



## NPN BU2508AF

### NPN SILICON POWER TRANSISTORS

The BU2508AF is silicon power transistor mounted in Jedec TO-3PF plastic package. They are designed for use in horizontal deflection circuits of color TV receivers. Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
$V_{CES}$	Collector- Emitter Voltage( $V_{BE}= 0$ )	1500	V
$V_{CEO}$	Collector-Emitter Voltage	700	V
$V_{EBO}$	Emitter-Base Voltage	7.5	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 @ $T_C=25^{\circ}C$	45	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-65~150	$^{\circ}C$

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	2.5	$^{\circ}C/W$



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### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = 100mA$ $I_B = 0, L = 25mH$	700	-	-	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 1mA$ $I_C = 0$	7.5	-	-	V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 4.5A$ $I_B = 1.1A$	-	-	1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 4.5A$ $I_B = 1.7A$	-	-	1.1	V
$I_{CES}$	Collector Cutoff Current	$V_{CE} = 1500V$ $V_{BE} = 0$	-	-	1.0	mA
		$V_{CE} = 1500V, V_{BE} = 0$ $T_C = 125^\circ C$	-	-	2.0	
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 7.5V$ $I_C = 0$	-	-	1.0	mA
$h_{FE}$	DC Current Gain	$I_C = 0.1A$ $V_{CE} = 5V$	-	13	-	-
$h_{FE}$	DC Current Gain	$I_C = 4.5A$ $V_{CE} = 1V$	4	-	7	-
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = 10V$ $f_{test} = 1MHz$	-	80	-	pF

### Switching times

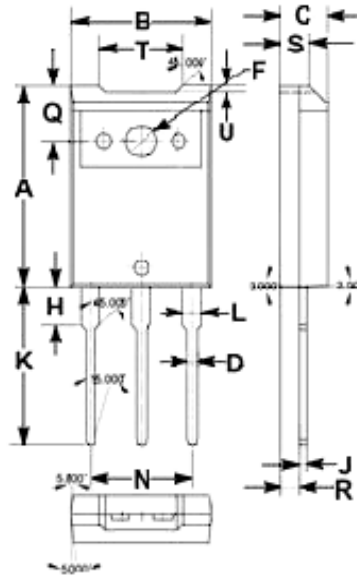
$t_{stg}$	Storage Time	$I_C = 4.5A, I_{B(end)} = 1.1A$ $L_B = 6\mu H$	-	-	6.0	$\mu s$
$t_f$	Fall Time	$-V_{BB} = 4V; (-di_B/dt = 0.6A/\mu s)$	-	-	0.6	$\mu s$



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### MECHANICAL DATA CASE TO-3P (TO-218)

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



Pin 1 :	Emitter
Pin 2 :	Base
Pin 3 :	Collector



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