

Silicon NPN Power Transistor

BU508AF

DESCRIPTION

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

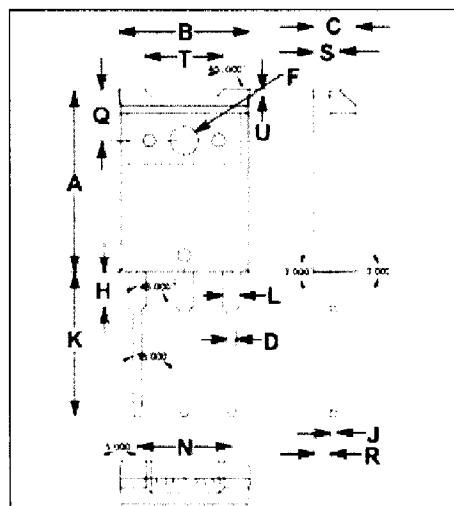
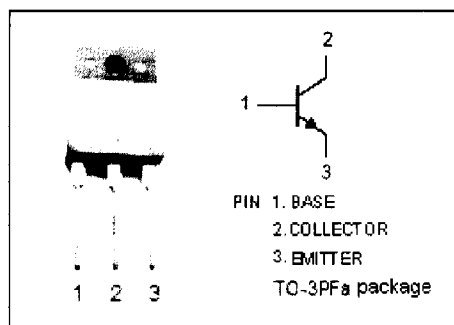
APPLICATIONS

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

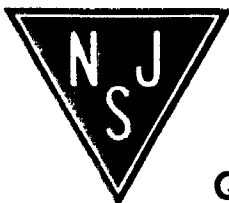
ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}C$)

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 @ $T_c=25^{\circ}C$	60	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}C$

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



DIM	mm	
	MIN	MAX
A	20.70	21.30
B	14.70	15.30
C	4.80	5.20
D	0.90	1.10
F	3.20	3.40
H	3.70	4.30
J	0.50	0.70
K	16.40	17.00
L	1.90	2.10
N	10.80	11.00
Q	5.60	6.00
R	1.80	2.20
S	3.10	3.50
T	8.70	9.30
U	0.55	0.75



Quality Semi-Conductors

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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 100\text{mA}; I_B= 0$	700			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 4.5\text{A}; I_B= 2.0\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 4.5\text{A}; I_B= 2.0\text{A}$			1.5	V
I_{CES}	Collector Cutoff Current	$V_{CE}= 1500\text{V}; V_{BE}= 0$ $V_{CE}= 1500\text{V}; V_{BE}= 0; T_C=125^\circ\text{C}$			1.0 2.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5.0\text{V}; I_C= 0$			10	mA
h_{FE-1}	DC Current Gain	$I_C= 0.1\text{A}; V_{CE}= 5\text{V}$	6		30	
h_{FE-2}	DC Current Gain	$I_C= 4.5\text{A}; V_{CE}= 5\text{V}$	2.25			
C_{OB}	Output Capacitance	$I_E= 0; V_{CB}= 10\text{V}; f_{test}= 0.1\text{MHz}$		125		pF
f_T	Current-Gain—Bandwidth Product	$I_C= 0.1\text{A}; V_{CE}= 5\text{V}; f_{test}= 1.0\text{MHz}$		7		MHz

Switching times

t_{stg}	Storage Time	$I_C= 4.5\text{A}, I_{B1}= 1.8\text{A}; L_B= 10\mu\text{H}$		8.0		μs
t_f	Fall Time			0.5		μs