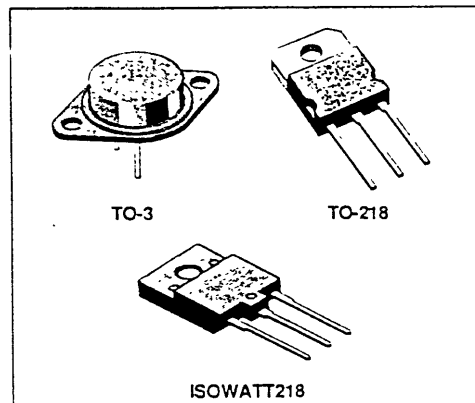


359-403

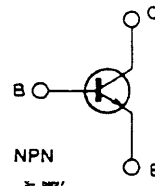
BU208/508/508FI BU208A/508A/508AFI

HORIZONTAL TVC DEFLECTION

- HIGH VOLTAGE
- HIGH POWER
- HIGH SWITCHING SPEED
- GOOD STABILITY
- CONSUMER POWER SUPPLY
- TV COLOR HORIZONTAL DEFLECTION



INTERNAL SCHEMATIC DIAGRAM



DESCRIPTION

The BU208/A, BU508/A and the BU508FI/AFI are silicon multiepitaxial mesa NPN transistors.

They are respectively in Jedec TO-3 metal case in TO-218 plastic case and in ISOWATT218 fully isolated package.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit
V_{CEs}	Collector-emitter Voltage ($V_{BE} = 0$)	1500			V
V_{CE0}	Collector-emitter Voltage ($I_B = 0$)	700			V
V_{EB0}	Emitter-base Voltage ($I_C = 0$)	10			V
I_C	Collector Current	8			A
I_{CM}	Collector Peak Current	15			A
		TO-3	TO-218	ISOWATT218	
P_{tot}	Total Dissipation at $T_c = 25^\circ\text{C}$	150	125	60	W
T_{stg}	Storage Temperature	-65 to 175	-65 to 150	-65 to 150	$^\circ\text{C}$
T_j	Max. Operating Junction Temperature	175	150	150	$^\circ\text{C}$

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BU208/508/508FI-BU208/508A/508AFI

THERMAL DATA

		TO-3	TO-218	ISOWATT218	
$R_{\theta j-c}$	Thermal Resistance Junction-case	Max	1	1	2.08 °C/W

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

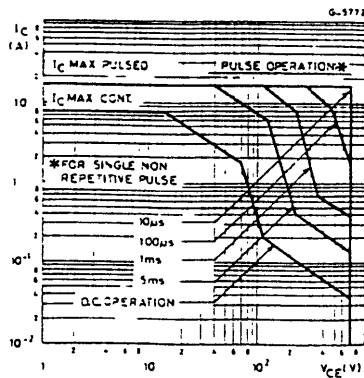
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cutoff Current ($V_{BE} = 0$)	$V_{CE} = V_{CES}$ $V_{CE} = V_{CES}$ $T_C = 125^{\circ}C$			1 2	mA mA
I_{EEO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 5V$			100	μA
$V_{CE(s.s)}$	Collector-emitter Sustaining Voltage	$I_C = 100mA$	700			V
V_{EB}	Emitter-base Voltage ($I_C = 0$)	$I_E = 10mA$	10			V
$V_{CE(sat)}$	Collector-emitter Saturation Voltage	$I_C = 4.5A$ $I_E = 2A$ for BU208A/508A/508AFI for BU208/508/508FI			1 5	V V
$V_{BE(sat)}$	Base-emitter Saturation Voltage	$I_C = 4.5A$ $I_E = 2A$			1.3	V
f_T	Transition Frequency	$I_C = 0.1A$ $V_{CE} = 5V$ $f = 5MHz$		7		MHz

INDUCTIVE LOAD

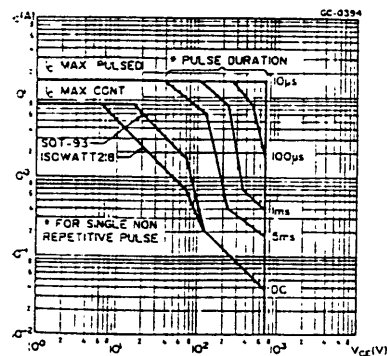
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit.
t_s	Storage Time	$I_C = 4.5A$ $V_{BE} = 2.5V$ $V_{CC} = 140V$		7		μs
t_f	Fall Time	$L_C = 0.9mH$ $L_B = 3\mu H$		0.55		μs

* Pulse: pulse duration = 300 μs , duty cycle = 1.5 %

Safe Operating Area (TO-3).



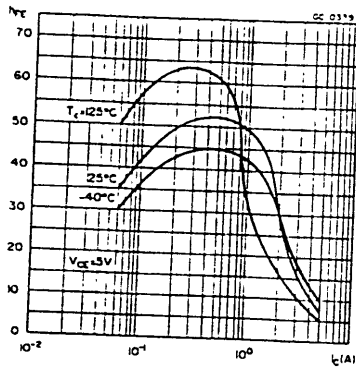
Safe Operating Area (TO-218/ISOWATT218).



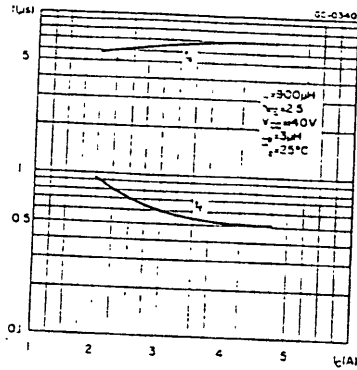
SEMELAB LIMITED

BU208/508/508FI-BU208A/508A/508AFI

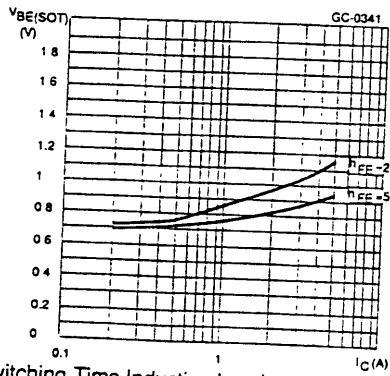
DC Current Gain.



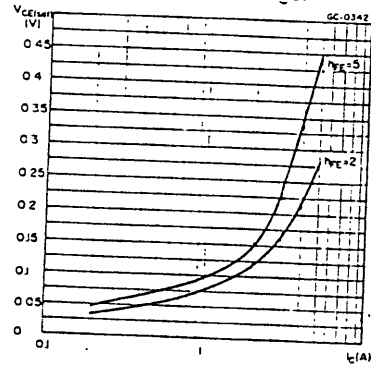
Switching Time Inductive Load.



Base-emitter Saturation Voltage.



Collector-emitter Saturation Voltage.



Switching Time Inductive Load.

