

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07418 DT-31-23

SILICON NPN TRIPLE DIFFUSED TYPE (PCT RPROCESS)

2SC510
2SC512

HIGH FREQUENCY POWER AMPLIFIER APPLICATIONS.
HIGH VOLTAGE SWITCHING APPLICATIONS.
REGULATOR APPLICATIONS.

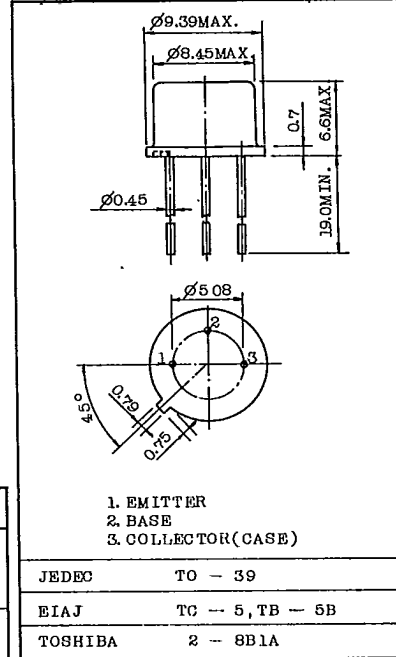
FEATURES :

- High Braekdown Voltage
: $V_{CEO}=100V$ (2SC510)
: $V_{CEO}= 60V$ (2SC512)
- Various Uses for Medium Power
: $I_C(\text{Max.}) =1.5A$
: $P_C(\text{Max.}) =800mW(T_a=25^\circ C)$, $8W(T_c=25^\circ C)$
- Complementary to 2SA510 and 2SA512.

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	2SC510	V_{CBO}	140	V
	2SC512		100	
Collector-Emitter Voltage	2SC510	V_{CEO}	100	V
	2SC512		60	
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	1.5	A
Base Current		I_B	300	mA
Collector Power Dissipation	Ta=25°C	P_C	800	mW
	Tc=25°C		8	W
Junction Temperatuer		T_j	175	°C
Storage Temperature Range		T_{stg}	-65~175	°C

Unit in mm



Weight : 1.13g

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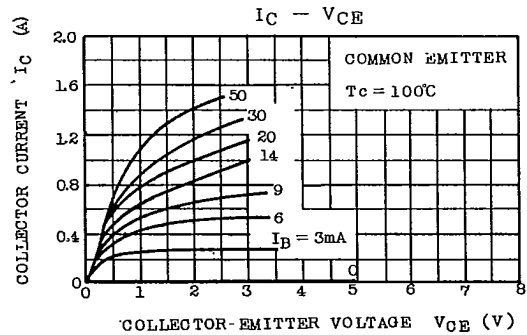
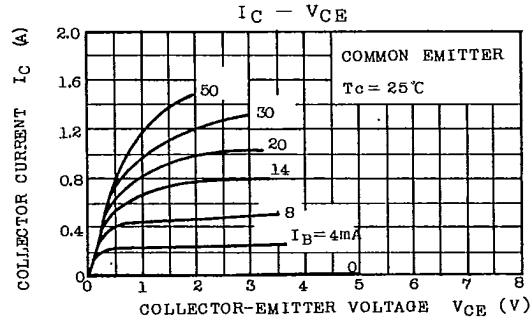
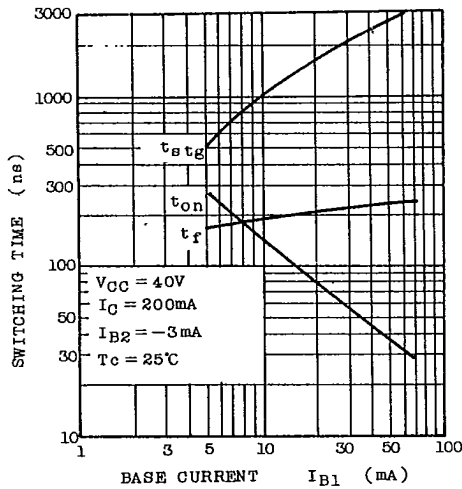
2SC510•2SC512

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	ICBO	V _{CB} =30V, I _E =0	-	-	1	μA	
Emitter Cut-off Current	IEBO	V _{EB} =5V, I _C =0	-	-	5	μA	
DC Current Gain	h _{FE} (1) (Note)	V _{CE} =2V, I _C =200mA	30	-	150		
	h _{FE} (2)	V _{CE} =5V, I _C =1A	15	-	-		
Saturation Voltage	Collector-Emitter	V _{CE(sat)}	I _C =200mA, I _B =20mA	-	0.2	0.6	V
	Base-Emitter	V _{BE(sat)}	I _C =200mA, I _B =20mA	-	0.8	1.0	
Transition Frequency	f _T	V _{CE} =10V, I _C =30mA	20	60	-	MHz	
Collector Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	-	25	40	pF	
Switching Time	Turn-on Time	t _{on}		-	0.13	-	μs
	Storage Time	t _{stg}		-	3.0	-	
	Fall Time	t _f		-	-	0.2	

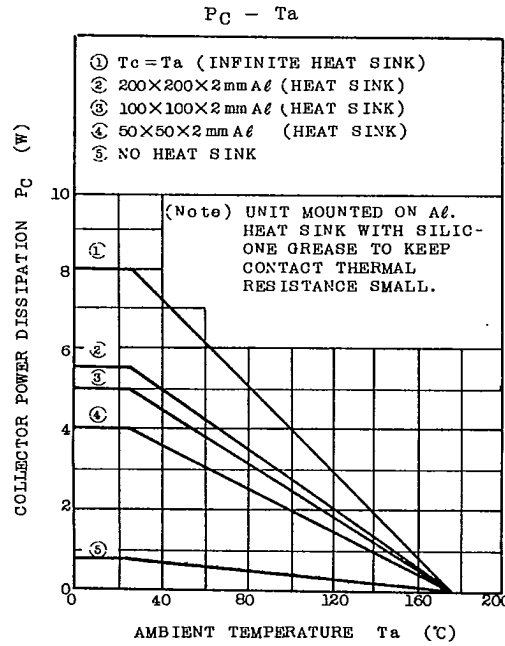
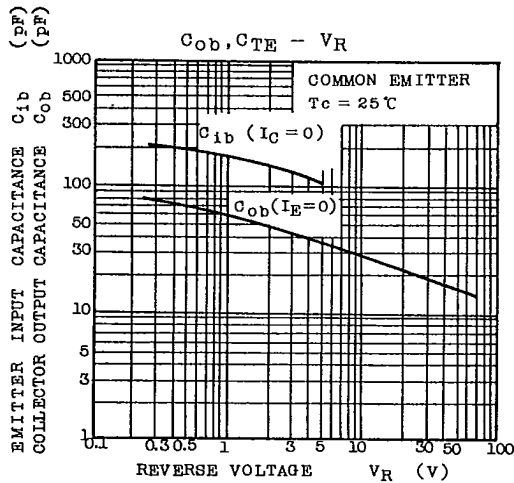
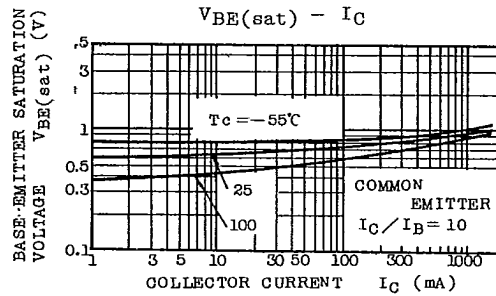
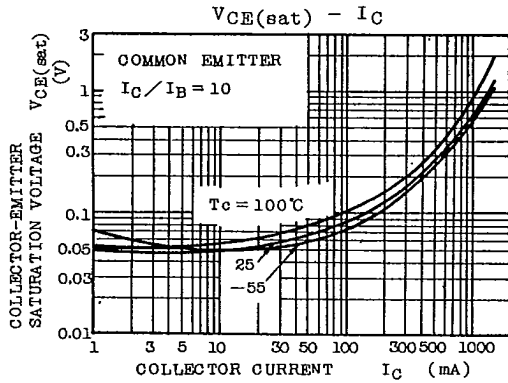
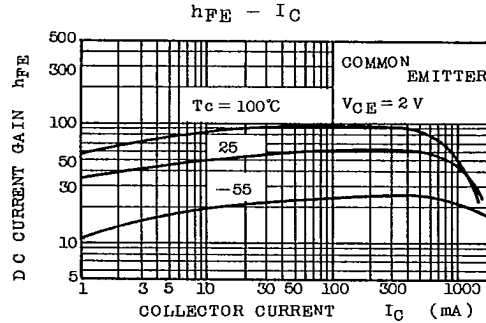
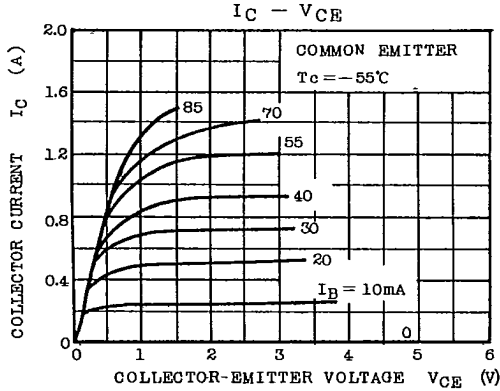
Note : h_{FE}(1) Classification R : 30~90, O : 50~150

SWITCHING CHARACTERISTICS



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2SC510·2SC512



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