

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.

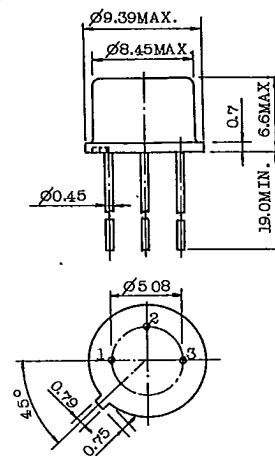
FEATURES :

- High Breakdown 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 ($T_a=25^\circ C$)

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	$T_a=25^\circ C$	P_C	800	mW
Dissipation	$T_c=25^\circ C$		8	W
Junction Temperature		T_j	175	$^\circ C$
Storage Temperature Range		T_{stg}	-65~175	$^\circ C$

Unit in mm



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

JEDEC	TO - 39
EIAJ	TC - 5, TB - 5B
TOSHIBA	2 - 8B1A

Weight : 1.13g

TOSHIBA CORPORATION

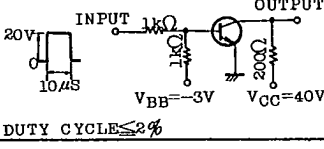
9097250 TOSHIBA (DISCRETE/OPTO)

56C 07419

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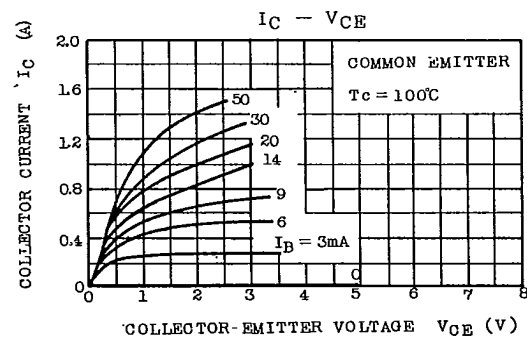
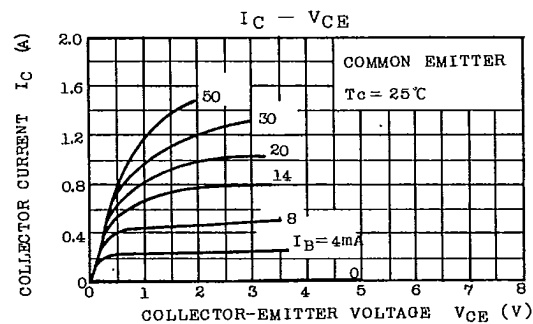
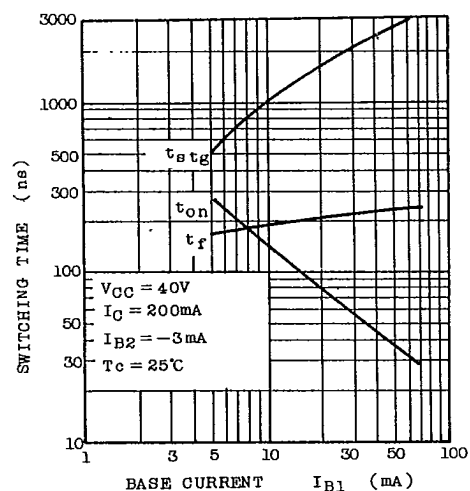
2SC510•2SC512

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=30V, I_E=0$	-	-	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	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	$V_{CE(sat)}$	-	0.2	0.6	V
	Base-Emitter	$V_{BE(sat)}$	-	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

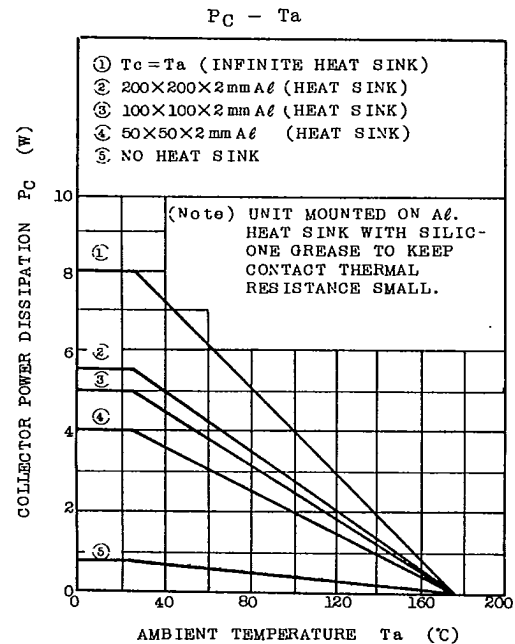
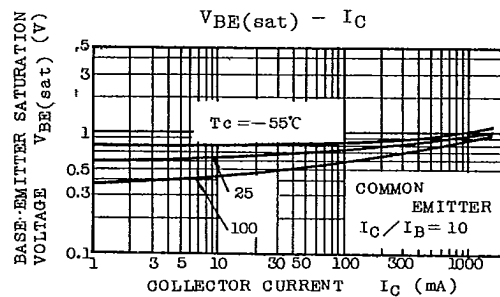
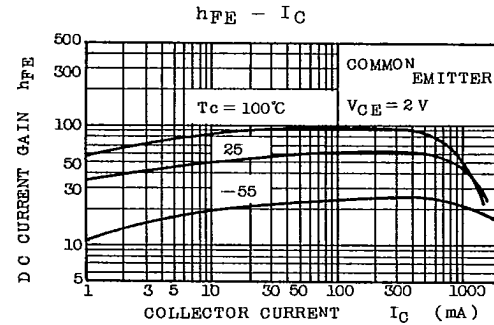
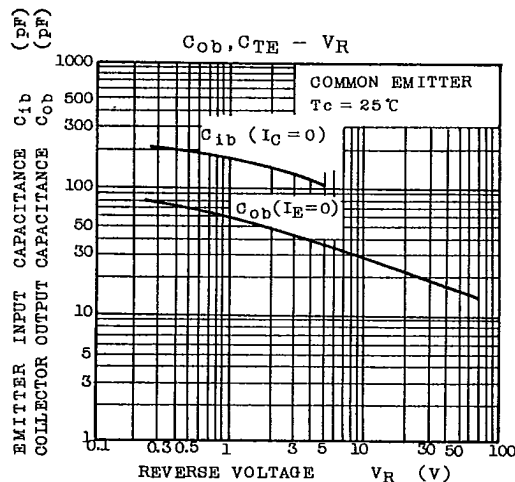
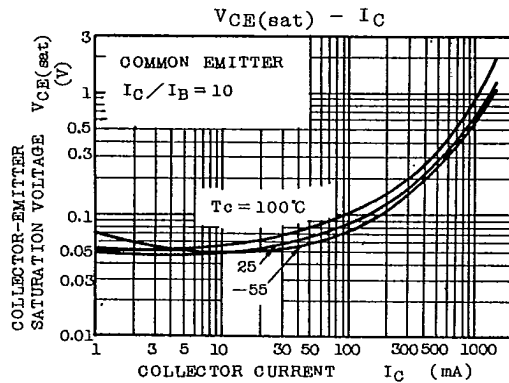
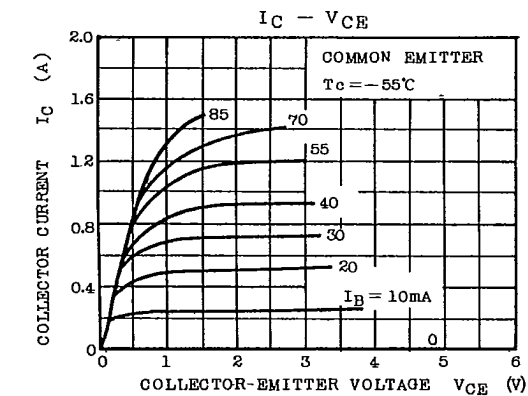
SWITCHING CHARACTERISTICS



TOSHIBA CORPORATION

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2SC510·2SC512

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