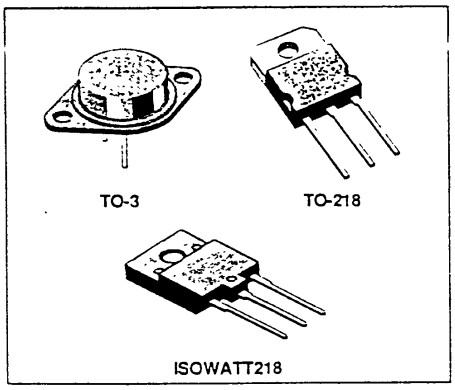
359-403

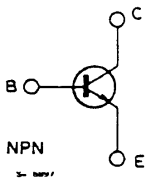
BU208/508/508FI
BU208A/508A/508AFI

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_{CEO}	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°C	150	125	60	W
T_{stg}	Storage Temperature	– 65 to 175	– 65 to 150	– 65 to 150	°C
T_j	Max. Operating Junction Temperature	175	150	150	°C

THERMAL DATA

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

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise specified)

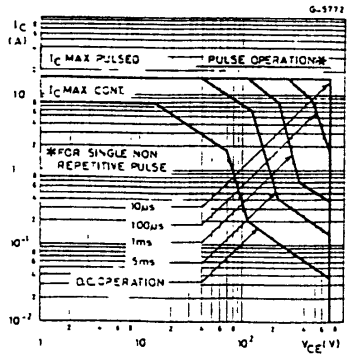
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cutoff Current (V_{BE} = 0)	V_{CE} = V_{CES} T_C = 125°C V_{CE} = V_{CES}			1 2	mA mA
I_{EBO}	Emitter Cutoff Current (I_C = 0)	V_{EB} = 5V			100	µA
$V_{CEO\ sus}$*	Collector Emitter Sustaining Voltage	I_C = 100mA	700			V
V_{EBO}	Emitter-base Voltage (I_C = 0)	I_E = 10mA	10			V
$V_{CE\ sat}$*	Collector-emitter Saturation Voltage	I_C = 4.5A I_B = 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_B = 2A			1.3	V
f_T	Transition Frequency	I_C = 0.1A V_{CE} = 5V f = 5MHz		7		MHz

INDUCTIVE LOAD

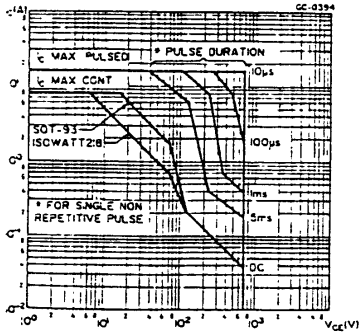
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit.
t_s	Storage Time	I_C = 4.5A h_{FE} = 2.5 V_{CC} = 140V		7		µs
t_f	Fall Time	L_C = 0.9mH L_B = 3µH		0.55		µs

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

Safe Operating Area (TO-3).

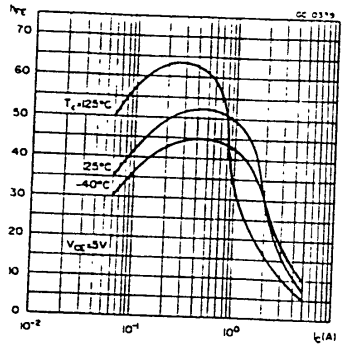


Safe Operating Area (TO-218/ISOWATT218).

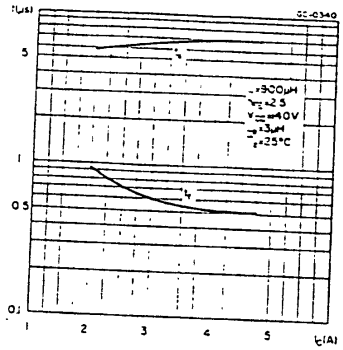


BU208/508/508FI-BU208A/508A/508AFI

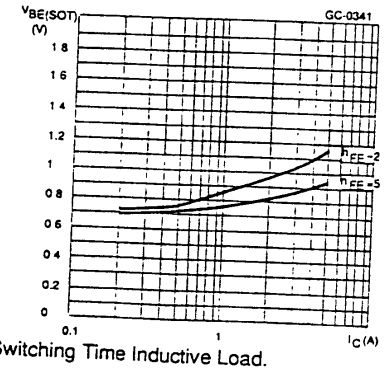
DC Current Gain.



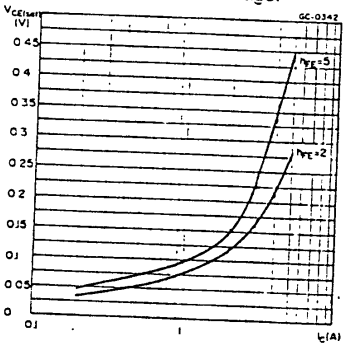
Switching Time Inductive Load.



Base-emitter Saturation Voltage.



Collector-emitter Saturation Voltage.



Switching Time Inductive Load.