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

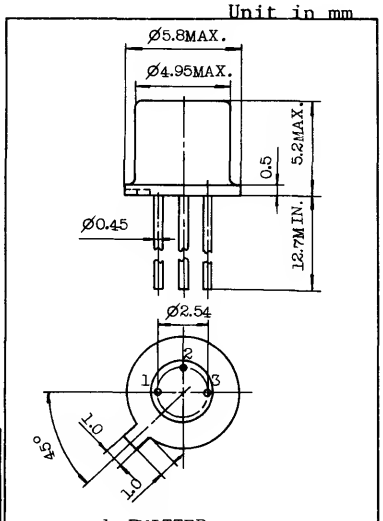
2SC2550

HIGH FREQUENCY AMPLIFIER APPLICATIONS.
HIGH SPEED SWITCHING APPLICATIONS.

FEATURES:

- High Breakdown Voltage : V_{CEO}=50V, V_{EBO}=8V
- High Gain and Excellent h_{FE} Linearity
  h_{FE}=70∿400 at V_{CE}=1V, I_C=10mA
- Complementary to 2SA1090.

Unit in mm



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

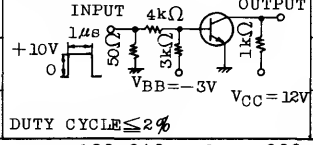
JEDEC	TO — 18
EIAJ	TC — 7, TB — 8C
TOSHIBA	2 — 5A1B

Weight : 0.31g

MAXIMUM RATINGS (Ta=25°C)

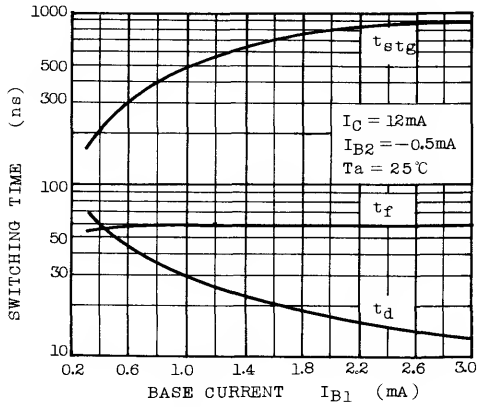
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current	I_C	200	mA
Base Current	I_B	50	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	-65∿175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

ELECTRICAL CHARACTERISTICS (Ta=25°C)

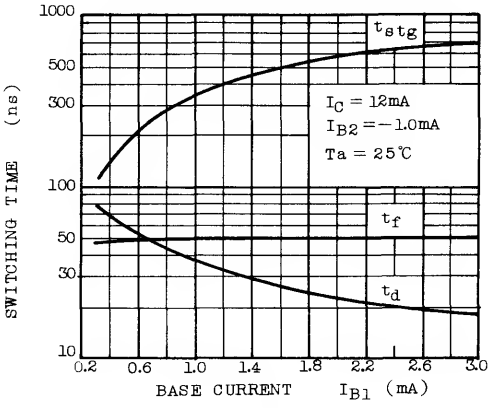
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=60V, I_E=0	-	-	0.1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=5V, I_C=0	-	-	0.1	μA
DC Current Gain		$h_{FE(1)}$ (Note)	V_{CE}=1V, I_C=10mA	70	-	400	
		$h_{FE(2)}$	V_{CE}=1v, I_C=100mA	20	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=200mA, I_B=20mA	-	0.3	0.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=200mA, I_B=20mA	-	-	1.2	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	-	3.0	4.0	pF
Base Intrinsic Resistance		$r_{bb'}$	V_{CB}=10V, I_E=-10mA, f=30MHz	-	30	-	Ω
Switching Time	Turn-on Time	t_{on}		-	100	-	ns
	Storage Time	t_{stg}		-	400	-	
	Fall Time	t_f		-	50	-	

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

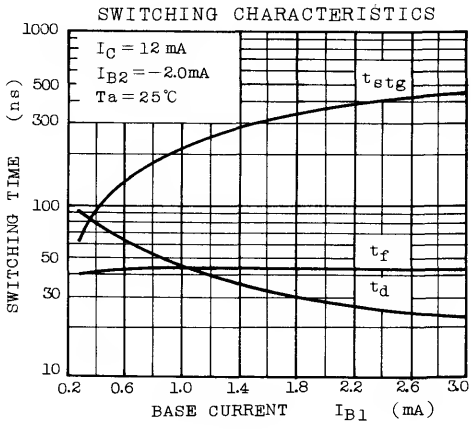
SWITCHING CHARACTERISTICS



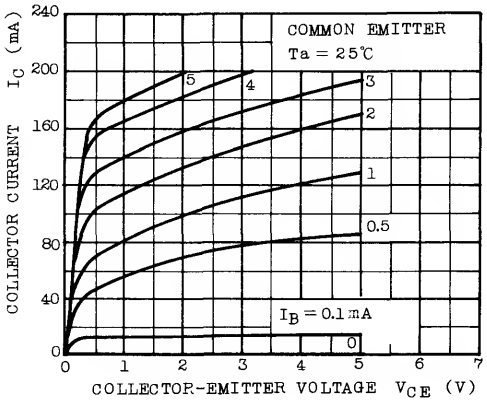
SWITCHING CHARACTERISTICS



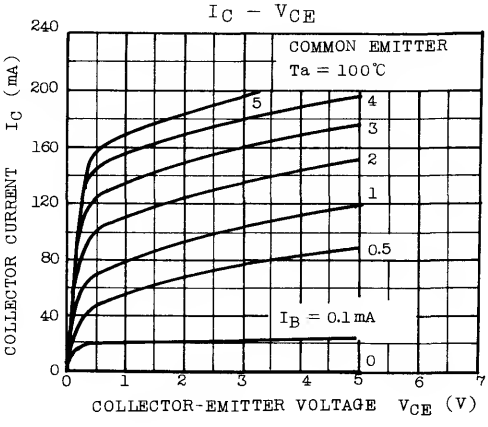
SWITCHING CHARACTERISTICS



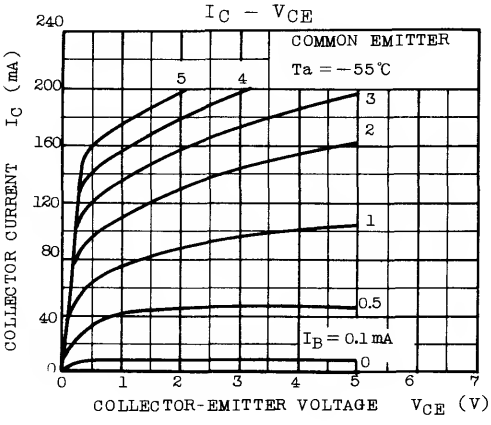
I_C − V_{CE}



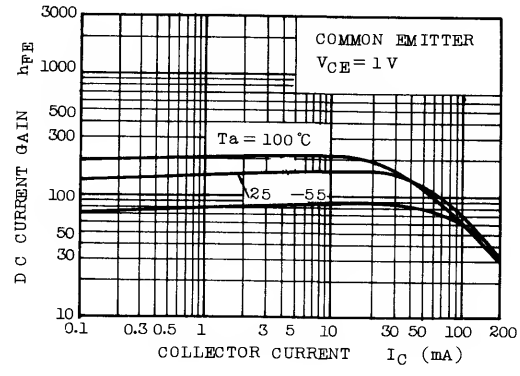
I_C − V_{CE}



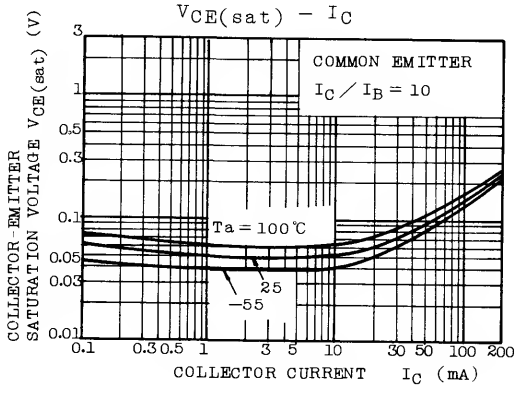
I_C − V_{CE}



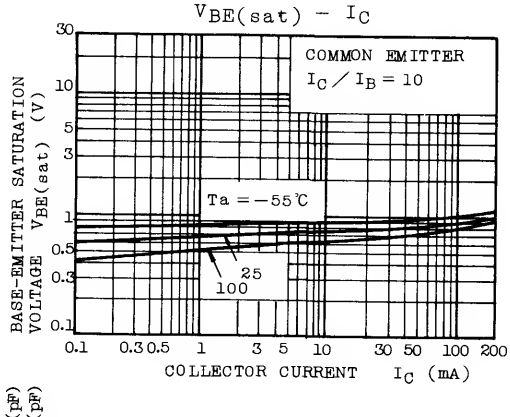
$h_{FE} - I_C$



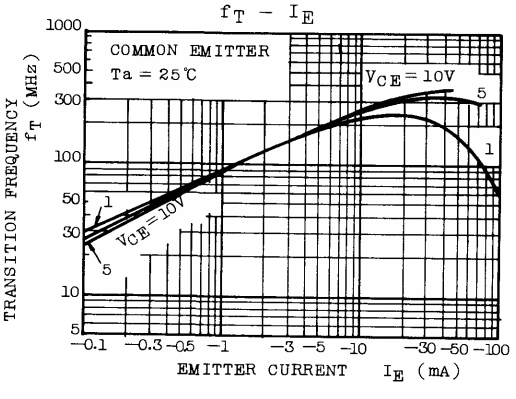
$V_{CE(sat)} - I_C$



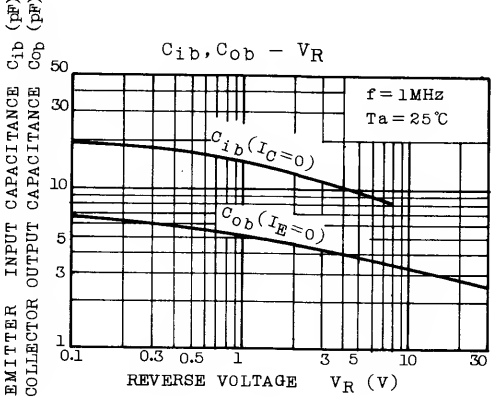
$V_{BE(sat)} - I_C$



$f_T - I_E$



$C_{ib}, C_{ob} - V_R$



$P_C - Ta$