2SB677

SILICON PNP EPITAXIAL TYPE (PCT PROCESS)
(DARLINGTON POWER)

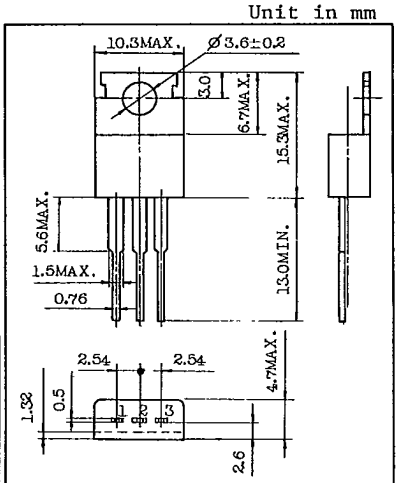
SWITCHING APPLICATIONS.
HAMMER DRIVE, PULSE MOTOR DRIVE APPLICATIONS.
POWER AMPLIFIER APPLICATIONS.

FEATURES:

- High DC Current Gain
  : h_{FE}=2000 (Min.) (V_{CE}=-2V, I_C=-1A)
- Low Saturation Voltage
  : $V_{CE(sat)}$=-1.5V (Max.) (I_C=-2A)

INDUSTRIAL APPLICATIONS

Unit in mm



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

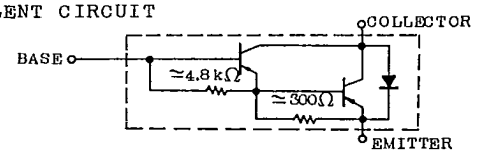
JEDEC	TO — 220 AB
EIAJ	SC — 46
TOSHIBA	2 — 10 A 1 A

Mounting Kit No. AC75
Weight : 1.9g

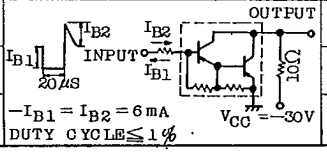
MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-3	A
Collector Power Dissipation (Tc=25°C)	P_C	25	W
Junction Temperature	Tj	150	°C
Storage Temperature Range	Tstg	-55~150	°C

EQUIVALENT CIRCUIT



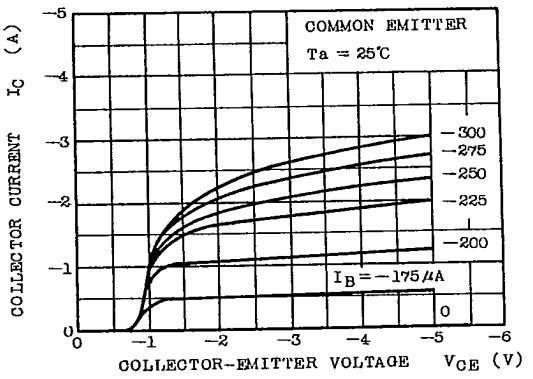
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-60V, I_E=0	-	-	-20	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-2.5	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=-25mA, I_B=0	-40	-	-	V
DC Current Gain		$h_{FE(1)}$	V_{CE}=-2V, I_C=-1A	2000	-	-	
		$h_{FE(2)}$	V_{CE}=-2V, I_C=-3A	1000	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-2A, I_B=-4mA	-	-	-1.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=-2A, I_B=-4mA	-	-	-2.0	V
Switching Time	Turn-on Time	t_{on}		-	0.30	-	μs
	Storage Time	t_{stg}		-	0.60	-	
	Fall Time	t_f		-	0.25	-	

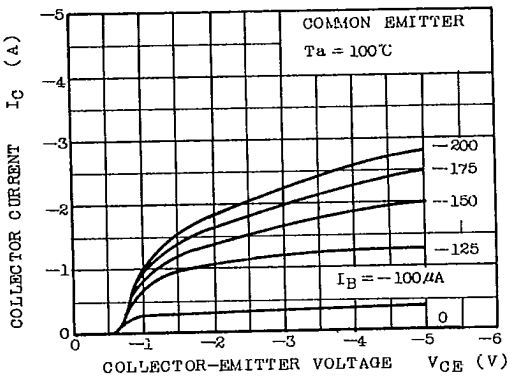
$-I_{B1}=I_{B2}=6$mA
DUTY CYCLE≦1%

2SB677

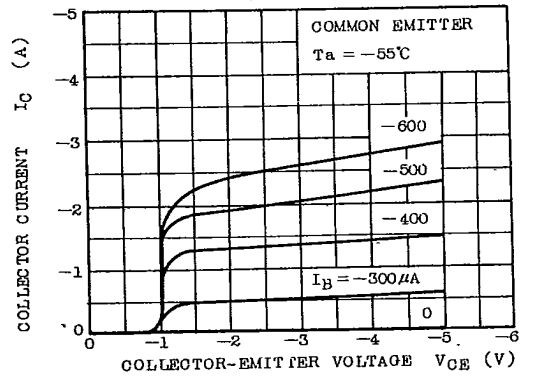
$I_C - V_{CE}$



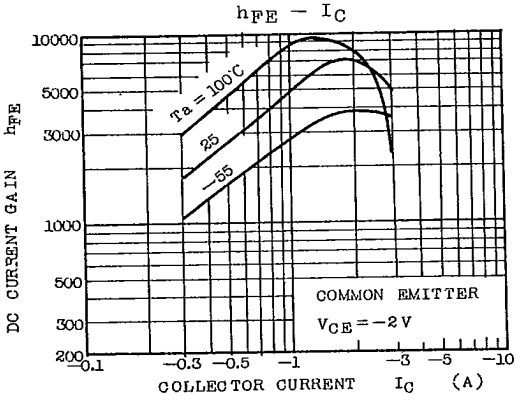
$I_C - V_{CE}$



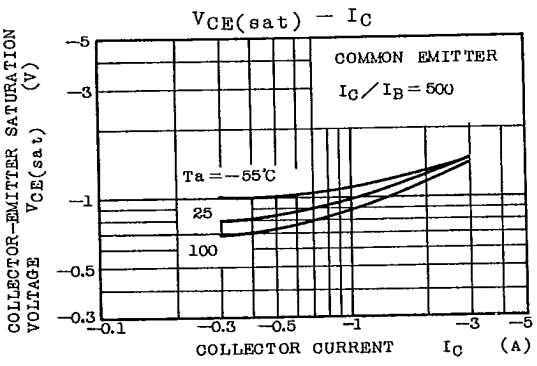
$I_C - V_{CE}$



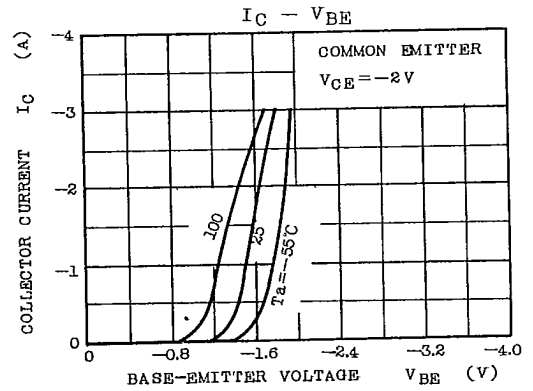
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$

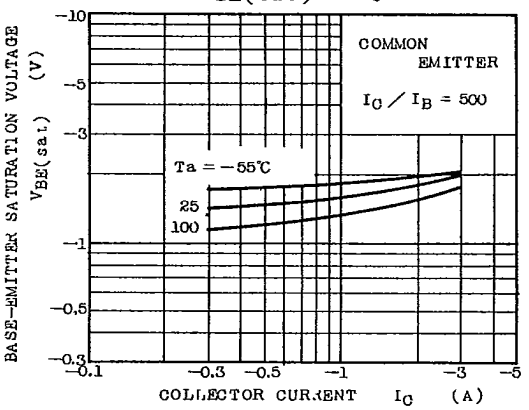


$I_C - V_{BE}$

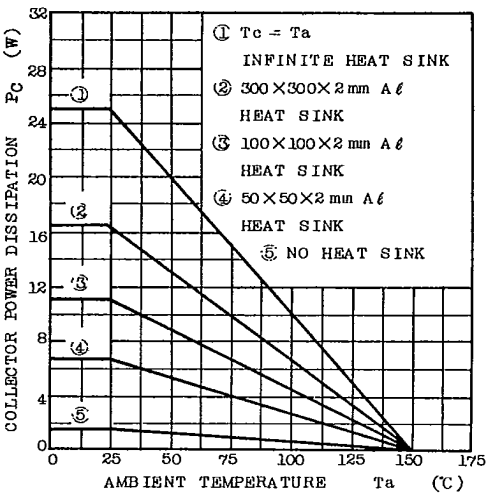


2SB677

$V_{BE(sat)} - I_C$



$P_C - Ta$



SAFE OPERATING AREA