2SD844

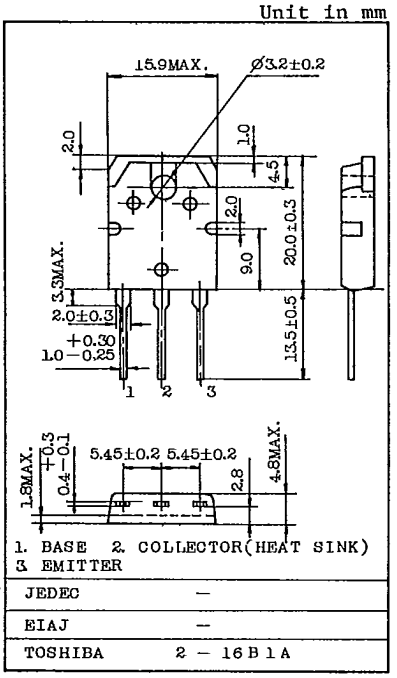
SILICON NPN TRIPLE DIFFUSED TYPE

HIGH CURRENT SWITCHING APPLICATIONS.
POWER AMPLIFIER APPLICATION.

FEATURES:

- High Collector Current : I_C=7A
- Low Collector Saturation Voltage
  : $V_{CE(sat)}$=0.4V(Max.) (at I_C=4A)
- High Power dissipation : P_C=60W (at Tc=25°C)
- Complementary to 2SB754.

Unit in mm



1. BASE 2. COLLECTOR(HEAT SINK)
3. EMITTER

JEDEC	—
EIAJ	—
TOSHIBA	2 — 16B1A

Weight : 4.6g

MAXIMUM RATINGS (Ta=25°C)

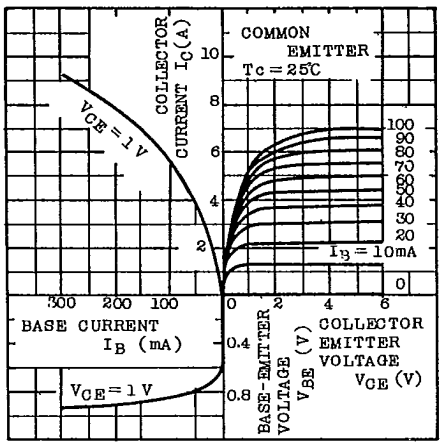
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	50	V
Collector-Emitter Voltage		V_{CEO}	50	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	7	A
Emitter Current		I_E	-7	A
Collector Power Dissipation	Ta=25°C	P_C	2.5	W
	Tc=25°C		60	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55∿150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

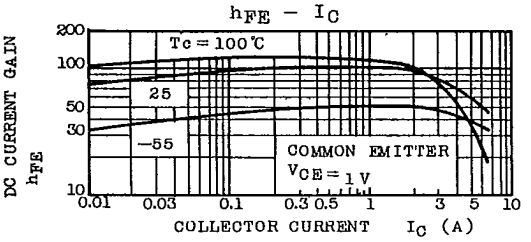
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=50V, I_E=0	-	-	10	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	10	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=50mA, I_B=0	50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10mA, I_C=0	5	-	-	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	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=4A, I_B=0.4A	-	0.2	0.4	V
Base-Emitter Voltage	V_{BE}	V_{CE}=1V, I_C=4A	-	0.9	1.2	V
Transition Frequency	f_T	V_{CE}=5V, I_C=1A	-	15	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	250	-	pF

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

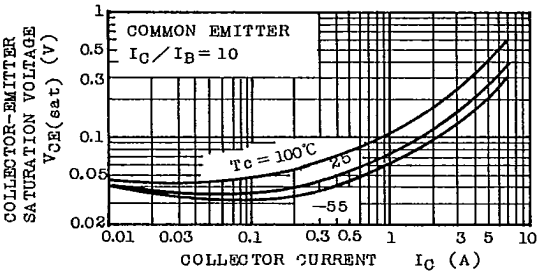
STATIC CHARACTERISTICS



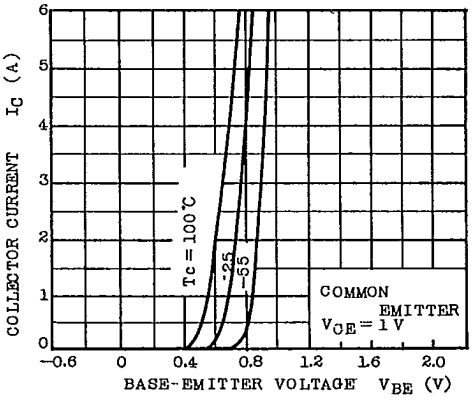
h_{FE} – I_C



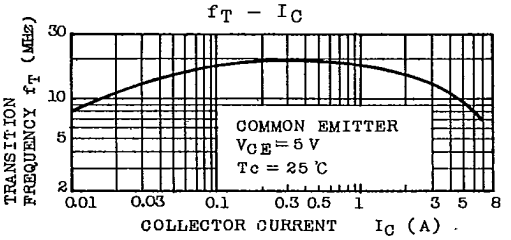
$V_{CE(sat)}$ – I_C



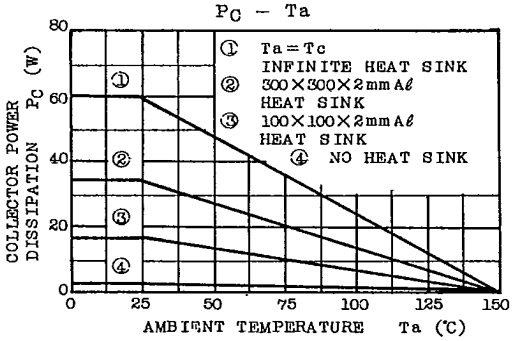
I_C – V_{BE}



f_T – I_C



P_C – Ta



SAFE OPERATING AREA