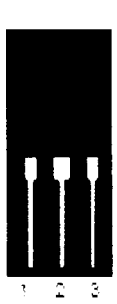
New Jersey Semi-Conductor Products, Inc.

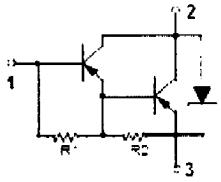
20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

Silicon PNP Darlington Power Transistor

2SB1382





PIN: 1 Base
2 Collector
3 Emitter
TO-3PML package

DESCRIPTION

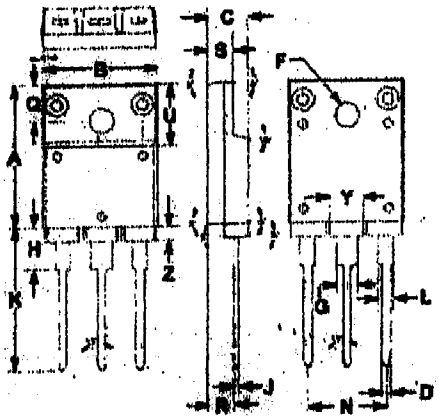
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= -120V(Min)
- High DC Current Gain-
  : h_{FE}= 2000(Min.) @(I_C= -8A, V_{CE}= -4V)
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= −1.5V(Max)@ (I_C= -8A, I_B= -16mA)
- Complement to Type 2SD2082

APPLICATIONS

- Designed for chopper regulator, DC motor driver and general purpose applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-120	V
V_{CEO}	Collector-Emitter Voltage	-120	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current-Continuous	-16	A
I_{CM}	Collector Current-Peak	-26	A
I_B	Base Current-Continuous	-1	A
P_C	Collector Power Dissipation @T_C=25℃	75	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃



DIM	mm MIN	mm MAX
A	19.90	20.10
B	15.75	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.20
H	5.90	6.10
J	0.595	0.70
K	21.10	22.50
L	1.90	2.25
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.60
U	9.90	10.10
Y	4.20	4.90
Z	1.90	2.10

NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= -10mA ; I_B= 0	-120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -8A; I_B= -16mA			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -8A; I_B= -16mA			-2.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -120V ; I_E= 0			-10	μ A
I_{EBO}	Emitter Cutoff Current	V_{EB}= -6V; I_C= 0			-10	mA
h_{FE}	DC Current Gain	I_C= -8A ; V_{CE}= -4V	2000			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= -10V; f_{test}= 1MHz		350		pF
f_T	Current-Gain—Bandwidth Product	I_E= 1A ; V_{CE}= -12V		50		MHz

Switching Times

t_{on}	Turn-on Time	V_{CC}= -40V, R_L= 5Ω , I_C= -8A; I_{B1}= -I_{B2}= -16mA,		0.8		μ s
t_{stg}	Storage Time			1.8		μ s
t_f	Fall Time			1.0		μ s