New Jersey Semi-Conductor Products, Inc.

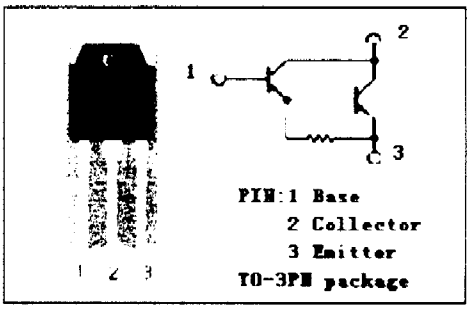
20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

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

Silicon PNP Darlington Power Transistor — 2SB1559

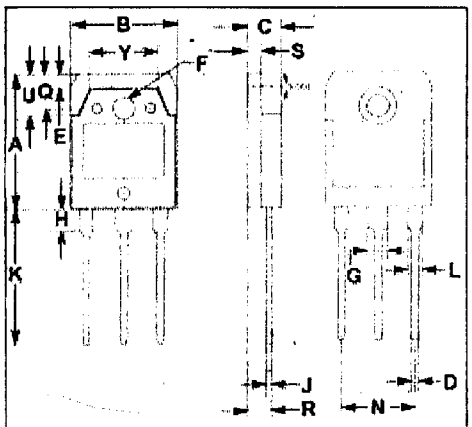
DESCRIPTION

- High DC Current Gain-
  : h_{FE}= 5000(Min)@I_C= -6A
- Low-Collector Saturation Voltage-
  : $V_{CE(sat)}$= -2.5V(Max.)@I_C= -6A
- Complement to Type 2SD2389



APPLICATIONS

- Designed for audio, series regulator and general purpose applications.



DIM	mm MIN	mm MAX
A	19.60	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	20.00	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.10
Y	9.90	10.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-8	A
I_B	Base Current- Continuous	-1	A
P_C	Collector Power Dissipation @ T_C=25℃	80	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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 data-sheets are current before placing orders.

Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= -30mA; I_B= 0	-150			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -6A; I_B= -6mA			-2.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -6A; I_B= -6mA			-3.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -160V; I_E= 0			-100	μ A
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C= 0			-100	μ A
h_{FE}	DC Current Gain	I_C= -6A; V_{CE}= -4V	5000		30000	
C_{OB}	Collector Output Capacitance	I_E= 0; V_{CB}= -10V; f= 1MHz		160		pF
f_T	Current-Gain—Bandwidth Product	I_C=-1A; V_{CE}= -12V		65		MHz

◆ **h_{FE} Classifications**

O	P	Y
5000-12000	6500-20000	15000-30000