



HORIZONTAL DEFLECTION TRANSISTOR

NPN BU508A

8A 1500V

Technical Data

...designed for use in large screen color deflection circuits.

- ☞ Collector-Emitter Voltage- $V_{CES}=1500V_{dc}$
- ☞ Low Thermal Resistance $1\text{ }^{\circ}\text{C/W}$ increased Reliability
- ☞ TO-218 Package for Low Cost Mounting
- ☞ Switching Times with Inductive Loads,
 $T_f=0.5\mu s(\text{Typ})@I_C=4.5A$

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector- Emitter Voltage	V_{CEO}	700	Vdc
Collector- Emitter Voltage	V_{CES}	1500	Vdc
Emitter Base Voltage	V_{EB}	5	Vdc
Collector Current – Continuous	I_C	8	Adc
-- Peak(1)	I_{CM}	15	
Base Current – continuous	I_B	4	Adc
-- Peak(1)	IBM	6	
<i>Total Power Dissipation @ TC = 25°C</i>	PD	125	Watts
Derate above 25°C		1	W/°C
Operating and Storage junction Temperature Range	T_j, T_{stg}	-65 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Thermal resistance junction to case	R_{thjc}	1.0	°C/W



ELECTRICAL CHARACTERISTICS : [Tc = 25 °C unless otherwise noted]

Characteristic	Symbol	Min	Typ	Max	Unit
* Off Characteristics :					
Collector–Emitter Sustaining Voltage (1) [Ic =100 mAdc, IB = 0]	V _{CEO(sus)}	700			Vdc
Collector Cutoff Current [V _{CE} = 1500 Vdc, V _{BE} = 0]	I _{CES}			0.1	mAdc
Emitter Base Leakage [V _{EB} = 6V, Ic = 0]	I _{EBO}			10	mAdc
* On Characteristics (1):					
DC Current Gain [Ic = 2.0 Adc , V _{CE} = 4.0 Vdc]	h _{FE}	2.25			
Collector-Emitter Saturation Voltage [Ic = 4.5 Adc , IB = 2Adc)	V _{CE(sat)}			1	Vdc
Base-Emitter Saturation Voltage [Ic = 4.5 Adc , IB = 2Adc]	V _{BE(sat)}			1.3	Vdc
Dynamic Characteristics :					
Current Gain – Bandwidth Product [Ic = 0.1Adc, V _{CE} =5 Vdc, ftest=1.0 MHz]	f _T	---	7	--	MHz
Output Capacitance (VCB=10Vdc,IE=0,f=0.1MHz)	C _{OB}	--	125	--	pF
SWITCHING CHARACTERISTICS					
Fall Time (Ic=4.5Adc,IB1=1.8Adc,LB=10 μ H)	tf	---	0.5	---	μ s
	ts		8		μ s

(1) Pulse Test : Pulse Width =5ms , Duty Cycle < 10.0%