2SA1090

SILICON PNP EPITAXIAL TYPE (PCT PROCESS)
(INDUSTRIAL APPLICATIONS)

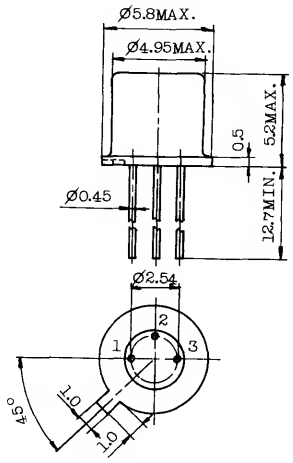
HIGH FREQUENCY AMPLIFIER APPLICATIONS.

HIGH SPEED SWITCHING APPLICATIONS.

FEATURES:

- High Breakdown Voltage
  : V_{CEO}=-50V (Min.), V_{EBO}=-8V (Min.)
- High Gain and Excellent h_{FE} Linearity
  : h_{FE}=70 ~ 400 at V_{CE}=-1V, I_C=-10mA
- Complementary to 2SC2550.

Unit in mm



1. EMITTER
2. BASE
3. COLLECTOR (CASE)

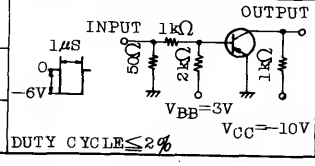
JEDEC	TO − 18
EIAJ	TC − 7, TB − 8C
TOSHIBA	2 − 5A1B

Weight : 0.31g

MAXIMUM RATINGS (Ta=25°C)

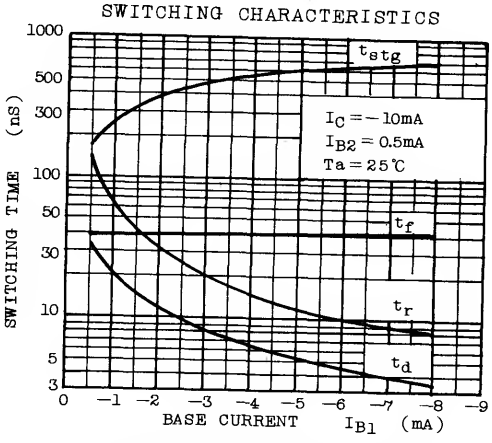
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-8	V
Collector Current	I_C	-200	mA
Base Current	I_B	-50	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	-65∿175	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

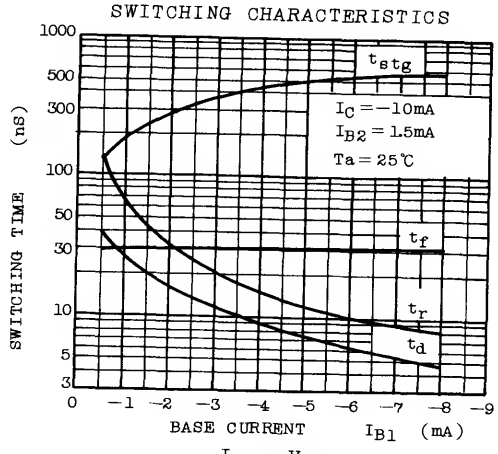
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-60V, I_E=0	-	-	-0.1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-0.1	μA
DC Current Gain		$h_{FE(1)}$ (Note)	V_{CE}=-1V, I_C=-10mA	70	-	400	
		$h_{FE(2)}$	V_{CE}=-1V, I_C=-100mA	10	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-100mA, I_B=-10mA	-	0.1	-0.3	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=-100mA, I_B=-10mA	-	-	-1.1	V
Transition Frequency		f_T	V_{CE}=-10V, I_C=-10mA	150	250	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	4.0	7.0	pF
Base Intrinsic Resistance		$r_{bb'}$	V_{CB}=-10V, I_E=10mA, f=30MHz	-	30	-	Ω
Switching Time	Turn-on Time	t_{on}		-	30	-	ns
	Storage Time	t_{stg}		-	400	-	
	Fall Time	t_f		-	30	-	

Note : $h_{FE(1)}$ Classification O : 70∿140, Y : 120∿240, GR : 200∿400

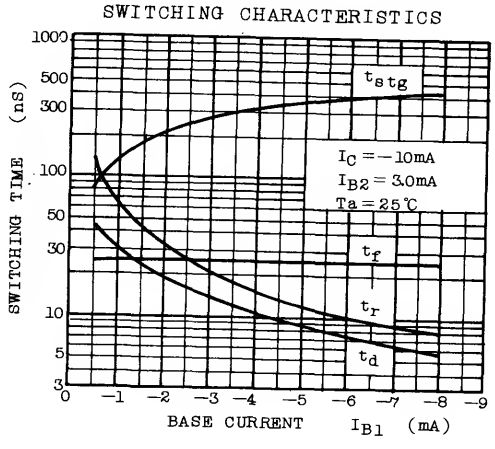
SWITCHING CHARACTERISTICS



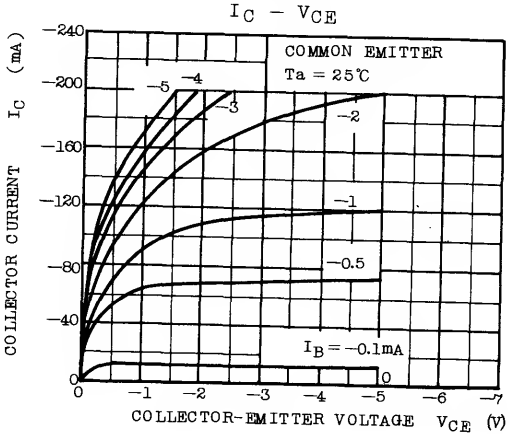
SWITCHING CHARACTERISTICS



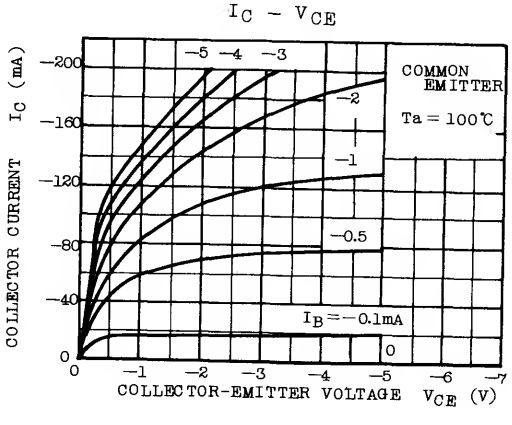
SWITCHING CHARACTERISTICS



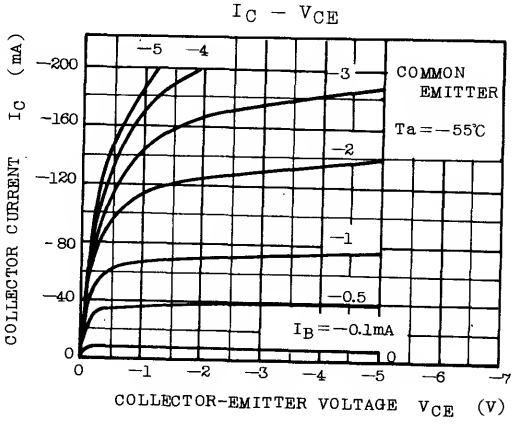
$I_C - V_{CE}$



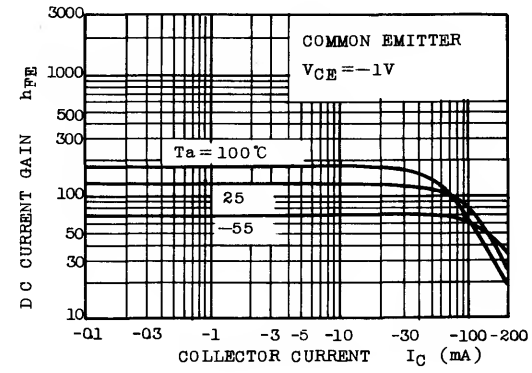
$I_C - V_{CE}$



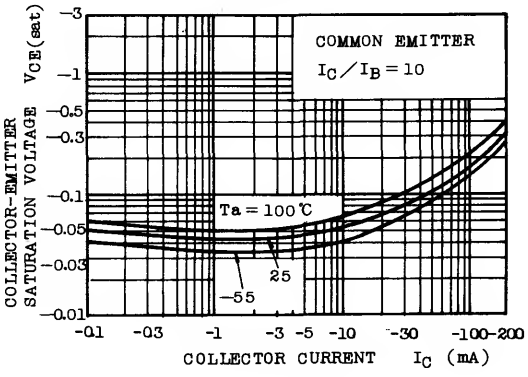
$I_C - V_{CE}$



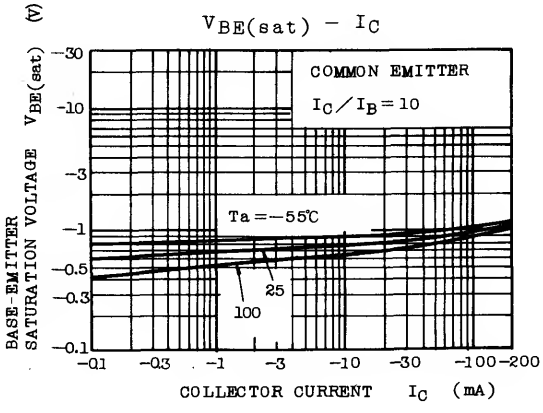
h_{FE} – I_C



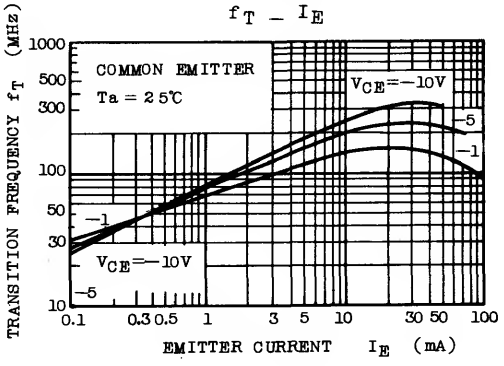
$V_{CE(sat)}$ – I_C



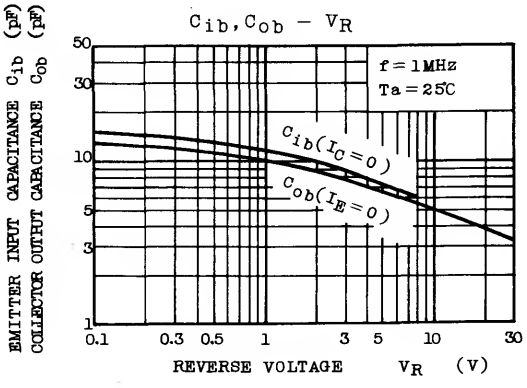
$V_{BE(sat)}$ – I_C



f_T – I_E



C_{ib}, C_{ob} – V_R



P_C – Ta