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

2SB678

LOW FREQUENCY MEDIUM POWER AMPLIFIER AND MEDIUM SPEED SWITCHING APPLICATIONS.

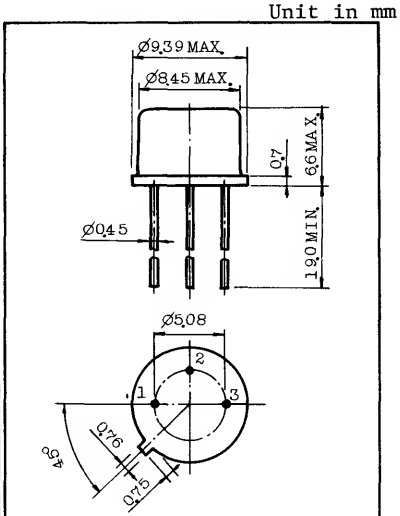
PULSE MOTOR DRIVE, RELAY DRIVE AND HAMMER DRIVE APPLICATIONS.

INDUSTRIAL APPLICATIONS

FEATURES :

- High DC Current Gain : $h_{FE(2)}$=1000(Min.) (V_{CE}=-2V, I_C=-1A)
- Low Saturation Voltage : $V_{CE}(sat)$=-1.5V(Max.)(I_C=-1A)
- Complementary to 2SD688.

Unit in mm



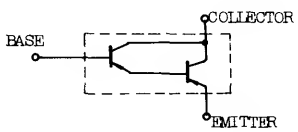
JEDEC	TO-39
EIAJ	TC-5, TB-5B
TOSHIBA	2-8B1A

Weight : 1.13g

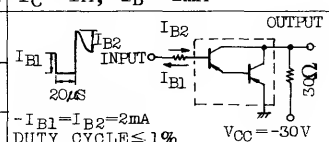
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-100	V
Collector-Emitter Voltage		V_{CEO}	-100	V
Emitter-Base Voltage		V_{EBO}	-10	V
Collector Current		I_C	-1.5	A
Emitter Current		I_E	1.5	A
Collector Power Dissipation	(Ta = 25°C)	P_C	0.8	W
	(Tc = 25°C)		8	
Junction Temperature		T_j	175	°C
Storage Temperature Range		T_{stg}	-65~175	°C

EQUIVALENT CIRCUIT



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-100V, I_E=0	-	-	-10	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-10V, I_C=0	-	-	-10	μA
Breakdown Voltage	Collector-Emitter	$V_{(BR)CEO}$	I_C=-10mA, I_B=0	-100	-	-	V
	Base-Emitter	$V_{(BR)EBO}$	I_E=-5mA, I_C=0	-10	-	-	
DC Current Gain		$h_{FE(1)}$	V_{CE}=-2V, I_C=-0.1A	2000	-	-	
		$h_{FE(2)}$	V_{CE}=-2V, I_C=-1A	1000	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	I_C=-1A, I_B=-2mA	-	-	-1.5	V
	Base-Emitter	$V_{BE(sat)}$	I_C=-1A, I_B=-2mA	-	-	-2.5	
Switching Time	Turn-on Time	t_{on}		-	0.3	-	μs
	Storage Time	t_{stg}		-	2.0	-	
	Fall Time	t_f		-	0.7	-	