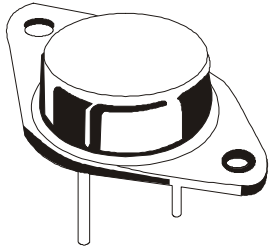


**NPN SILICON PLANAR POWER TRANSISTOR**

**BU208A**



**TO-3  
Metal Can Package**

**ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	$V_{CEO(sus)}$	700	V
Collector Emitter Voltage	$V_{CES}$	1500	V
Emitter Base Voltage	$V_{EBO}$	5.0	V
Collector Current Continuous	$I_C$	5.0	A
Peak	$I_{CM}$	7.5	
Base Current Continuous	$I_B$	4.0	A
Peak (Negative)	$I_{BM}$	3.5	
Power Dissipation @ $T_c=95^\circ\text{C}$	$P_D$	12.5	W
Derate Above $95^\circ\text{C}$		0.625	W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	- 65 to +115	$^\circ\text{C}$

**THERMAL RESISTANCE**

Junction to Case	$R_{th(j-c)}$	1.6	$^\circ\text{C/W}$
Maximum Lead Temperature for Soldering Purpose 1/8" from Case for 5 Seconds	$T_L$	275	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$  unless specified otherwise)**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	Typ	MAX	UNITS
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}^*$	$I_C=100\text{mA}, L=25\text{mH}$	700			V
Collector Cut off Current	$I_{CES}$	$V_{CE}=\text{Rated } V_{CES}, V_{BE}=0$			1.0	mA
Emitter Base Voltage	$V_{EBO}$	$I_E=10\text{mA}, I_C=0$ $I_E=100\text{mA}, I_C=0$	5.0	7.0		V
DC Current Gain	$h_{FE}^*$	$I_C=4.5\text{A}, V_{CE}=5\text{V}$	2.25			
Collector Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C=4.5\text{A}, I_B=2\text{A}$			1.0	V
Base Emitter Saturation Voltage	$V_{BE(sat)}^*$	$I_C=4.5\text{A}, I_B=2\text{A}$			1.5	V

**Dynamic Characteristics**

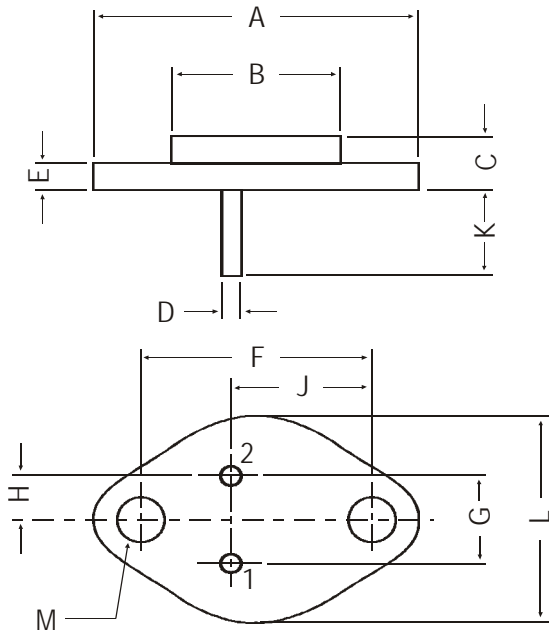
Current Gain Bandwidth Product	$f_T$	$I_C=0.1\text{A}, V_{CE}=5\text{V}, f=1\text{MHz}$		4.0		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		125		pF

**Switching Characteristics**

Storage Time	$t_s$	$I_C=4.5\text{A}, I_{B1}=1.8\text{A}, L_B=10\mu\text{H}$		8.0		$\mu\text{s}$
Fall Time	$t_f$	$I_C=4.5\text{A}, I_{B1}=1.8\text{A}, L_B=10\mu\text{H}$		0.4		$\mu\text{s}$

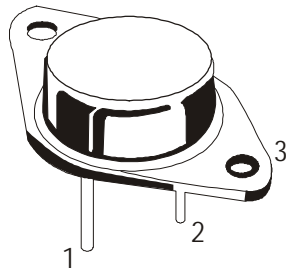
**Pulse test: PW=300ms; Duty Cycle $\leq$ 2%**

TO-3 Metal Can Package



DIM	MIN.	MAX.
A	—	39.37
B	—	22.22
C	6.35	8.50
D	0.96	1.09
E	—	1.77
F	29.90	30.40
G	10.69	11.18
H	5.20	5.72
J	16.64	17.15
K	11.15	12.25
L	—	26.67
M	3.84	4.19

All dimensions in mm.



PIN CONFIGURATION

1. BASE
2. EMITTER
3. COLLECTOR

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-3	100 pcs/pkt	1.3 kg/100 pcs	12.5" x 8" x 1.8"	0.1K	17" x 11.5" x 21"	2K	27.5 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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