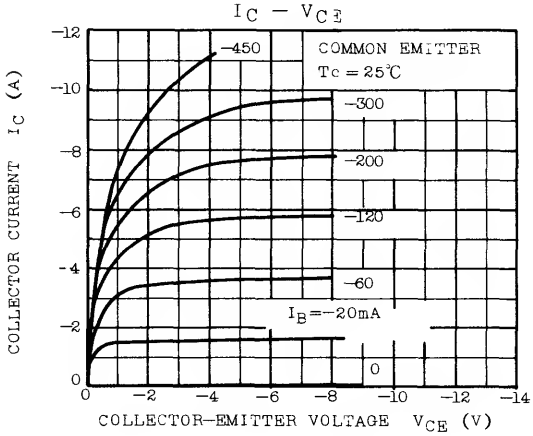
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-220	V
Collector-Emitter Voltage	V_{CEO}	-180	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-15	A
Base Current	I_B	-3	A
Collector Power Dissipation (Tc=25°C)	P_C	150	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-65∿150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

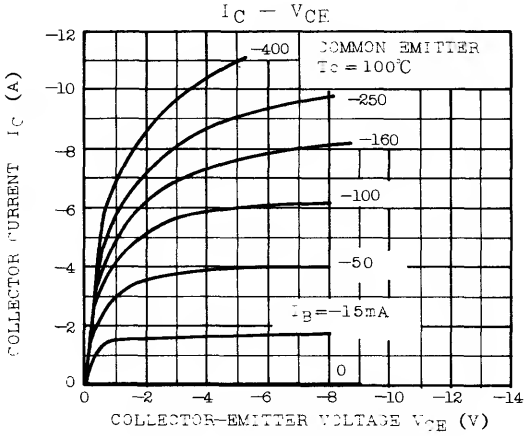
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-150V, I_E=0	-	-	-100	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-1	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=-50mA, I_B=0	-180	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	V_{CE}=-5V, I_C=-5A	25	-	80	
		$h_{FE(2)}$	V_{CE}=-5V, I_C=-15A	10	15	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-10A, I_B=-1A	-	-	-2.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=-10A, I_B=-1A	-	-1.6	-2.5	V
Transition Frequency		f_T	V_{CE}=-10V, I_C=-1A	-	3.5	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-50V, I_E=0, f=1MHz	-	300	-	pF
Switching Time	Turn-on Time	t_{on}		-	1	-	μs
	Storage Time	t_{stg}		-	4	-	
	Fall Time	t_f		-	0.5	-	

Note : $h_{FE(1)}$ Classification BN : 25∿50, R : 40∿80

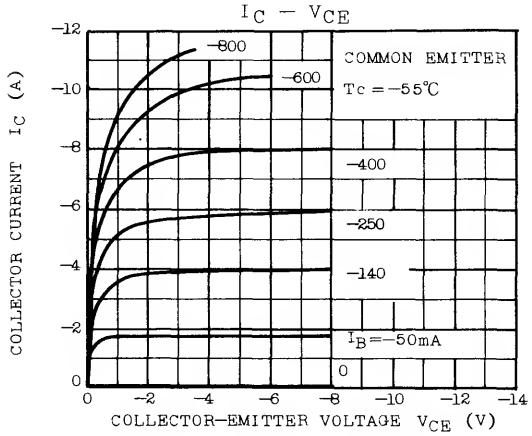
$I_C - V_{CE}$



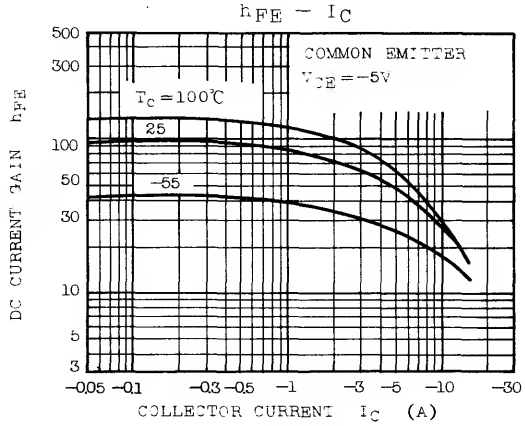
$I_C - V_{CE}$



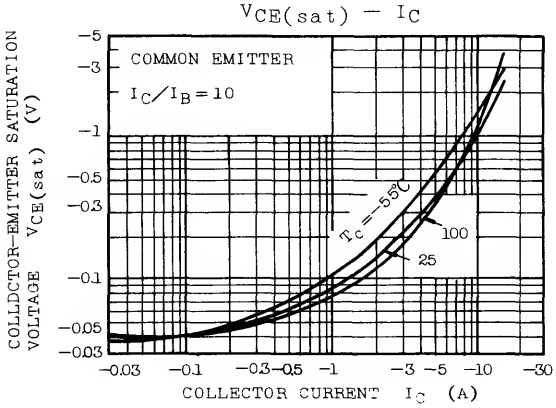
$I_C - V_{CE}$



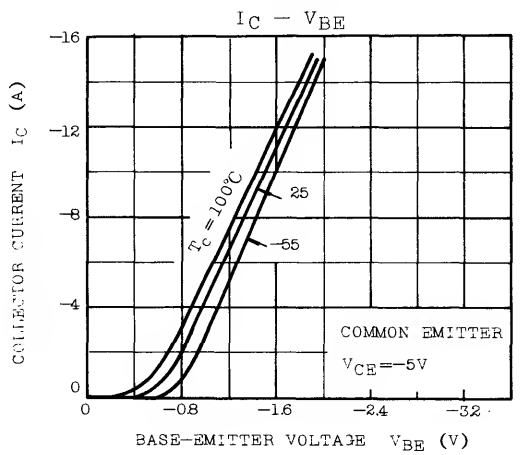
$h_{FE} - I_C$

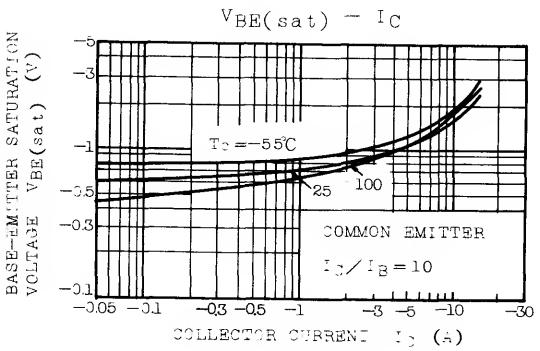


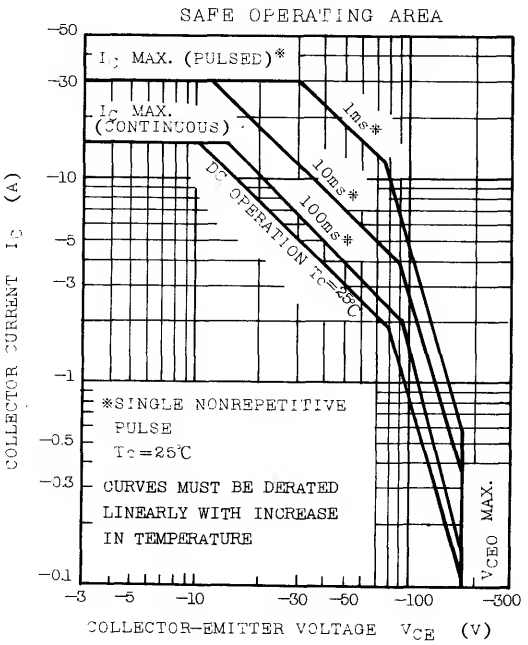
$V_{CE(sat)} - I_C$



$I_C - V_{BE}$




$V_{BE(sat)}$ – I_C
BASE-EMITTER SATURATION VOLTAGE $V_{BE(sat)}$ (V)
T_c=−55℃
25
100
COMMON EMITTER
I_C/I_B=10
COLLECTOR CURRENT I_C (A)


SAFE OPERATING AREA
I_C MAX. (PULSED)*
I_C MAX. (CONTINUOUS)
1ms*
10ms*
100ms*
DC OPERATION T_c=25℃
*SINGLE NONREPETITIVE PULSE
T_c=25℃
CURVES MUST BE DERATED LINEARLY WITH INCREASE IN TEMPERATURE
V_{CEO} MAX.
COLLECTOR CURRENT I_C (A)
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)