

SILICON NPN EPITAXIAL PLANAR TYPE (INDUSTRIAL APPLICATIONS)

2SC395A

Unit in mm

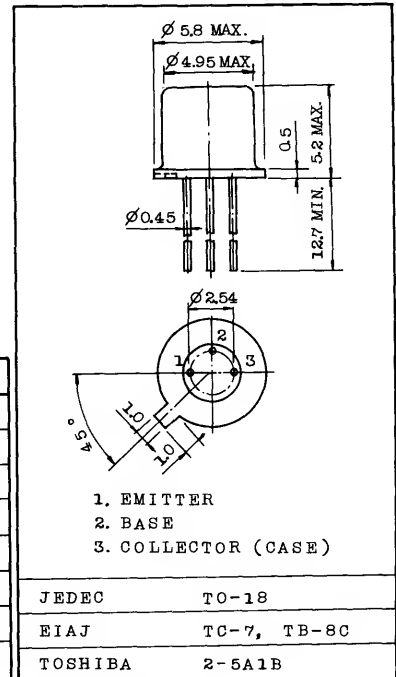
ULTRA HIGH SPEED SWITCHING APPLICATIONS.
COMPUTER, COUNTER APPLICATIONS.

FEATURES:

- High Transition Frequency : $f_T=200\text{MHz}(\text{Min.})$
- Low Saturation Voltage
 : $V_{CE(\text{sat})}=0.25\text{V}(\text{Max.})$ at $I_C=10\text{mA}$, $I_B=1\text{mA}$
- High Switching Speed : $t_{\text{stg}}=25\text{ns}(\text{Typ.})$

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	20	V
Collector-Emitter Voltage	V_{CEO}	12	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Base Current	I_B	100	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	-65~175	°C



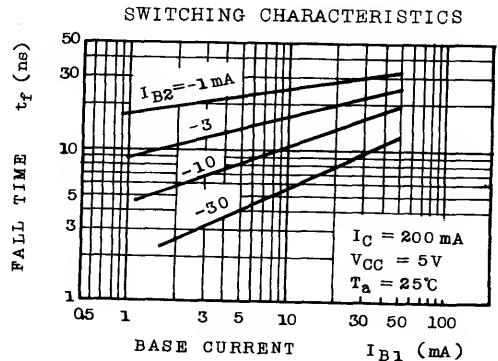
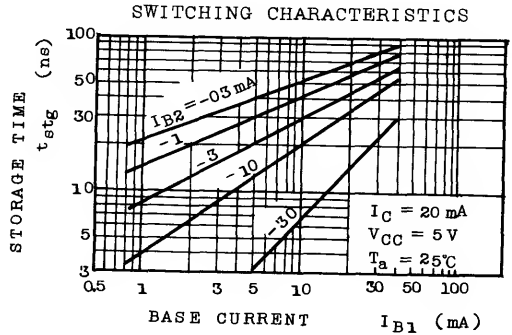
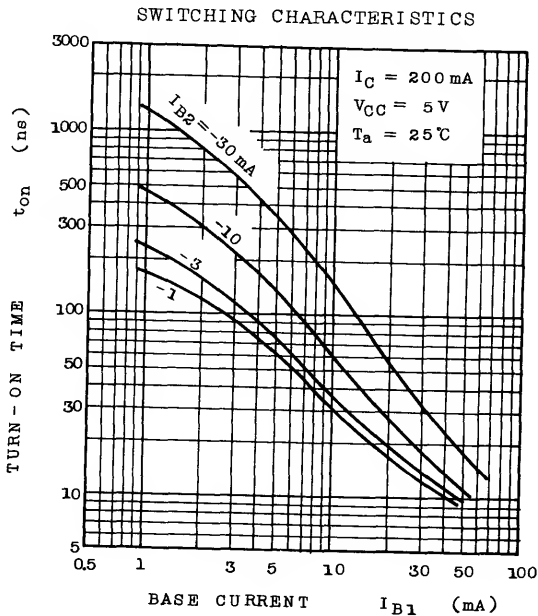
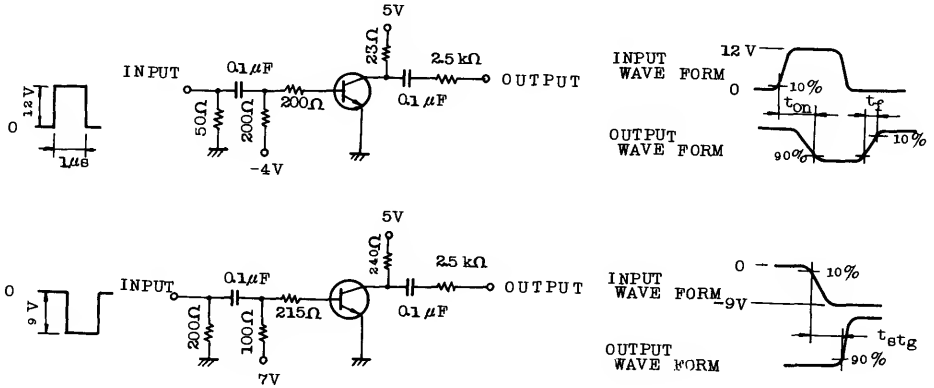
Weight : 0.31g

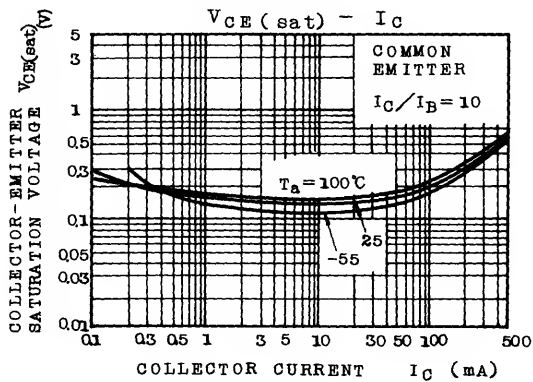
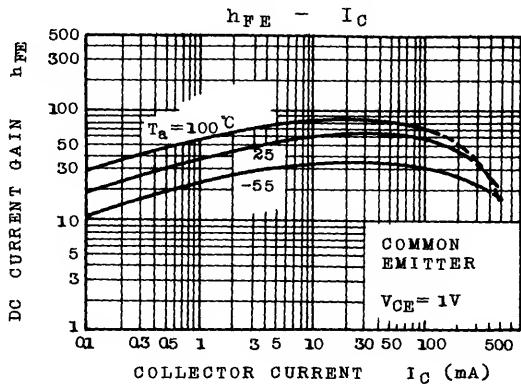
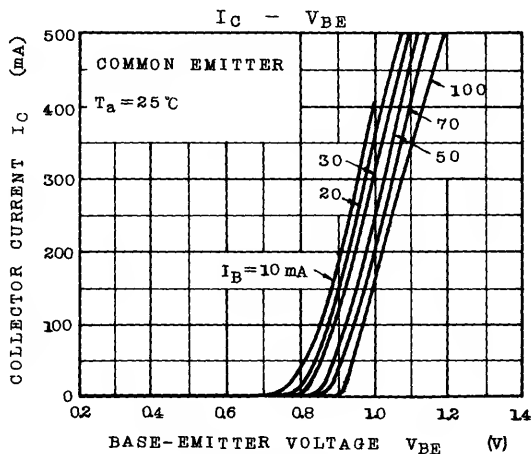
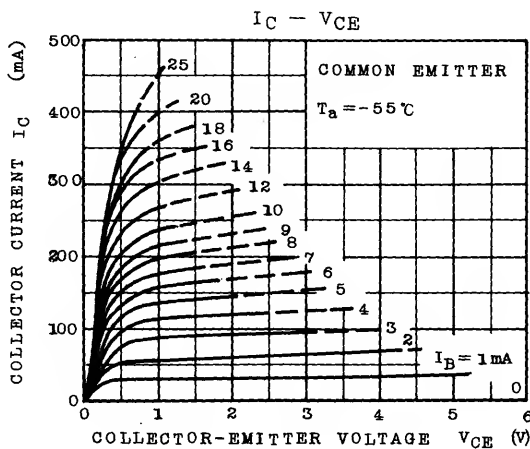
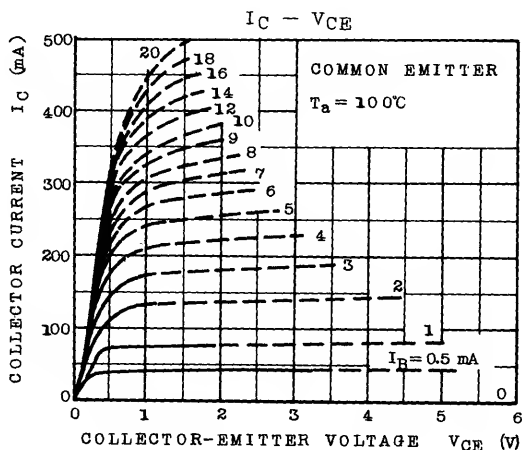
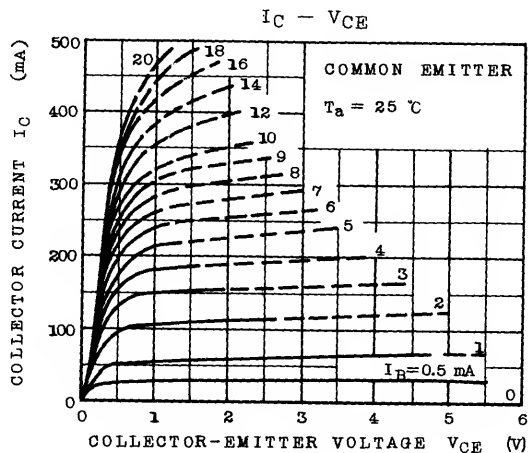
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CE}=20\text{V}$, $I_E=0$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$	-	-	1.0	μA
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=1\text{V}$, $I_C=10\text{mA}$	60	-	200	
	$h_{FE(2)}$	$V_{CE}=5\text{V}$, $I_C=500\text{mA}$	10	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$ (1)	$I_C=10\text{mA}$, $I_B=1\text{mA}$	-	-	0.25	V
	$V_{CE(\text{sat})}$ (2)	$I_C=200\text{mA}$, $I_B=20\text{mA}$	-	-	0.7	
Base-Emitter Saturation Voltage	$V_{BE(\text{sat})}$	$I_C=10\text{mA}$, $I_B=1\text{mA}$	-	-	0.8	V
Transition Frequency	f_T	$V_{CE}=10\text{V}$, $I_C=10\text{mA}$	200	400	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$	-	4	6	pF
Switching Time	Turn-on Time	t_{on}	-	20	40	ns
	Storage Time	t_{stg}	-	25	50	
	Fall Time	t_f	-	15	30	

Note: $h_{FE(1)}$ Classification 0: 60~120, Y: 100~200

Fig. SWITCHING TIME TEST CIRCUIT





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