SILICON PNP TRIPLE DIFFUSED TYPE (PCT PROCESS)

2SB553

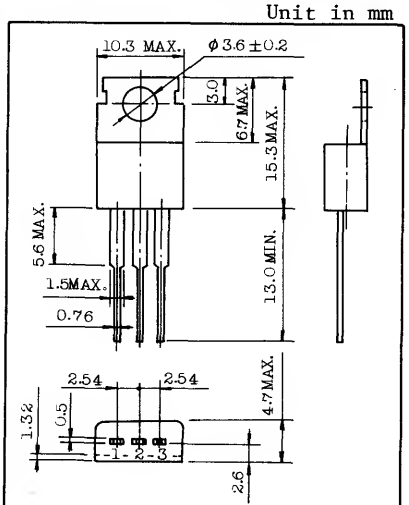
INDUSTRIAL APPLICATIONS

HIGH CURRENT SWITCHING APPLICATIONS.
POWER AMPLIFIER APPLICATIONS.

FEATURES:

- Low Collector Saturation Voltage
  : $V_{CE(sat)}$=-0.4V (Max.) at I_C=-4A
- Complementray to 2SD553.

Unit in mm



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

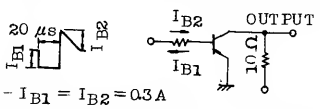
JEDEC	TO-220AB
EIAJ	SC-46
TOSHIBA	2-10A1A

Mounting Kit No. AC75
Weight : 1.9g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-70	V
Collector-Emitter Voltage		V_{CEO}	-50	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current		I_C	-7	A
Collector Power Dissipation	Ta=25°C	P_C	1.5	W
	Tc=25°C		40	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55∿150	°C

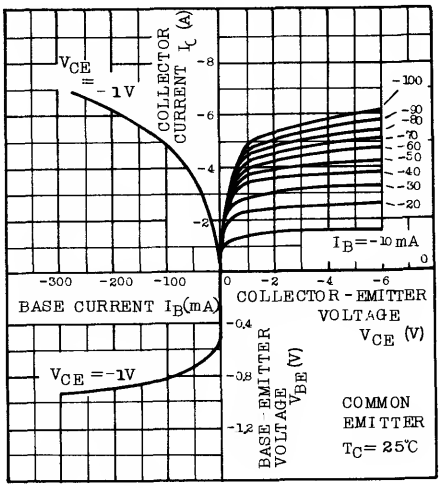
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISITC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-70V, I_E=0	-	-	-30	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-50	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=-50mA, 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=-4A	30	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	I_C=-4A, I_B=-0.4A	-	-0.2	-0.4	V
	Base-Emitter	$V_{BE(sat)}$	I_C=-4A, I_B=-0.4A	-	-0.9	-1.2	
Transition Frequency		f_T	V_{CE}=-4V, I_C=-1A	-	10	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1 MHz	-	250	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.2	-	μs
	Storage Time	t_{stg}		-	2.5	-	
	Fall Time	t_f		-	0.5	-	

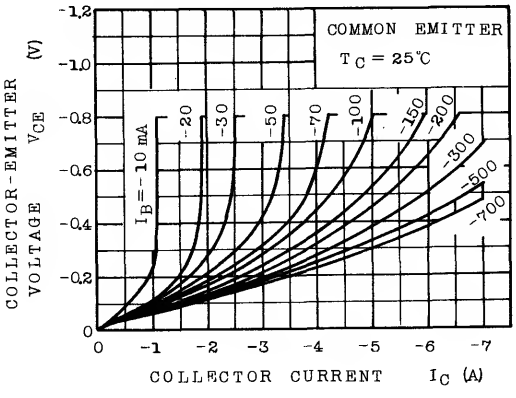
$-I_{B1} = I_{B2} = 0.3A$
DUTY CYCLE ≦ 1% V_{CC}=-30V

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

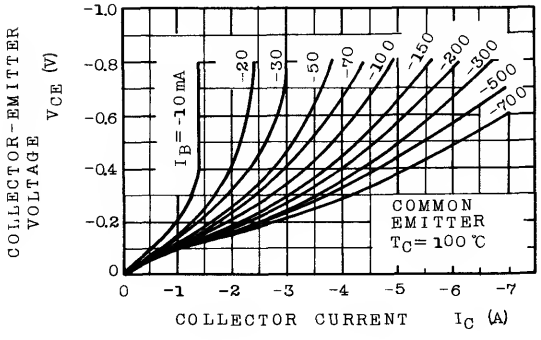
STATIC CHARACTERISTICS



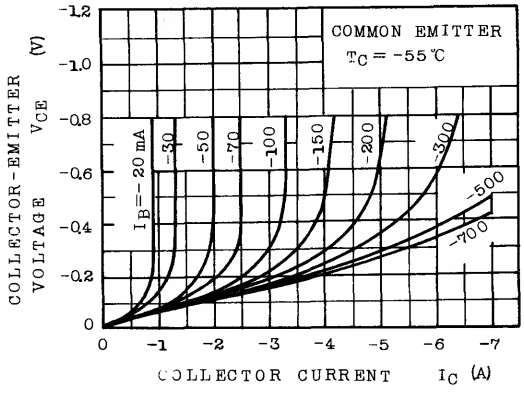
V_{CE} — I_C (LOW VOLTAGE REGION)



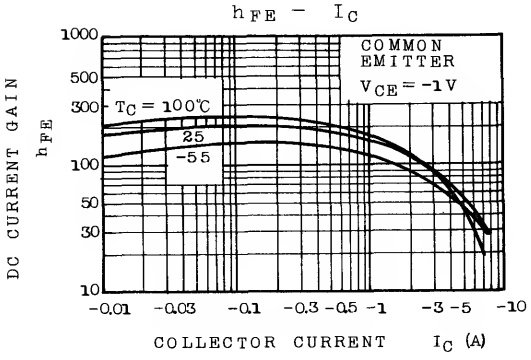
V_{CE} — I_C (LOW VOLTAGE REGION)



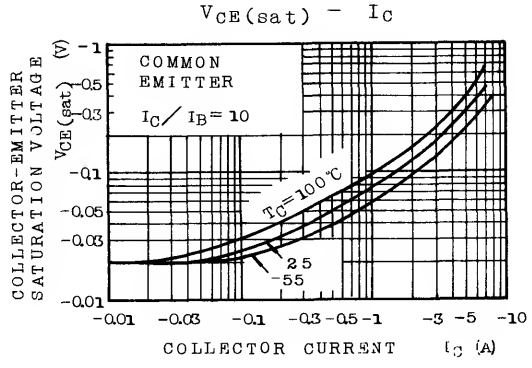
V_{CE} — I_C (LOW VOLTAGE REGION)



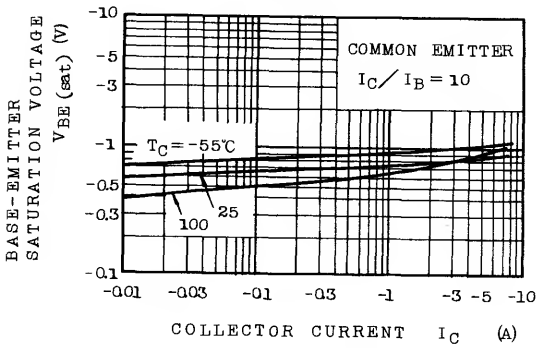
h_{FE} — I_C



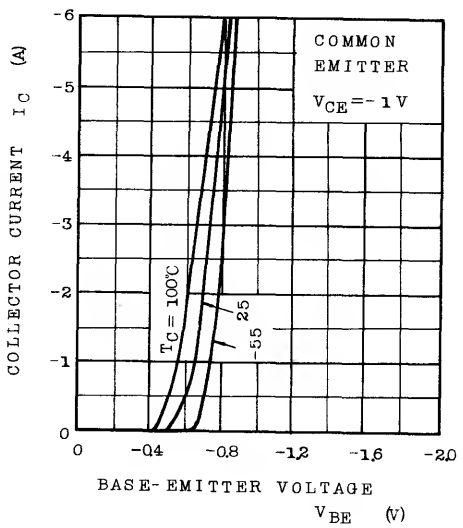
$V_{CE(sat)}$ — I_C



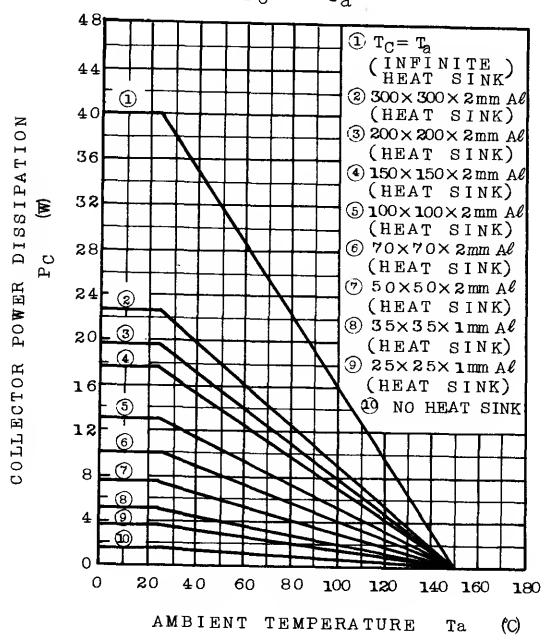
$V_{BE(sat)}$ – I_C



I_C – V_{BE}



P_C – T_a



SAFE OPERATING AREA