

BU207-BU208(A)

NPN POWER TRANSISTORS

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Characteristic	Symbol	BU207	BU208 BU208A	Unit
Collector-Emitter Voltage	V_{CEO}	600	700	V
Collector-Emitter Voltage	V_{CEX}	1300	1500	V
Emitter-Base Voltage	V_{EBO}	5.0		V
Collector Current – continuous	I_C	5.0		A
Peak		7.5		
Base Current -continuous	I_B	2.5		A
Total Power Dissipation @ $T_C = 25^\circ\text{C}$	P_D	55		W
Derate Above 25°C		0.611		W/ $^\circ\text{C}$
Operating and Storage Temperature Range	T_J, T_{stg}	-65 to +115		$^\circ\text{C}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.64		$^\circ\text{C}/\text{W}$

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

Characteristic	Symbol	Min	Max	Unit
Collector-Emitter Sustaining Voltage ⁽¹⁾ ($I_C = 100\text{mA}$, $I_B = 0$)	BU207 BU208(A) $V_{CEO(sus)}$	600 700	- -	V
Collector Cutoff Current ($V_{CE} = 1300\text{V}$, $V_{BE} = 0$) ($V_{CE} = 1500\text{V}$, $V_{BE} = 0$)	BU207 BU208(A) I_{CES}	- -	1.0 1.0	mA
Emitter Cutoff Current ($V_{EB} = 5.0\text{V}$, $I_C = 0$)	I_{EBO}	-	10	mA
DC Current Gain ⁽¹⁾ ($I_C = 4.5\text{A}$, $V_{CE} = 5.0\text{V}$)	h_{FE}	2.25	-	-
Collector-Emitter Saturation Voltage ⁽¹⁾ ($I_C = 4.5\text{A}$, $I_B = 2.0\text{A}$)	BU207 BU208(A) $V_{CE(sat)}$	- -	5.0 1.0	V
Base-Emitter Saturation Voltage ⁽¹⁾ ($I_C = 4.5\text{A}$, $I_B = 2.0\text{A}$)	$V_{BE(sat)}$	-	1.5	V
Current Gain – Bandwidth Product ($I_C = 100\text{mA}$, $V_{CE} = 5\text{V}$, $f = 1\text{MHz}$)	f_T	4.0 (typ)		MHz
Output Capacitance ($V_{CE} = 10\text{V}$, $I_E = 0$, $f = 1.0\text{MHz}$)	C_{ob}	125 (typ)		pF
Fall Time $I_C = 4.5\text{A}$, $I_{B1} = 1.8\text{A}$, $L_B = 25\mu\text{H}$	t_f	1.0 (typ)		μs

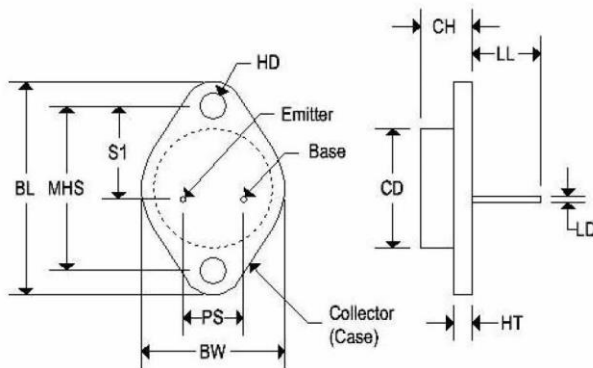
Note 1: Pulse test: Pulse width $\leq 300\mu\text{s}$. Duty cycle $\leq 2\%$.

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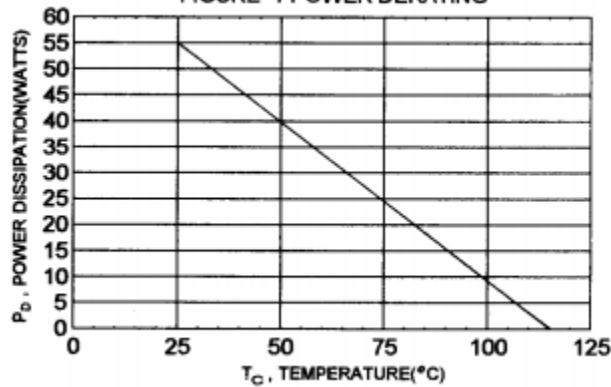
MECHANICAL CHARACTERISTICS

Case:	TO-3
Marking:	Alpha-Numeric
Polarity:	See below



	TO-3			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.875	-	22.220
CH	0.250	0.380	6.860	9.650
HT	0.060	0.135	1.520	3.430
BW	-	1.050	-	26.670
HD	0.131	0.188	3.330	4.780
LD	0.038	0.043	0.970	1.090
LL	0.312	0.500	7.920	12.700
BL	1.550 REF		39.370 REF	
MHS	1.177	1.197	29.900	30.400
PS	0.420	0.440	10.670	11.180
S1	0.655	0.675	16.640	17.150

FIGURE -1 POWER DERATING



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