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

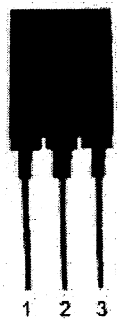
Silicon NPN Power Transistor — BU508AFI

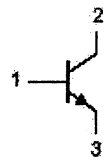
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 700V (Min)
- High Switching Speed

APPLICATIONS

- Designed for use in horizontal deflection circuits of color TV receivers.





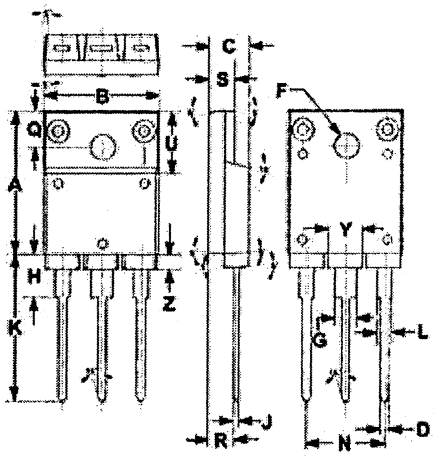
PIN 1. BASE
2. COLLECTOR
3. EMITTER

TO-3PML package

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector- Emitter Voltage(V_{BE}= 0)	1500	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current- Continuous	8	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current- Continuous	4	A
I_{BM}	Base Current-Peak	6	A
P_C	Collector Power Dissipation @ T_C=25℃	50	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.5	℃/W



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

Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 100mA ; I_B= 0	700			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 4.5A; I_B= 2.0A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 4.5A; I_B= 2.0A			1.3	V
I_{CES}	Collector Cutoff Current	V_{CE}= 1500V; V_{BE}= 0 V_{CE}= 1500V; V_{BE}= 0; T_C=125℃			1.0 2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5.0V ; I_C= 0			0.1	mA
h_{FE-1}	DC Current Gain	I_C= 0.1A ; V_{CE}= 5V	6		30	
h_{FE-2}	DC Current Gain	I_C= 4.5A ; V_{CE}= 5V	2.25			
f_T	Current-Gain—Bandwidth Product	I_C= 0.1A; V_{CE}= 5V; f_{test}= 1.0MHz		7		MHz

Switching times

t_{stg}	Storage Time	I_C= 4.5A , I_{B1}= 1.8A; V_{CC}= 140V; L_B= 3μH, L_C= 0.9mH		7.0		μs
t_f	Fall Time			0.55		μs