

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

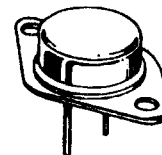
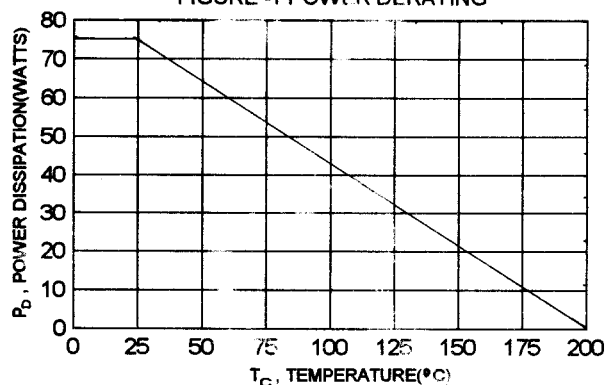
MAXIMUM RATINGS

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°C	P_D	75 0.428		W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	- 65 to +200		$^\circ\text{C}$

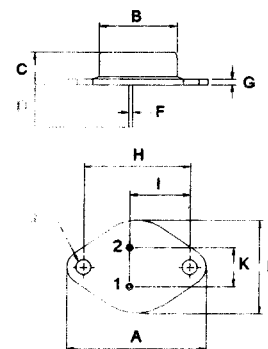
THERMAL CHARACTERISTICS

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

FIGURE -1 POWER DERATING



TO-3



PIN 1. BASE
2. EMITTER
COLLECTOR (CASE)

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
----------------	--------	-----	-----	------

OFF CHARACTERISTICS

Collector - Emitter Sustaining Voltage (1) ($I_C = 100\text{ mA}$, $I_B = 0$) BU326 BU326A	$V_{CE(sus)}$	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 ($I_C = 1.0\text{ A}$, $V_{CE} = 5.0\text{ V}$)	h_{FE}	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

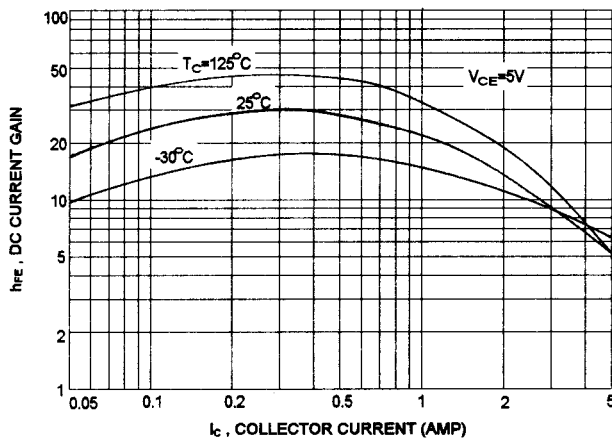
Current Gain - Bandwidth Product ($I_C = 0.2\text{ A}$, $V_{CE} = 10\text{ V}$, $f = 1.0\text{ MHz}$)	f_T	4.0		MHz
--	-------	-----	--	-----

SWITCHING CHARACTERISTICS

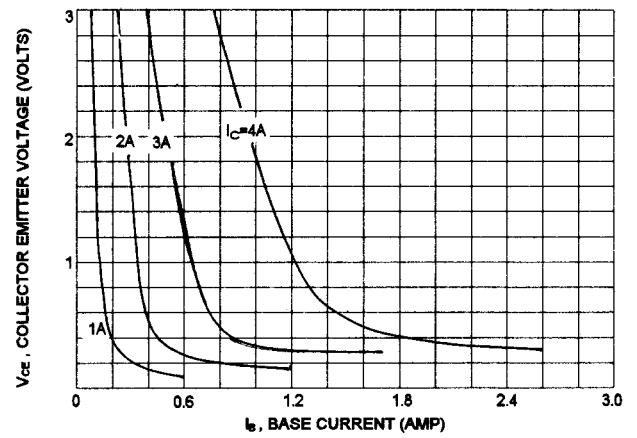
Turn On Time	$V_{CC} = 250\text{ V}$, $I_C = 2.5\text{ A}$ $I_{B1} = 0.5\text{ A}$, $I_{B2} = -1\text{ A}$	t_{on}		0.5	us
Storage Time		t_s		3.5	us
Fall Time		t_f		0.5	us

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

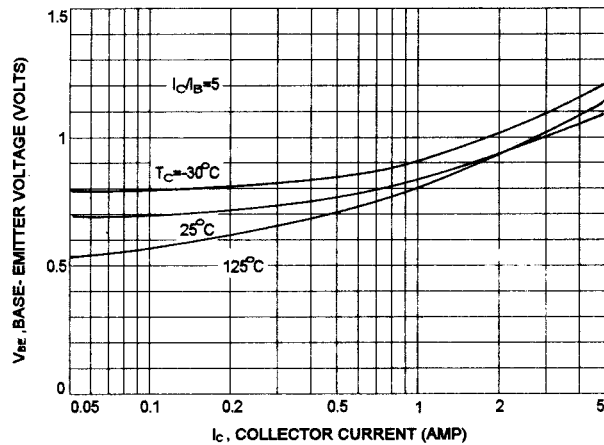
DC CURRENT GAIN



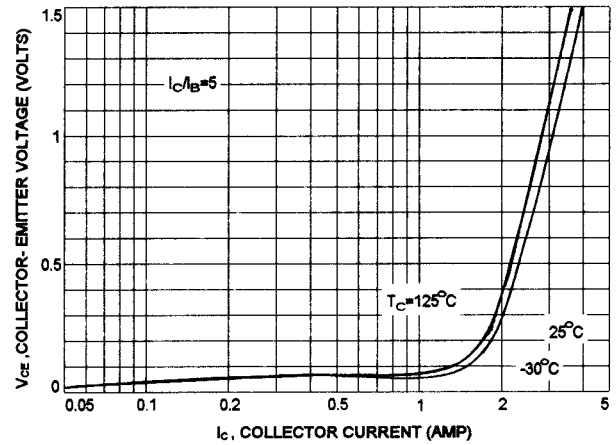
COLLECTOR SATURATION REGION



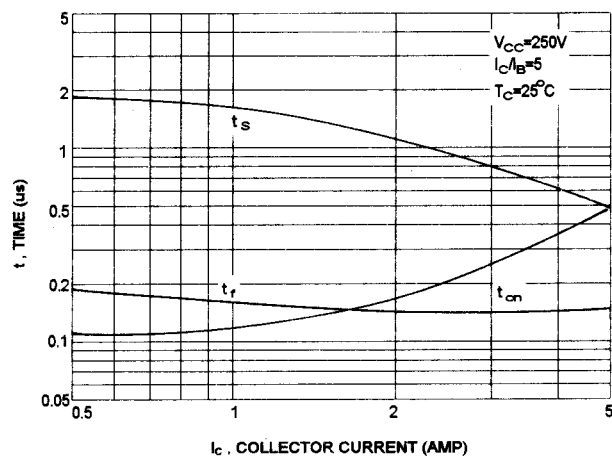
BASE-EMITTER VOLTAGE



COLLECTOR-EMITTER VOLTAGE



SWITCHING TIME



SAFE OPERATING AREA

