

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07427

D T-31-23

2SC594

SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

HIGH FREQUENCY AMPLIFIER APPLICATIONS.

VIDEO AMPLIFIER APPLICATIONS.

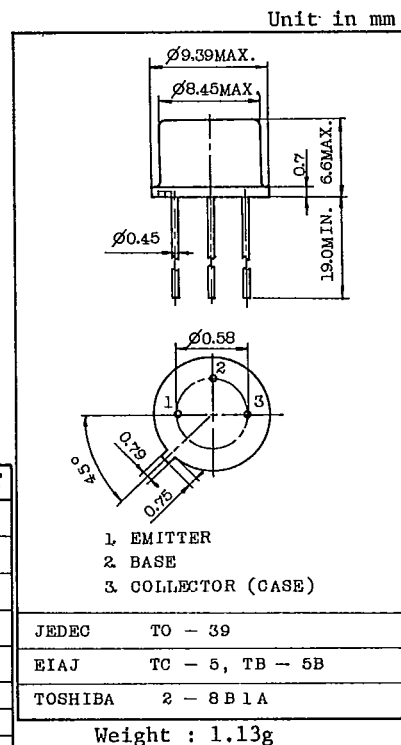
HIGH SPEED SWITCHING APPLICATIONS.

FEATURES:

- High Transition Frequency : $f_T=200\text{MHz}$ (Typ.)
- Low Output Capacitance : $C_{ob}=3.5\text{pF}$ (Typ.)
- Low Saturation Voltage
: $V_{CE(sat)}=0.3\text{V}$ (Max.) at $I_C=100\text{mA}$, $I_B=10\text{mA}$
- Complementary to 2SA594.

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V _{CB0}	60	V
Collector-Emitter Voltage		V _{CE0}	45	V
Emitter-Base Voltage		V _{EB0}	5	V
Collector Current		I _C	200	mA
Base Current		I _B	50	mA
Collector Power Dissipation	Ta=25°C	P _C	750	mW
	Tc=25°C		5	W
Junction Temperature		T _j	175	°C
Storage Temperature Range		T _{stg}	-65~175	°C



ELECTRICAL CHARACTERISTICS (T_a=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} =45V, I _E =0	-	-	0.1	μA
Emitter Cut-off Current		IEBO	VEB=5V, I _C =0	-	-	0.1	μA
DC Current Gain		^h FE(1) (Note)	V _{CE} =1V, I _C =10mA	40	-	240	
		^h FE(2)	V _{CE} =3V, I _C =200mA	20	-	-	
Collector-Emitter Saturation Voltage		V _{CE(sat)}	I _C =100mA, I _B =10mA	-	-	0.3	V
Base-Emitter Saturation Voltage		V _{BE(sat)}	I _C =100mA, I _B =10mA	-	-	1.0	V
Transition Frequency		f _T	V _{CE} =10V, I _C =10mA	100	200	-	MHz
Input Impedance (Real Part)		r _{ie}	V _{CE} =10V, I _E =-10mA, f=200kHz	-	-	120	Ω
Collector Output Capacitance		C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	-	3.5	5.0	pF
Switching Time	Turn-on Time	t _{on}		-	30	-	ns
	Storage Time	t _{stg}		-	250	-	
	Fall Time	t _f		-	30	-	

Note : h_{FE}(1) Classification R : 40~80, O : 70~140, Y : 120~240,

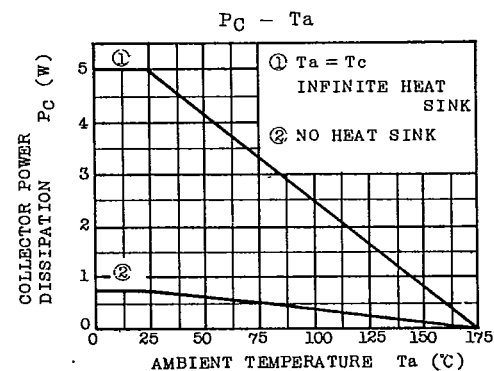
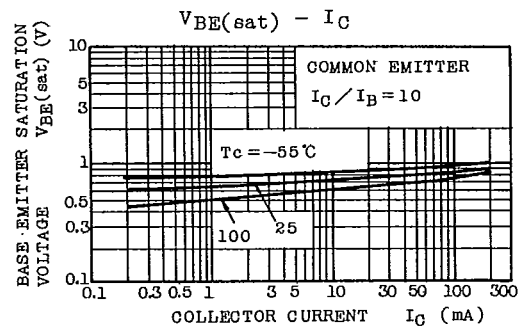
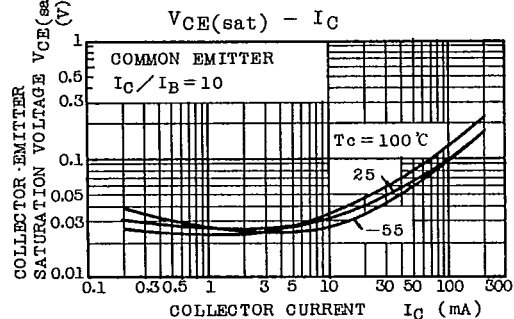
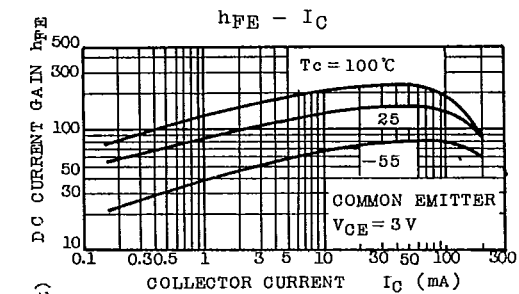
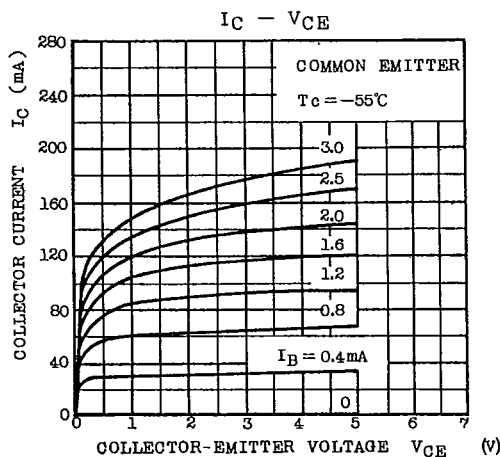
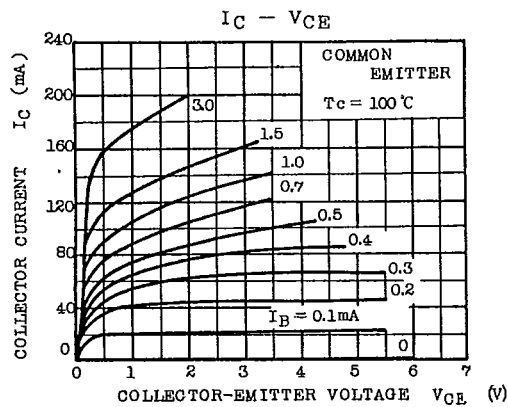
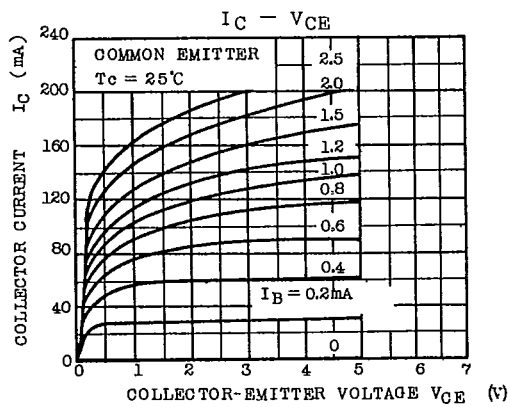
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