

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07954 DT-33-09

SILICON NPN TRIPLE DIFFUSED TYPE

2SD1412

HIGH CURRENT SWITCHING APPLICATIONS:

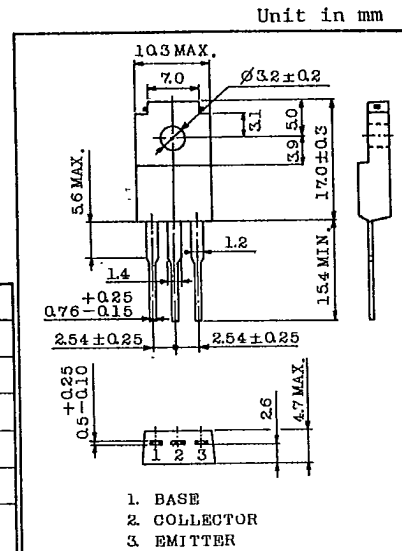
POWER AMPLIFIER APPLICATIONS.

FEATURES:

- . Low Saturation Voltage : $V_{CE(sat)}=0.4V(\text{Max.})$ at $I_C=4A$
- . Complementary to 2SB1019

MAXIMUM RATINGS (T_a=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V _{CB0}	70	V
Collector-Emitter Voltage		V _{CE0}	50	V
Emitter-Base Voltage		V _{EB0}	5	V
Collector Current		I _C	7	A
Base Current		I _B	1	A
Collector Power Dissipation	T _a =25°C	P _C	2.0	W
	T _c =25°C		30	
Junction Temperature		T _j	150	°C
Storage Temperature Range		T _{stg}	-55 ~ 150	°C



JEDEC	-
EIAJ	-
TOSHIBA	2-10L1A

Weight : 2.1g

ELECTRICAL CHARACTERISTIC ($T_a=25^{\circ}\text{C}$)

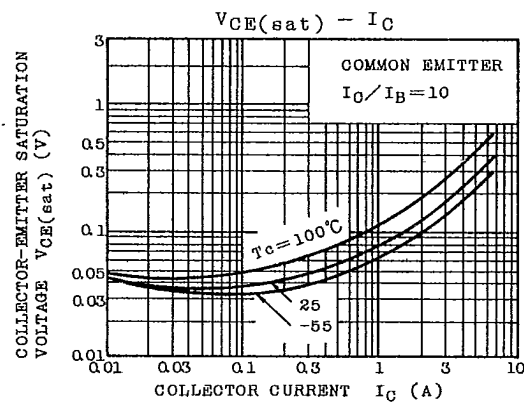
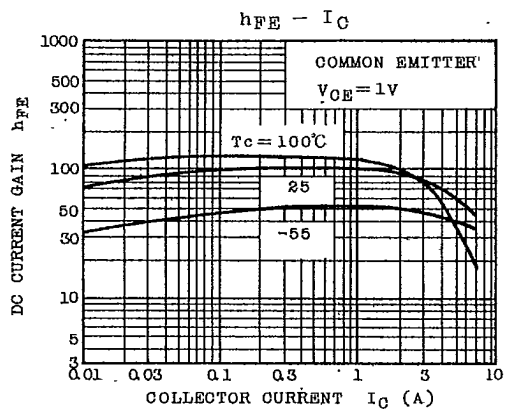
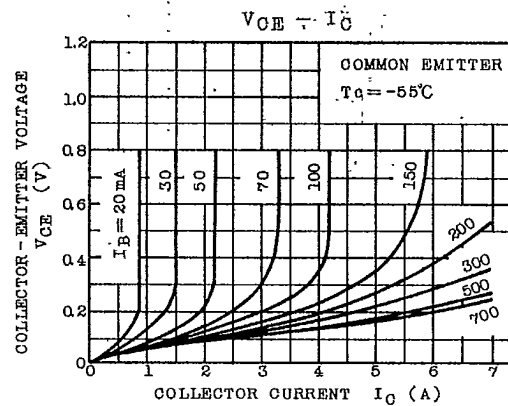
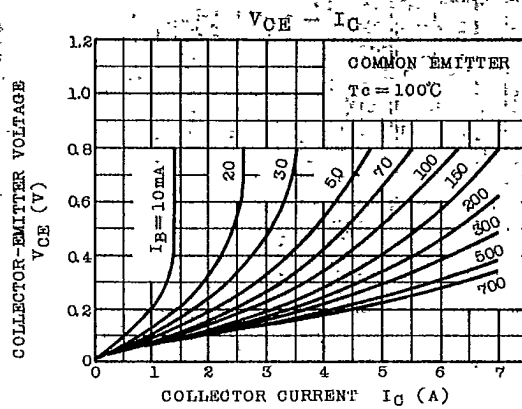
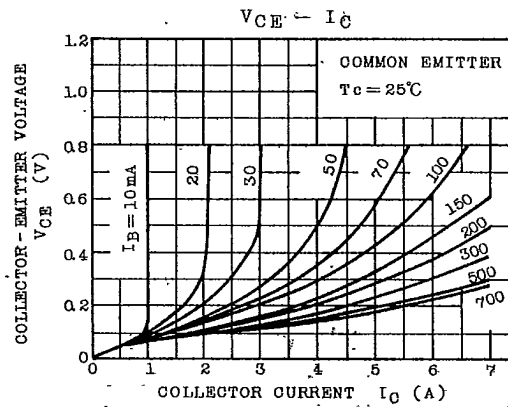
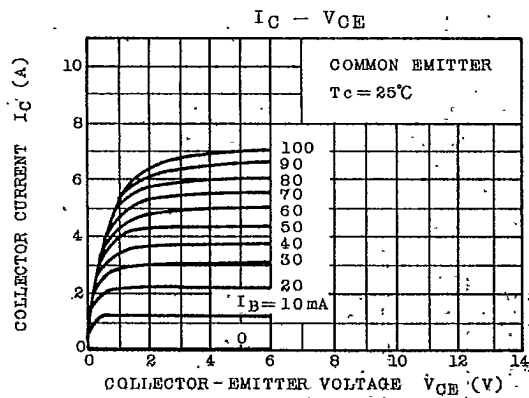
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=70V, I_E=0$	-	-	30	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	50	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	50	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE}=1V, I_C=1A$	70	-	240	
		$h_{FE(2)}$	$V_{CE}=1V, I_C=4A$	30	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C=4A, I_B=0.4A$	-	0.2	0.4	V
	Base-Emitter	$V_{BE(sat)}$	$I_C=4A, I_B=0.4A$	-	0.9	1.2	
Transition Frequency		f_T	$V_{CE}=4V, I_C=1A$	-	10	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	250	-	pF
Switching Time	Turn-on Time	t_{on}	20μs INPUT I_{B1} I_{B2} OUTPUT R_L C_L $V_{CC}=30V$	-	0.2	-	μs
	Storage Time	t_{stg}		-	2.5	-	
	Fall Time	t_f		$I_{B1}=-I_{B2}=0.3A$ DUTY CYCLE $\leq 1\%$	-	0.5	

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

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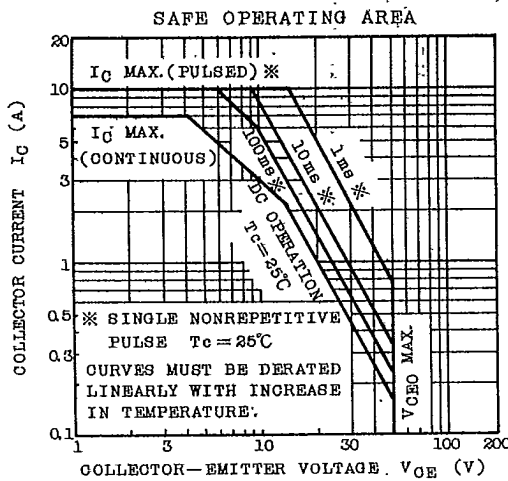
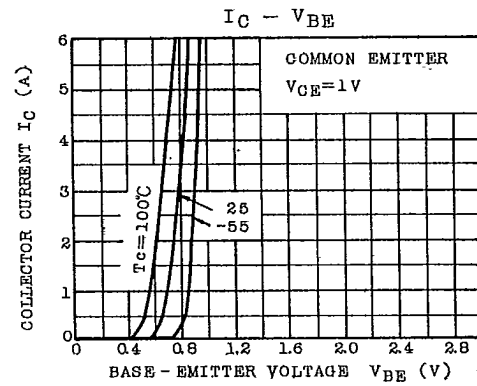
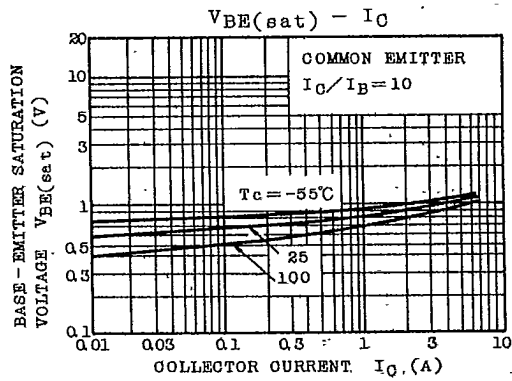
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