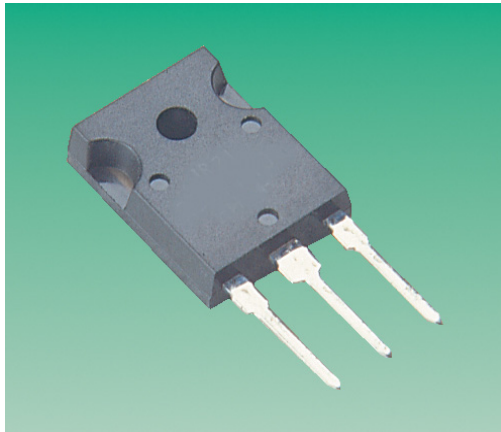


BU508A, 508D

Horizontal Deflection Transistors



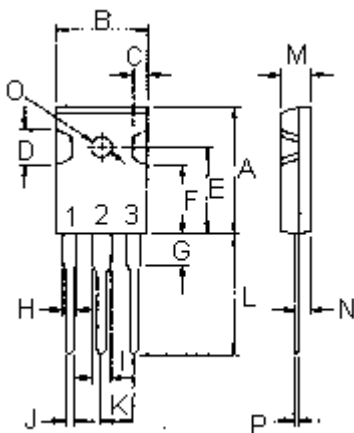
High Voltage Switching



Specifically designed for use in large screen colour deflection circuits.

Features:

- Collector-Emitter Sustaining Voltage -
 $V_{CEX} = 1500V$ (Minimum) - BU508A, BU508D.
- Glassivated Base-Collector Junction.



Pin 1. Base
2. Collector
3. Emitter

Dimensions	Minimum	Maximum
A	20.63	22.38
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	4.20	4.50
H	1.82	2.46
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.50	21.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.55	0.70

Dimensions : Millimetres

NPN
BU508A
BU508D

5 Ampere
Power
Transistors
1500 Volts
125 Watts



TO-247(3P)

BU508A, 508D

Horizontal Deflection Transistors



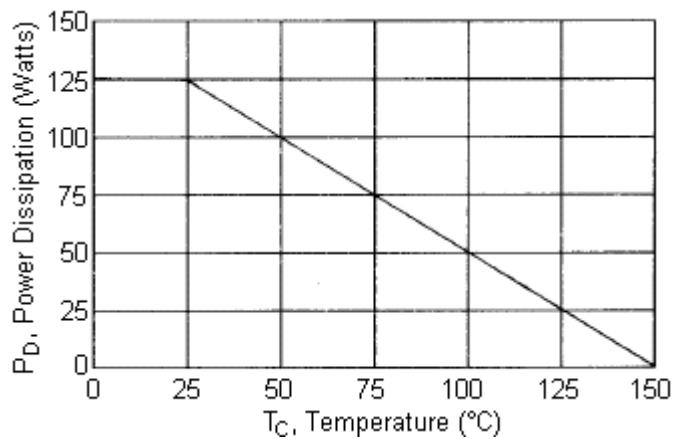
Maximum Ratings

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	700	V
Collector-Emitter Voltage ($V_{BE} = 0$)	V_{CES}	1500	
Emitter-Base Voltage	V_{EBO}	5.0	
Collector Current-Continuous -Peak	I_C	5.0 8.0	A
Base Current-Continuous	I_B	2.5	
Total Power Dissipation at $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	125 1.0	W $\text{W}/^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

Thermal Characteristics

Characteristic	Symbol	Maximum	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	1.0	$^\circ\text{C}/\text{W}$

Figure - 1 Power Derating



BU508A, 508D

Horizontal Deflection Transistors



Electrical Characteristics ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Minimum	Maximum	Unit	
OFF Characteristics					
Collector-Emitter Sustaining Voltage (1) ($I_C = 100\text{mA}$, $I_B = 0$)	$V_{CE(sus)}$	700	-	V	
Collector Cut off Current ($V_{CE} = 1500\text{V}$, $V_{BE} = 0$)	I_{CES}	-	1.0	mA	
Emitter Cut off Current ($V_{EB} = 5.0\text{V}$, $I_C = 0$) BU508A BU508D	I_{EBO}	-	10 300		
ON Characteristics (1)					
Collector-Emitter Saturation Voltage ($I_C = 4.5\text{A}$, $I_B = 2.0\text{A}$) BU508A, BU508D	$V_{CE(sat)}$	-	1.0	V	
Base-Emitter Saturation Voltage ($I_C = 4.5\text{A}$, $I_B = 2.0\text{A}$)	$V_{BE(sat)}$	-	1.5		
Diode Forward Voltage ($I_F = 4.0\text{A}$) BU508D	V_F	-	2.0		
Dynamic Characteristics					
Current Gain-Bandwidth Product ($I_C = 0.1\text{A}$, $V_{CE} = 5.0\text{V}$, $f = 1.0\text{MHz}$)	f_T	4.0 (Typical)	-	MHz	
Output Capacitance ($V_{CE} = 10\text{V}$, $I_E = 0$, $f = 1.0\text{MHz}$)	C_{ob}	125 (Typical)	-	pF	
Switching Characteristics					
Storage Time	$I_C = 4.5\text{A}$, $I_{B1} = 1.4\text{A}$, $L_B = 10\mu\text{H}$	t_s	7.0 (Typical)	-	μs
Fall Time		t_f	1.0 (Typical)	-	

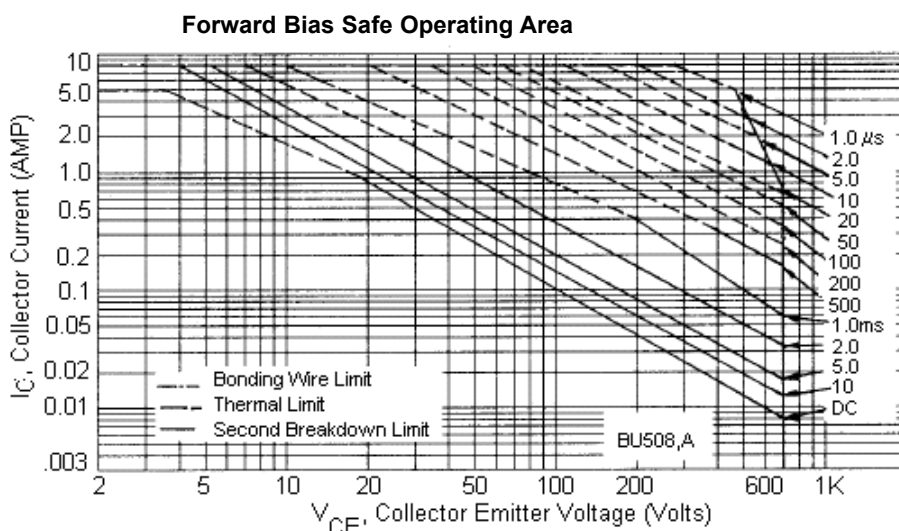
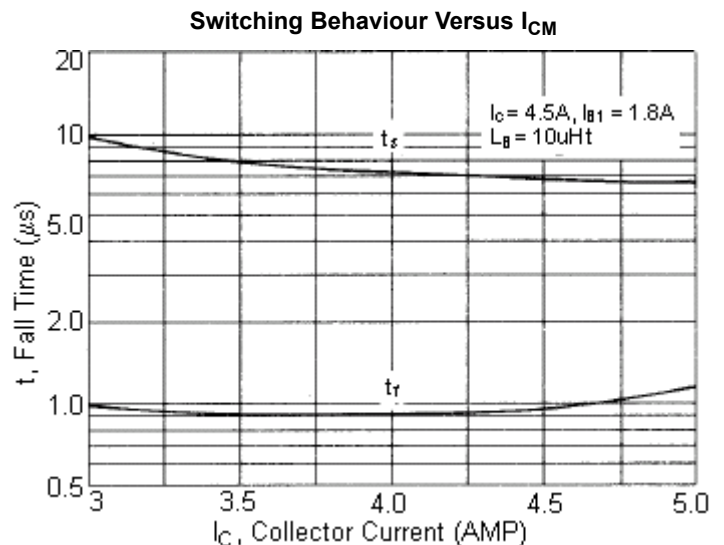
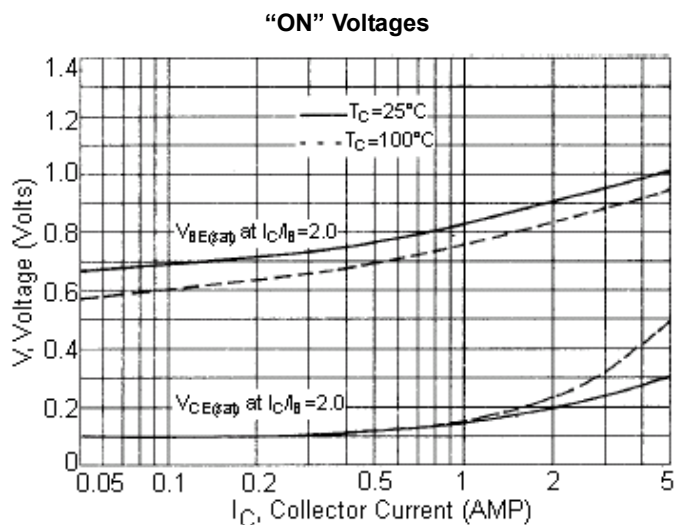
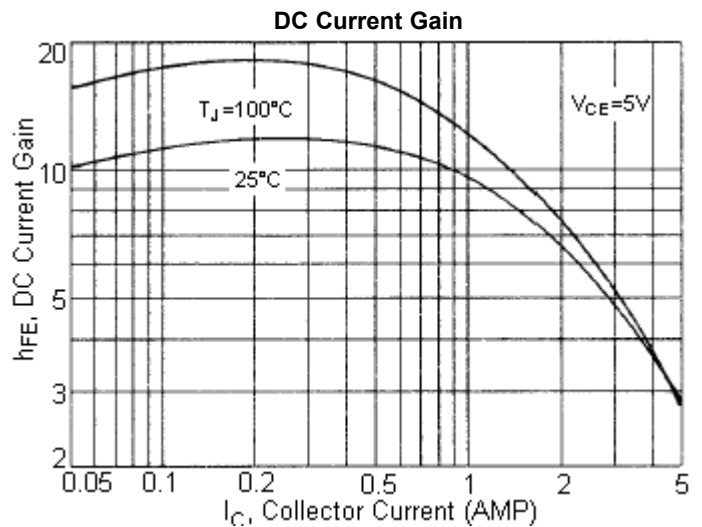
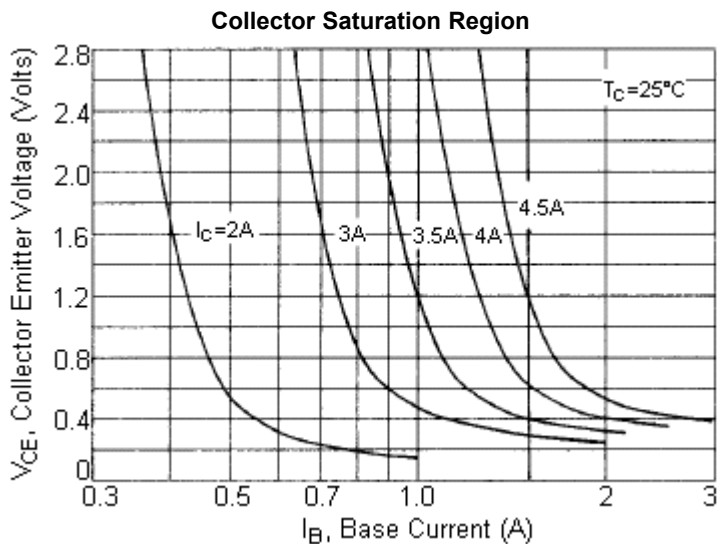
(1) Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

BU508A, 508D

Horizontal Deflection Transistors



BU508A

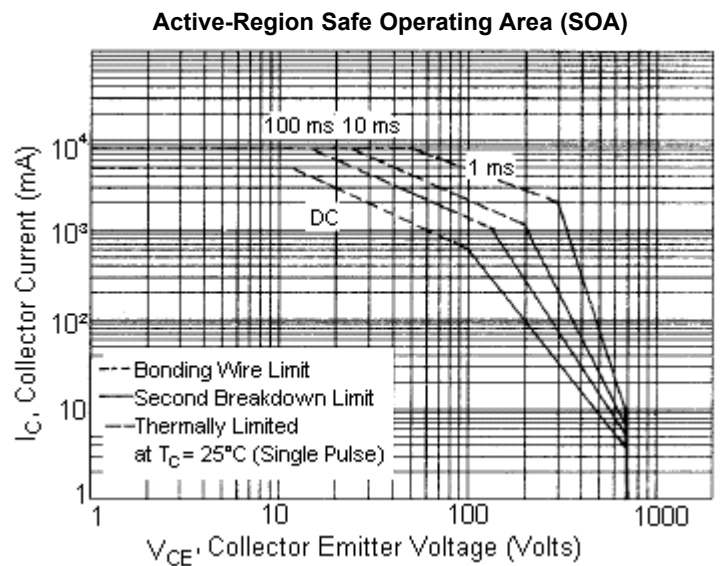
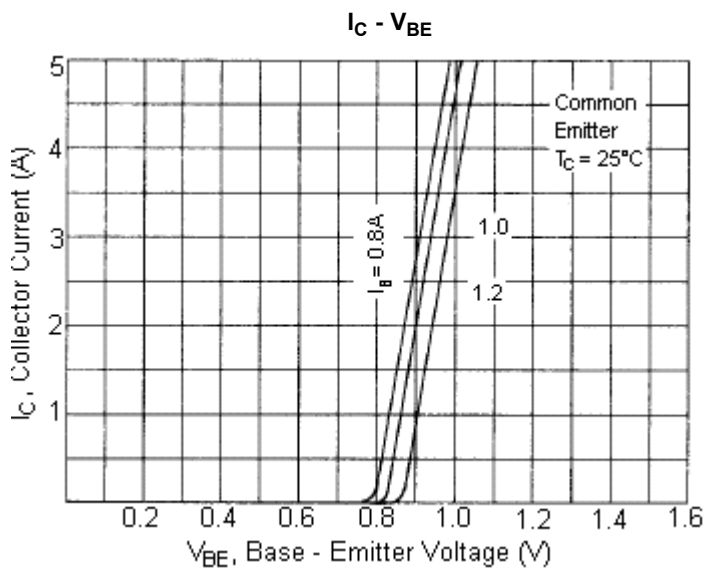
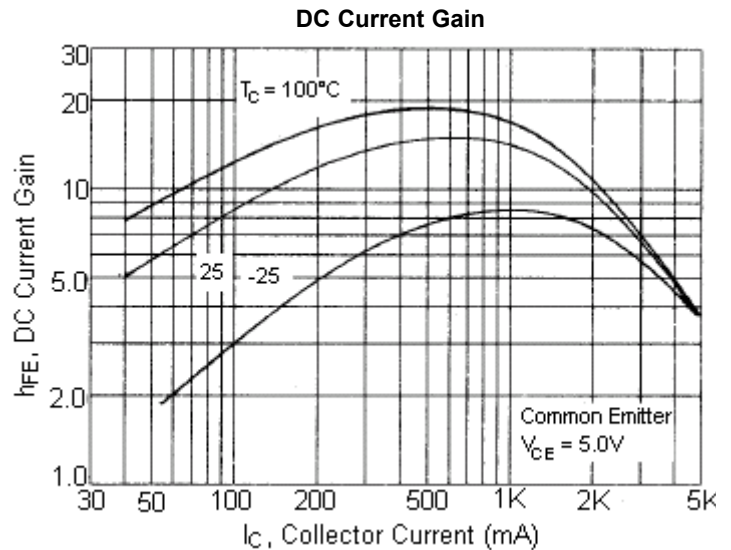
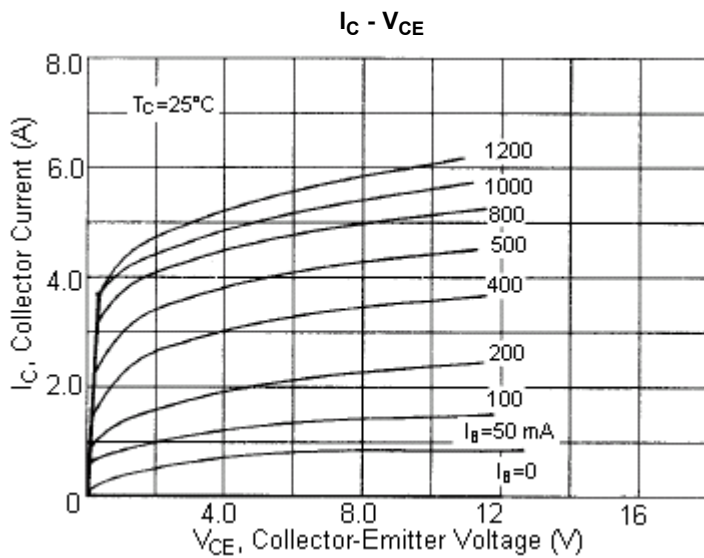


BU508A, 508D

Horizontal Deflection Transistors



BU508D



Specifications

$I_{C(av)}$ maximum (A)	V_{CEO} maximum (V)	V_{CES} maximum (V)	$V_{CE(Sat)}$ (V) at $I_C = 4.5\text{A}$	P_{tot} at 25°C (W)	Package	Type	Part Number
5	700	1500	1	125	TO-247	NPN	BU508A
							BU508D



BU508A, 508D

Horizontal Deflection Transistors



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