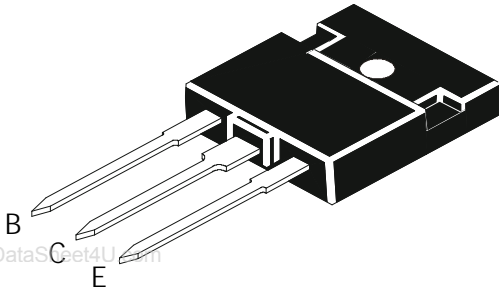


## NPN POWER TRANSISTORS

**BU508F, BU508AF,  
BU508DF**

**TO- 3P Fully Isolated  
Plastic Package**



**Fast Switching, High Voltage Devices for use in Horizontal Deflection Circuits of Colour TV**

### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector -Emitter Voltage	$V_{CES}$	1500	V
Collector -Emitter Voltage	$V_{CEO}$	700	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	8	A
Collector Peak Current	$I_{CM}$	15	
Total Power Dissipation upto $T_a=25^\circ\text{C}$ $T_c=25^\circ\text{C}$	$P_{tot}$	34 60	W
Storage Temperature Range	$T_{stg}$	- 65 to +150	$^\circ\text{C}$
Max Operating Junction Temperature	$T_j$	150	$^\circ\text{C}$

### THERMAL RESISTANCE

Thermal Resistance Junction - Case	$R_{th(j-c)}$	2.08	$^\circ\text{C/W}$
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### ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut off Current	$I_{CES}$	$V_{CE}=V_{CES}, V_{BE}=0$			1.0	mA
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}^*$	$I_B=0, I_C=100\text{mA}$	700			V
Emitter Base Voltage	$V_{EBO}$	$I_E=10\text{mA}, I_C=0$	5.0			V
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			300	mA
DC Current Gain	$h_{FE}$	$I_C=4.5\text{A}, V_{CE}=5\text{V}$	2.25			
Diode forward Voltage	$V_F$	$I_F=4.0\text{A}$			2.0	V
Collector Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C=4.5\text{A}, I_B=2.0\text{A}$			1.0	V
		$I_C=4.5\text{A}, I_B=2.0\text{A}$			5.0	V
Base Emitter Saturation Voltage	$V_{BE(sat)}^*$	$I_C=4.5\text{A}, I_B=2.0\text{A}$			1.5	V

### SWITCHING TIME

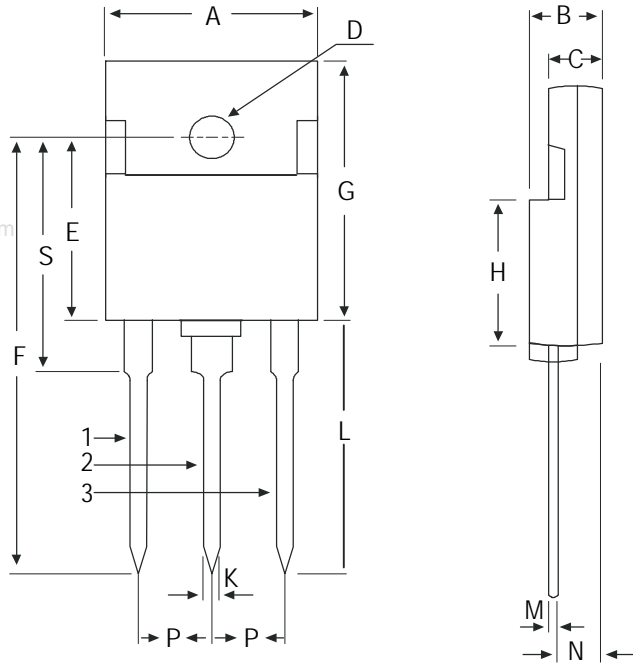
Storage Time	$t_s$	$I_C=4.5\text{A}, h_{FE}=2.5, V_{CC}=140\text{V}$		7.0		$\mu\text{s}$
Fall Time	$t_f$	$L_C=0.9\text{mH}, L_B=3\mu\text{H}$		0.5		$\mu\text{s}$

\* Pulse test: Pulse Duration  $\leq 300\text{ms}$  , Duty cycle  $\leq 1.5\%$ .

**BU508F, BU508AF,  
BU508DF**

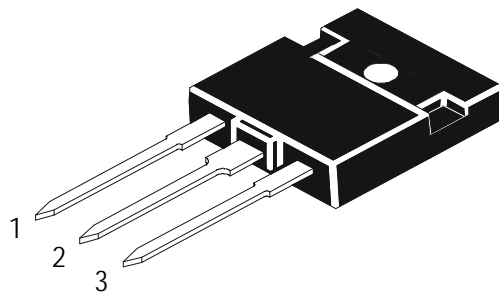
**TO- 3P Fully Isolated  
Plastic Package**

**TO-3P (TO-218) Plastic Package**



DIM	MIN	MAX
A	15.80	16.40
B	5.20	5.70
C	3.80	4.20
D	Ø 3.30	Ø 3.60
E	14.50	15.10
F	33.25	36.75
G	20.75	21.25
H	11.50	12.25
K	1.00	1.30
L	18.75	21.65
M	0.40	0.60
N	3.15	3.45
P	5.21	5.72
S	18.75	19.25

All diminsions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

**Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-3P	100 pcs/polybag	628 gm/100 pcs	3" x 7.5" x 7.5"	0.3K	17" x 15" x 13.5"	4.8K	42 kgs

### **Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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