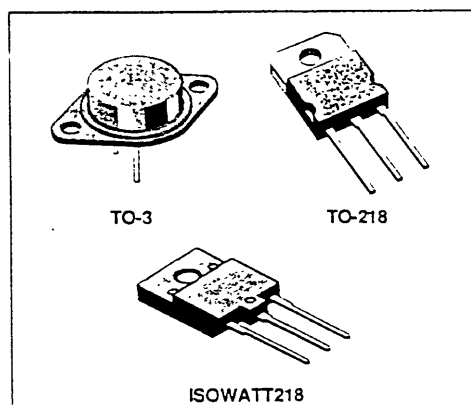


359-403

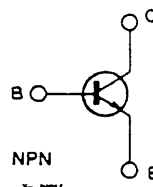
BU208/508/508FI BU208A/508A/508AFI

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_{EBO}	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	
$R_{\theta J \text{ case}}$	Thermal Resistance Junction-case	Max	1	1	2.08	$^{\circ}\text{C/W}$

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

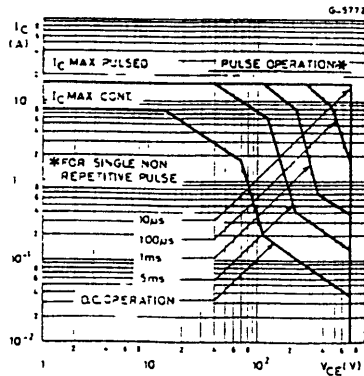
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cutoff Current ($V_{\text{BE}} = 0$)	$V_{\text{CE}} = V_{\text{CES}}$ $V_{\text{CE}} = V_{\text{CES}}$ $T_{\text{C}} = 125^{\circ}\text{C}$			1 2	mA mA
I_{EBO}	Emitter Cutoff Current ($I_{\text{C}} = 0$)	$V_{\text{EB}} = 5\text{V}$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

INDUCTIVE LOAD

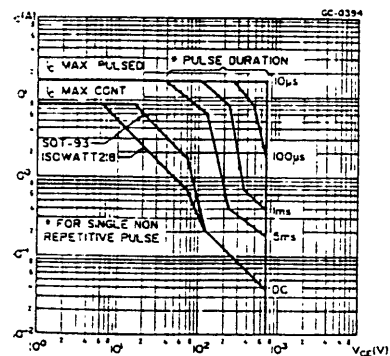
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
t_{s}	Storage Time	$I_{\text{C}} = 4.5\text{A}$ $h_{\text{FE}} = 2.5$ $V_{\text{CC}} = 140\text{V}$		7		μs
t_{f}	Fall Time	$L_{\text{C}} = 0.9\text{mH}$ $L_{\text{B}} = 3\mu\text{H}$		0.55		μs

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

Safe Operating Area (TO-3).



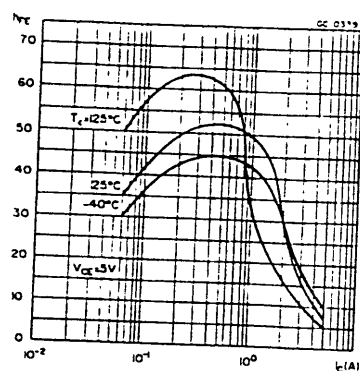
Safe Operating Area (TO-218/ISOWATT218).



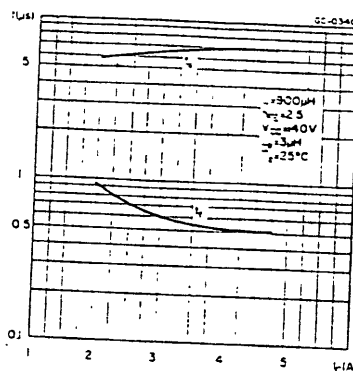
SEMELAB LIMITED

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

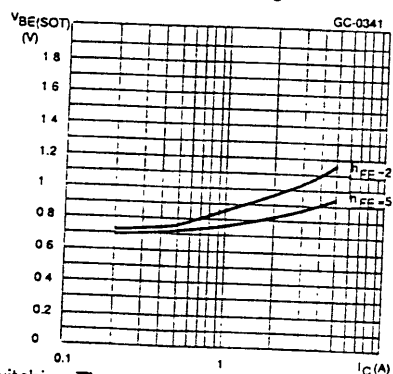
DC Current Gain.



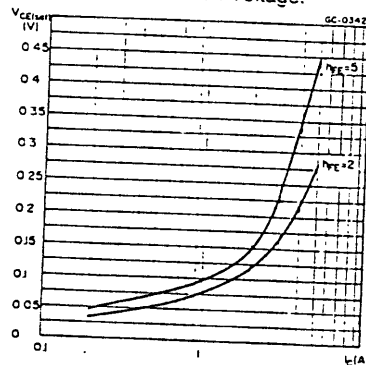
Switching Time Inductive Load.



Base-emitter Saturation Voltage.



Collector-emitter Saturation Voltage.



Switching Time Inductive Load.

