

HORIZONTAL DEFLECTION TRANSISTOR

NPN BU205 2.5A 36W

Technical Data

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

- ☞ Collector-Emitter Voltage- $V_{CEX}=1500Vdc$
- ☞ Glassivated Base-Collector Junction
- ☞ TO-3 Package
- ☞ Switching Times with Inductive Loads, $t_f=0.65 \mu s$ (typ)@ $I_C=2A$

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector- Emitter Voltage	V_{CEO}	700	Vdc
Collector- Emitter Voltage	V_{CEX}	1500	Vdc
Emitter Base Voltage	V_{EB}	5	Vdc
Collector Current – Continuos	I_C	2.5	Adc
Peak(1)	I{CM}	3	Adc
Base Current – peak(1)	I_{BM}	2.5	Adc
<u>Total Power Dissipation @</u> <u>TC = 25°C</u> Derate above 25°C	PD	36W 0.4	Watts W/°C
Operating and Storage junction Temperature Range	T_j, T_{stg}	-65 to +115	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Thermal resistance junction to case	R_{thjc}	2.5	°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}			1	mAdc
Emitter Base Voltage [I _E = 10mA, Ic = 0]	BV _{EBO}	5			Vdc
* On Characteristics (1):					
DC Current Gain [Ic = 2.0 Adc , V _{CE} = 4.0 Vdc]	h _{FE}	2.25			
Collector-Emitter Saturation Voltage [Ic = 2.0 Adc , IB = 1Adc)	V _{CE(sat)}			5	Vdc
Base-Emitter Saturation Voltage [Ic = 2.0 Adc , IB = 1Adc]	V _{BE(sat)}			1.5	Vdc
Dynamic Characteristics :					
Current Gain – Bandwidth Product [Ic = 0.1Adc, V _{CE} =5 Vdc, ftest=1.0 MHz]	f _T	---	4	--	MHz
Output Capacitance (VCB=10Vdc,IE=0,f=1MHz)	C _{OB}	--	50	--	pF
SWITCHING CHARACTERISTICS					
Fall Time (Ic=2Adc,IB1=1Adc,LB=25♻H)	tf	---	0.65	---	♻s

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