

# 2SB1021

## SILICON PNP TRIPLE DIFFUSED TYPE (DARLINGTON POWER)

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

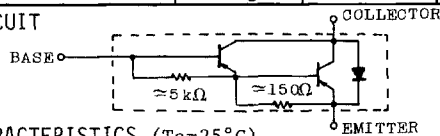
### FEATURES:

- High DC Current Gain:  $h_{FE}=2000(\text{Min.})$  (at  $V_{CE}=-3V, I_C=-3A$ )
- Low Saturation Voltage:  $V_{CE}(\text{sat})=-1.5V(\text{Max.})$  (at  $I_C=-3A$ )
- Complementary to 2SD1416.

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

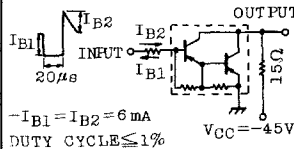
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-80	V
Collector-Emitter Voltage	$V_{CEO}$	-80	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-7	A
Base Current	$I_B$	-0.2	A
Collector Power Dissipation ( $T_c=25^\circ\text{C}$ )	$P_C$	30	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ 150	$^\circ\text{C}$

### EQUIVALENT CIRCUIT



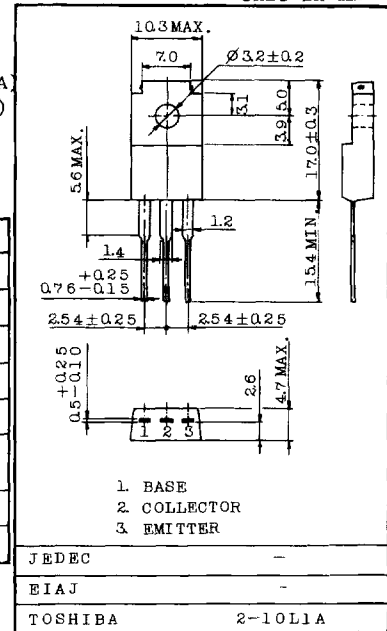
### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=-80V, I_E=0$	-	-	-100	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=-5V, I_C=0$	-	-	-4.0	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-50\text{mA}, I_B=0$	-80	-	-	V
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	$V_{CE}(\text{sat})(1)$	$I_C=-3A, I_B=-6\text{mA}$	-	-0.95	-1.5	V
	$V_{CE}(\text{sat})(2)$	$I_C=-7A, I_B=-14\text{mA}$	-	-1.3	-2.0	
Base-Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_C=-3A, I_B=-6\text{mA}$	-	-1.55	-2.5	V
Switching Time	Turn-on Time	$t_{on}$	-	0.8	-	$\mu\text{s}$
	Storage Time	$t_{stg}$	-	2.0	-	
	Fall Time	$t_f$	-	2.5	-	



### INDUSTRIAL APPLICATIONS

Unit in mm



1. BASE
2. COLLECTOR
3. EMITTER

JEDEC	-
EIAJ	-
TOSHIBA	2-10L1A

Weight : 2.1g

