SILICON NPN TRIPLE DIFFUSED TYPE

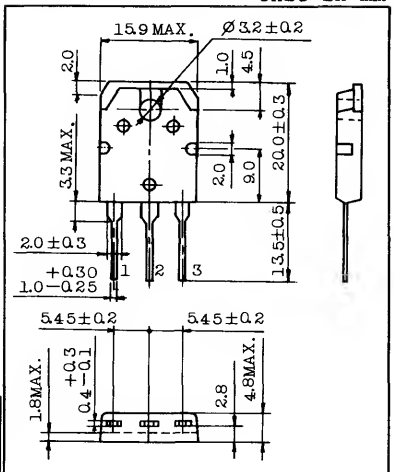
2SD717

HIGH POWER SWITCHING APPLICATIONS.
DC-DC CONVERTER AND DC-AC INVERTER APPLICATIONS.

FEATURES:

- Low Collector Saturation Voltage
  : $V_{CE(sat)}$=0.4V (Max.), (I_C=6A)
- High Collector Power Dissipation : P_C=80W (Tc=25°C)

Unit in mm



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

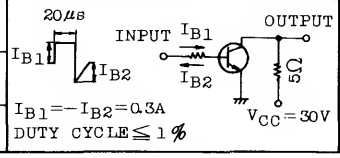
JEDEC	—
EIAJ	—
TOSHIBA	2 − 16B1A

Weight : 4.6 g

MAXIMUM RATINGS (Ta=25°C)

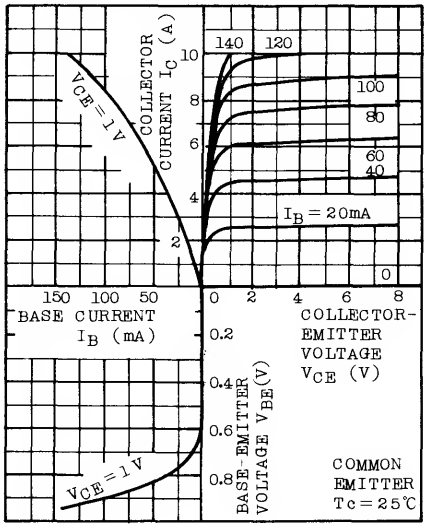
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	70	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	10	A
Base Current	I_B	2	A
Collector Power Dissipation (Tc=25°C)	P_C	80	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55∿150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

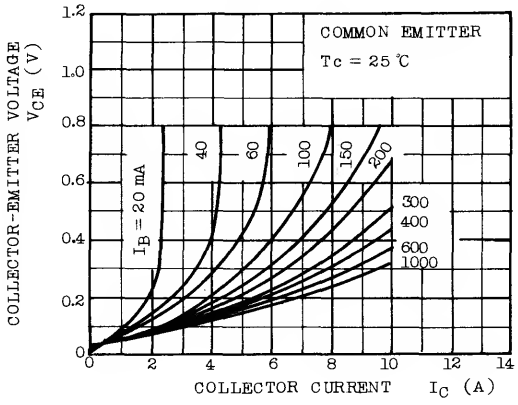
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=70V, I_E=0	-	-	10	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=5V, I_C=0	-	-	10	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=50mA, I_B=0	50	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	V_{CE}=1V, I_C=1A	70	-	240	
		$h_{FE(2)}$	V_{CE}=1V, I_C=6A	30	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=6A, I_B=0.3A	-	0.25	0.4	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=6A, I_B=0.3A	-	0.9	1.2	V
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	-	350	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.3	-	μs
	Storage Time	t_{stg}		-	2.5	-	
	Fall Time	t_f		-	0.4	-	

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

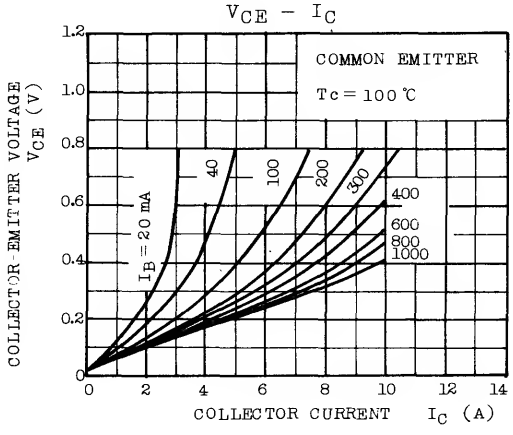
STATIC CHARACTERISTICS



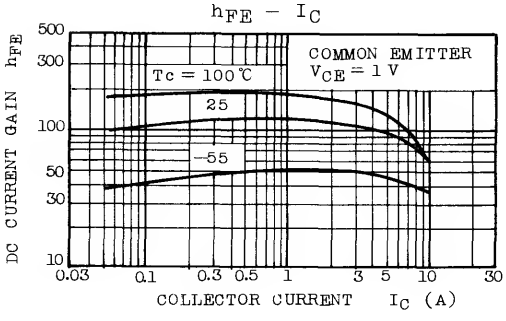
V_{CE} – I_C



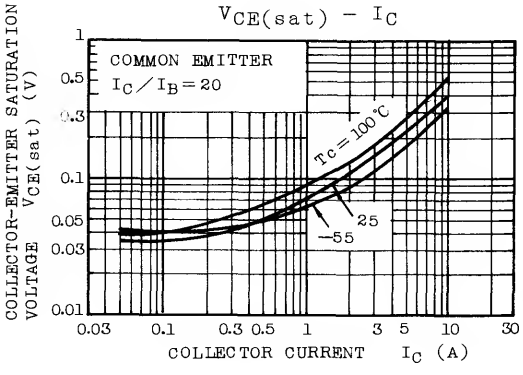
V_{CE} – I_C



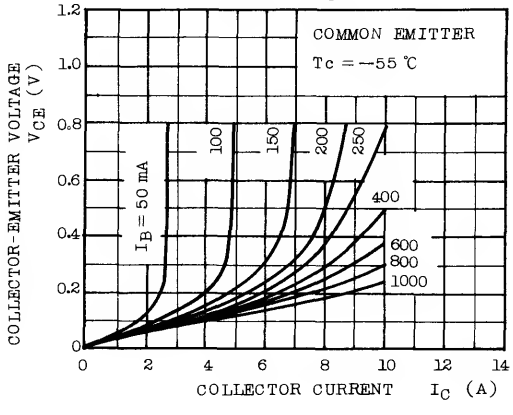
h_{FE} – I_C



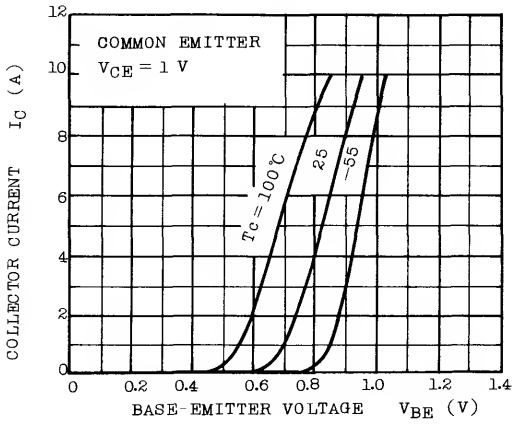
$V_{CE(sat)}$ – I_C



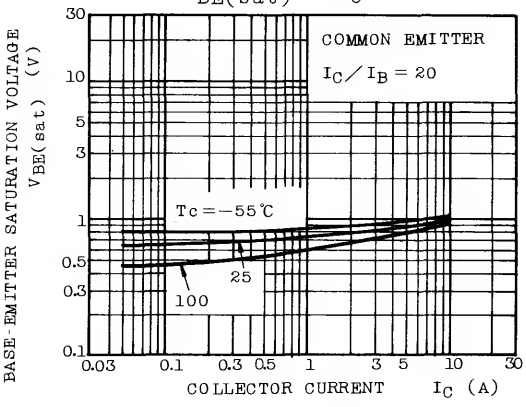
V_{CE} – I_C



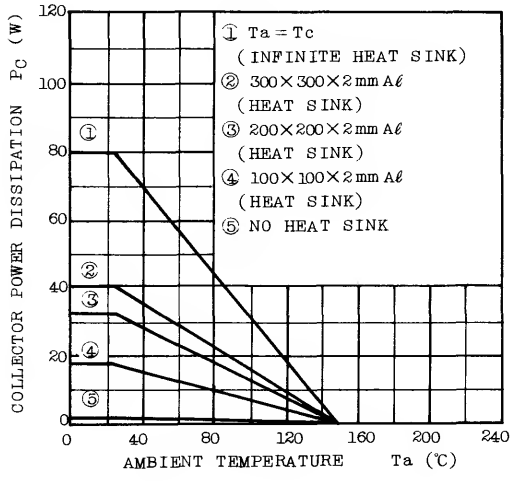
$I_C - V_{BE}$



$V_{BE(sat)} - I_C$



$P_C - Ta$



SAFE OPERATING AREA