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

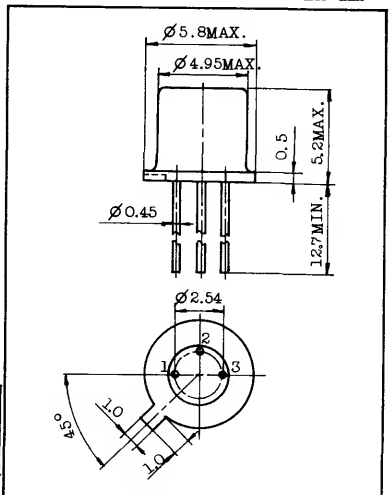
2SC979
2SC979A

HIGH FREQUENCY AMPLIFIER APPLICATIONS.
HIGH SPEED SWITCHING APPLIATIONS.

FEATURES:

- High Breakdown Voltage : V_{CEO}=70V(2SC979A).
- Low Saturation Voltage
  : $V_{CE(sat)}$=0.05V (Typ.) at I_C=10mA, I_B=1mA
- High Transition Frequency
  : f_T=250MHz (Typ.) at V_{CE}=10V, I_C=10mA
- Low Output Capacitance : C_{ob}=3pF (Typ.)
- Complementary to 2SA499.

Unit in mm



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

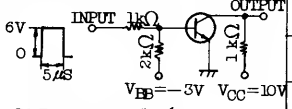
JEDED	TO－18
EIAJ	TC－7, TB－8C
TOSHIBA	2－5A1B

Weight : 0.31g

MAXIMUM RATINGS (Ta=25°C)

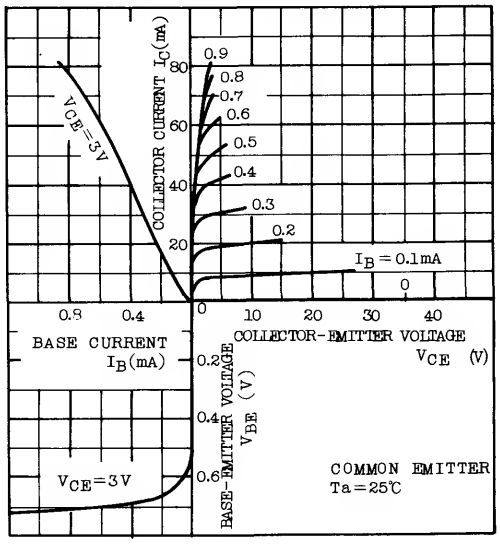
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	2SC979	V_{CBO}	70	V
	2SC979A		100	
Collector-Emitter Voltage	2SC979	V_{CEO}	50	V
	2SC979A		70	
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	100	mA
Base Current		I_B	20	mA
Collector Power Dissipation		P_C	300	mW
Junction Temperature		T_j	175	°C
Storage Temperature Range		T_{stg}	-65∿175	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

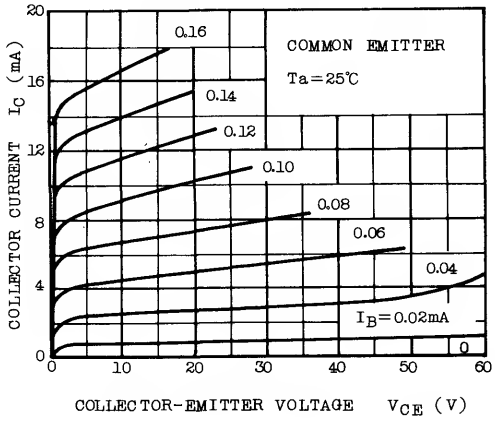
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	2SC979	I_{CBO}	V_{CB}=70V, I_E=0	-	-	1.0	μA
	2SC979A		V_{CB}=100V, I_E=0	-	-	1.0	
Emitter Cut-off Current		I_{EBO}	V_{EB}=5V, I_C=0	-	-	1.0	μA
DC Current Gain	2SC979	h_{FE} (Note)	V_{CE}=1V, I_C=10mA	70	-	240	
	2SC979A			70	-	140	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=10mA, I_B=1mA	-	0.05	0.3	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=10mA, I_B=1mA	-	0.75	1.0	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	5	pF
Switching Time	Turn-on Time	t_{on}		-	25	-	ns
	Storage Time	t_{stg}		-	400	-	
	Fall Time	t_f		-	30	-	

Note : h_{FE} Classification O : 70∿140, Y : 120∿240

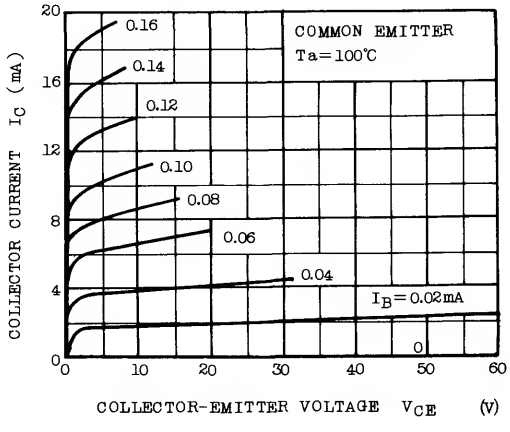
STATIC CHARACTERISTICS



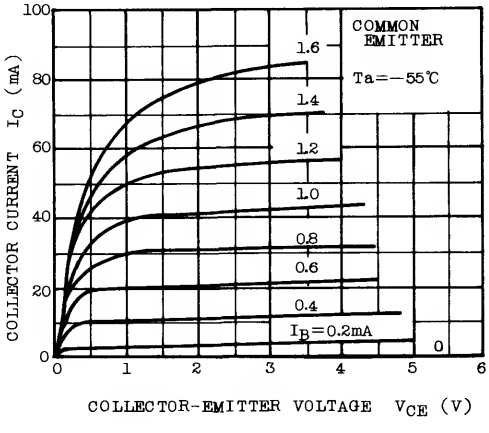
$I_C - V_{CE}$(LOW CURRENT REGION)



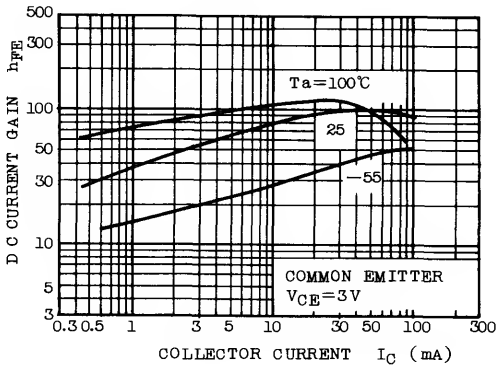
$I_C - V_{CE}$(LOW CURRENT REGION)



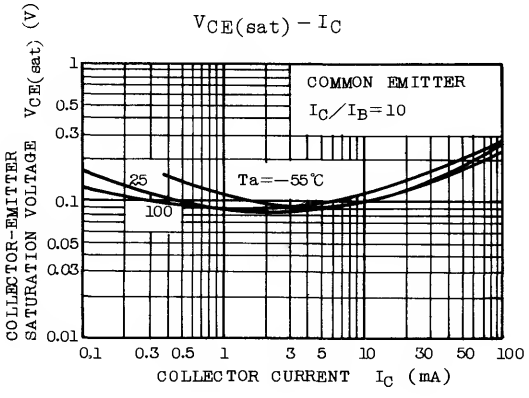
$I_C - V_{CE}$(LOW VOLTAGE REGION)



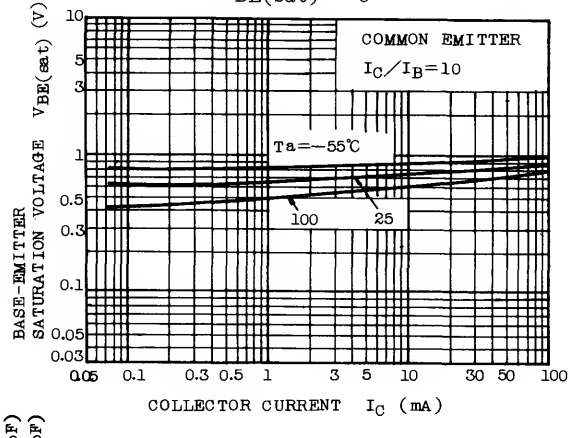
$h_{FE} - I_C$



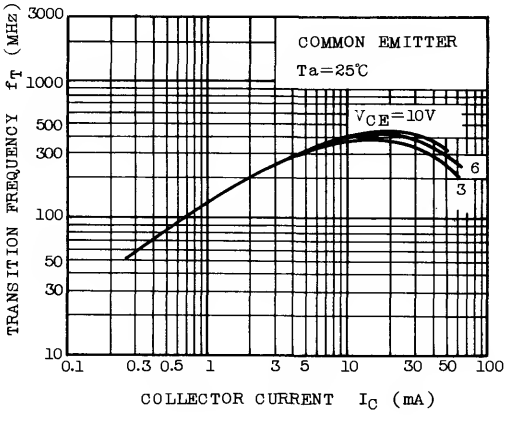
$V_{CE(sat)} - I_C$



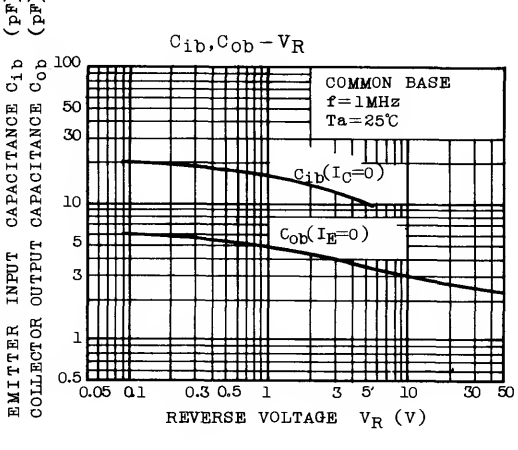
$V_{BE(sat)} - I_C$



$f_T - I_C$



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



$P_C - Ta$