

2SB997
2SB998
2SB999

SILICON PNP TRIPLE DIFFUSED TYPE
 (DARLINGTON POWER)

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07388 D T-33-19

HIGH POWER SWITCHING APPLICATIONS.
 HAMMER DRIVE, PULSE MOTOR DRIVE APPLICATIONS.

INDUSTRIAL APPLICATIONS

Unit in mm

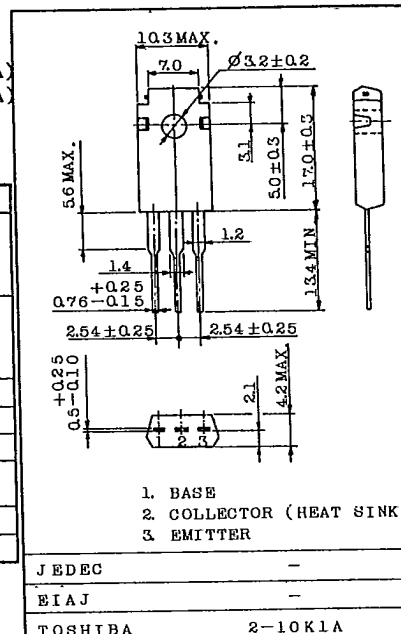
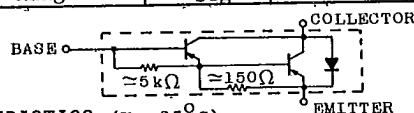
FEATURES:

- High DC Current Gain : $h_{FE}=2000(\text{Min.})$ (at $V_{CE}=-3V, I_C=-3A$)
- Low Saturation Voltage : $V_{CE(sat)}=-1.5V(\text{Max.})$ (at $I_C=-3A$)
- Complementary to 2SD1357, 2SD1358 and 2SD1359

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	2SB997	-100	V
	2SB998	-80	
	2SB999	-60	
Collector-Emitter Voltage	2SB997	-100	V
	2SB998	-80	
	2SB999	-60	
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-7	A
Base Current	I_B	-0.2	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	40	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ\text{C}$

EQUIVALENT CIRCUIT

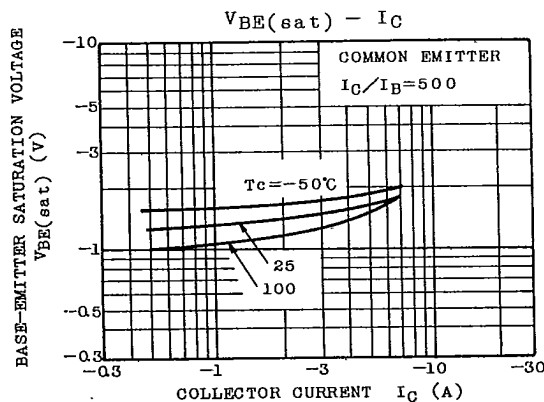
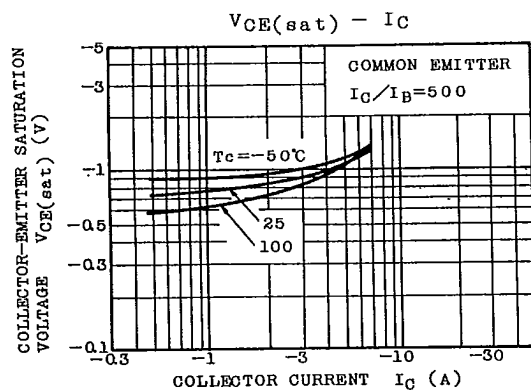
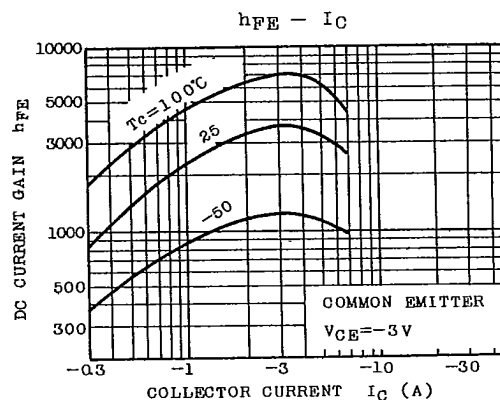
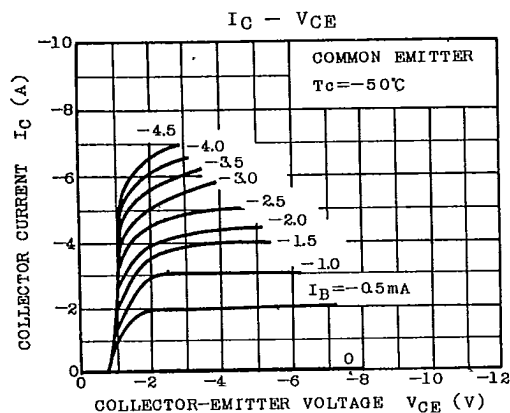
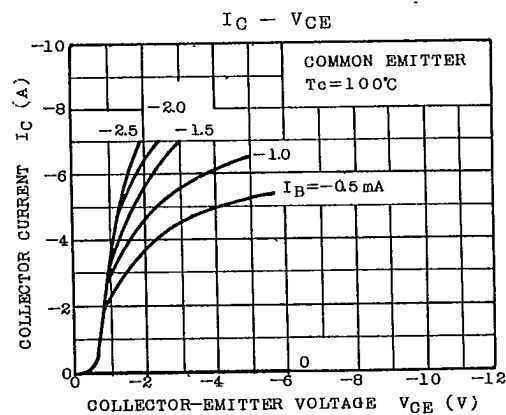
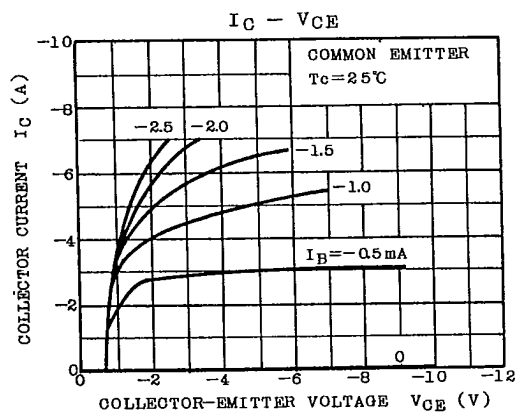
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	2SB997	$V_{CB}=-100V, I_E=0$	-	-	-100	μA
	2SB998	$V_{CB}=-80V, I_E=0$	-	-	-100	
	2SB999	$V_{CB}=-60V, I_E=0$	-	-	-100	
Emitter Cut-off Current	I_{E0}	$V_{EB}=-5V, I_C=0$	-	-	-4.0	mA
Collector-Emitter Breakdown Voltage	2SB997	$I_C=-50\text{mA}, I_B=0$	-100	-	-	V
	2SB998		-80	-	-	
	2SB999		-60	-	-	
DC Current Gain	$h_{FE}(1)$	$V_{CE}=-3V, I_C=-3A$	2000	-	15000	
	$h_{FE}(2)$	$V_{CE}=-3V, I_C=-7A$	1000	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=-3A, I_B=-6\text{mA}$	-	-0.95	-1.5	V
	$V_{CE(sat)2}$	$I_C=-7A, I_B=-14\text{mA}$	-	-1.3	-2.0	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-3A, I_B=-6\text{mA}$	-	-1.55	-2.5	V
Switching Time	Turn-on Time	t_{on}	-	0.8	-	μs
	Storage Time	t_{stg}	-	2.0	-	
	Fall Time	t_f	-	2.5	-	

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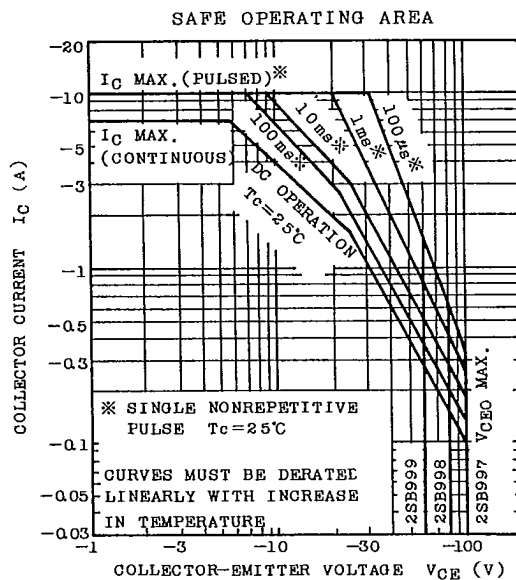
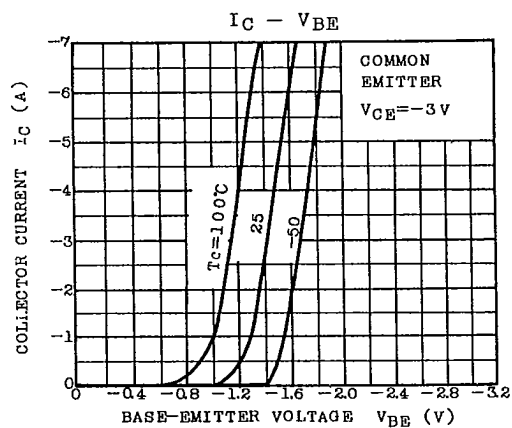
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