

# HIGH VOLTAGE POWER TRANSISTOR

The BU326 and BU326A Type are a fast switching high voltage transistor, more specially intended for operating in color TV receivers chopper supplies.

## FEATURES:

- \* Collector-Emitter Sustaining Voltage -  
 $V_{CE(sus)} = 375 \text{ V (Min.) - BU326}$   
 $= 400 \text{ V (Min.) - BU326A}$
- \* Low Collector-Emitter Saturation Voltage -  
 $V_{CE(sat)} = 1.5 \text{ V (Max.) @ } I_C = 2.5 \text{ A, } I_B = 0.5 \text{ A}$

Boca Semiconductor Corp.

BSC

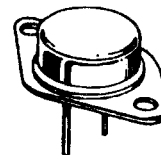
<http://www.bocasemi.com>

**NPN**  
**BU326**  
**BU326A**

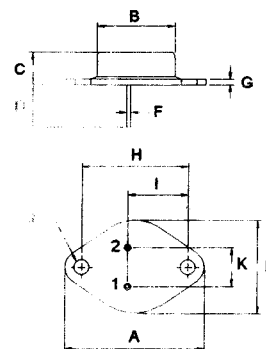
**6 AMPERE**  
**POWER**  
**TRANSISTORS**  
**375-400 VOLTS**  
**75 WATTS**

## MAXIMUM RATINGS

Characteristic	Symbol	BU326	BU326A	Unit
Collector-Emitter Voltage	$V_{CEO}$	375	400	V
Collector-Base Voltage	$V_{CBO}$	800	900	V
Emitter-Base Voltage	$V_{EBO}$	10		V
Collector Current - Continuous - Peak	$I_C$	6.0 8.0		A
Base Current - Continuous	$I_B$	3.0		A
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	75 0.428		W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	- 65 to +200		$^\circ\text{C}$



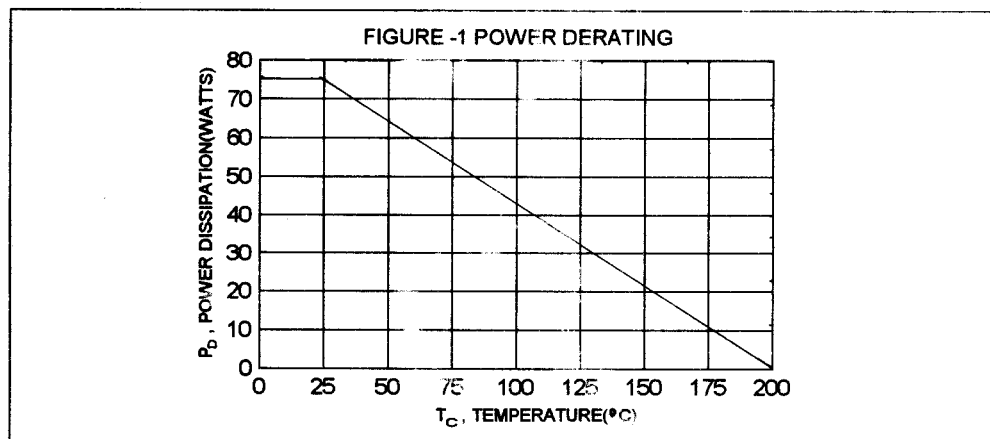
TO-3



PIN 1. BASE  
 2. EMITTER  
 COLLECTOR(CASE)

## THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	2.33	$^\circ\text{C/W}$



DIM	MILLIMETERS	
	MIN	MAX
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18

**ELECTRICAL CHARACTERISTICS (  $T_c = 25^\circ\text{C}$  unless otherwise noted )**

Characteristic	Symbol	Min	Max	Unit
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**OFF CHARACTERISTICS**

Collector - Emitter Sustaining Voltage (1) ( $I_C = 100\text{ mA}$ , $I_B = 0$ )	BU326 BU326A	$V_{CEO(sus)}$	375 400	V
Collector Cutoff Current ( $V_{CE} = 800\text{ V}$ , $V_{BE} = 0$ ) ( $V_{CE} = 900\text{ V}$ , $V_{BE} = 0$ )	BU326 BU326A	$I_{CES}$	1.0 1.0	mA
Emitter Cutoff Current ( $V_{EB} = 10\text{ V}$ , $I_C = 0$ )		$I_{EBO}$	10	mA

**ON CHARACTERISTICS (1)**

DC Current Gain ( $I_C = 1.0\text{ A}$ , $V_{CE} = 5.0\text{ V}$ )		hFE	25(typ)	
Collector - Emitter Saturation Voltage ( $I_C = 2.5\text{ A}$ , $I_B = 0.5\text{ A}$ ) ( $I_C = 4.0\text{ A}$ , $I_B = 1.25\text{ A}$ )		$V_{CE(sat)}$	1.5 3.0	V
Base - Emitter Saturation Voltage ( $I_C = 2.5\text{ A}$ , $I_B = 0.5\text{ A}$ ) ( $I_C = 4.0\text{ A}$ , $I_B = 1.25\text{ A}$ )		$V_{BE(sat)}$	1.4 1.6	V

**DYNAMIC CHARACTERISTICS**

Current Gain - Bandwidth Product ( $I_C = 0.2\text{ A}$ , $V_{CE} = 10\text{ V}$ , $f = 1.0\text{ MHz}$ )		$f_T$	4.0	MHz
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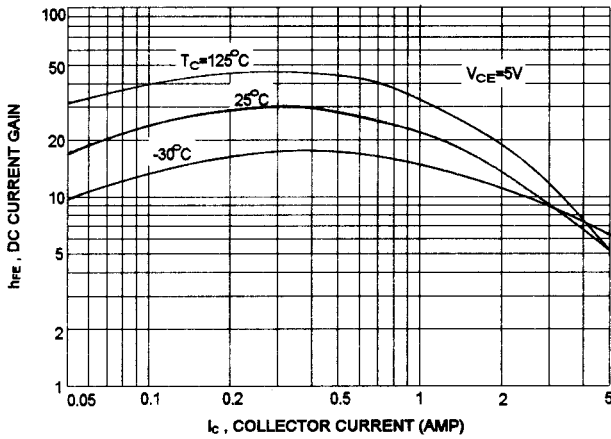
**SWITCHING CHARACTERISTICS**

Turn On Time	$V_{CC} = 250\text{ V}$ , $I_C = 2.5\text{ A}$ $I_{B1} = 0.5\text{ A}$ , $I_{B2} = -1\text{ A}$	$t_{on}$	0.5	us
Storage Time		$t_s$	3.5	us
Fall Time		$t_f$	0.5	us

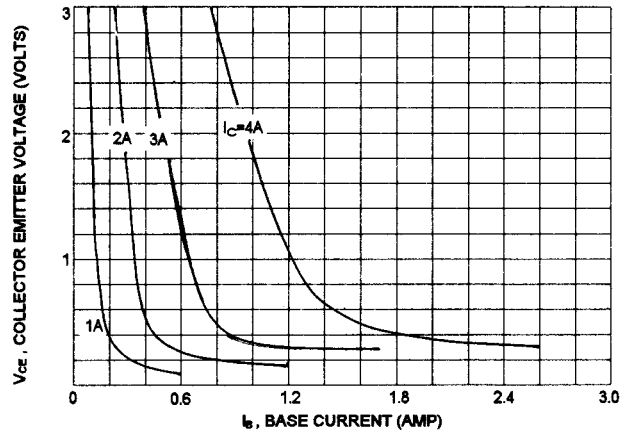
(1) Pulse Test: Pulse width  $\leq 300\text{ us}$ , Duty Cycle  $\leq 2.0\%$

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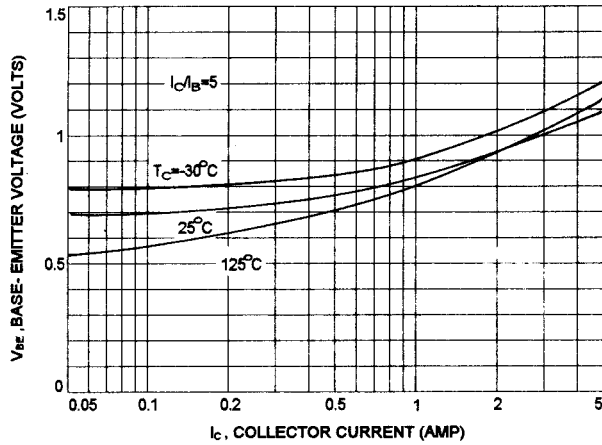
**DC CURRENT GAIN**



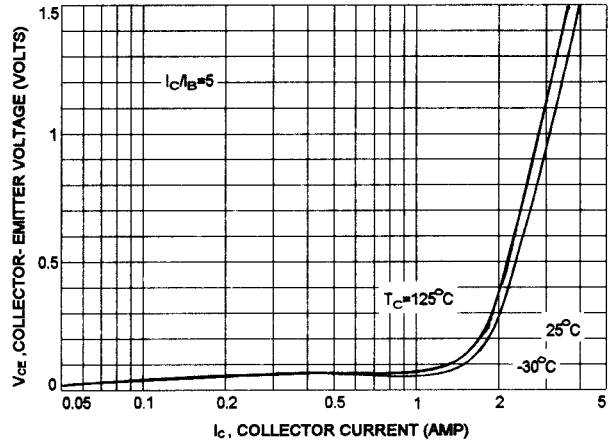
**COLLECTOR SATURATION REGION**



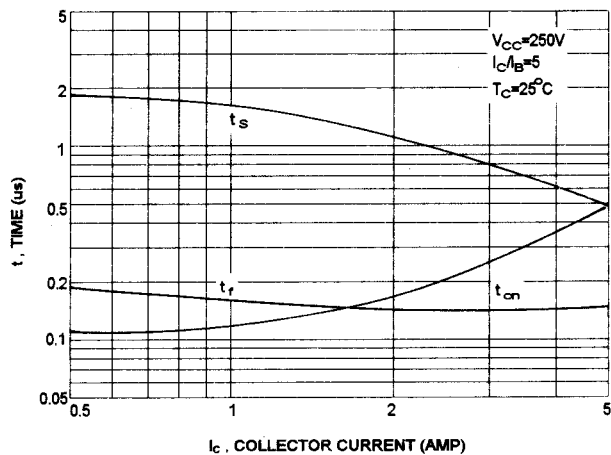
**BASE-EMITTER VOLTAGE**



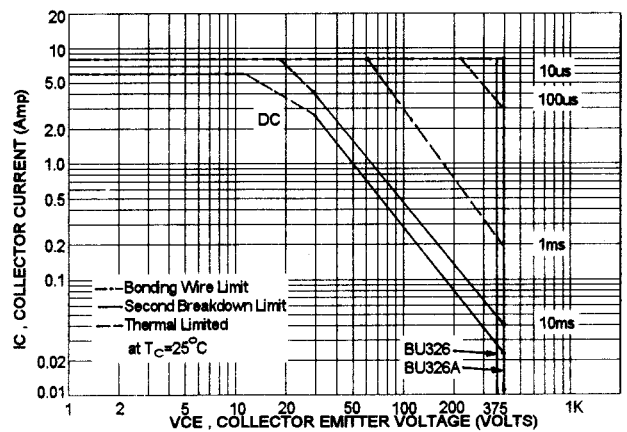
**COLLECTOR-EMITTER VOLTAGE**



**SWITCHING TIME**



**SAFE OPERATING AREA**



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