MOSPEC

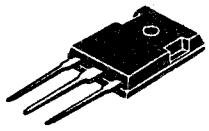
HIGH VOLTAGE POWER TRANSISTOR

The BU426 and BU426A Type are a fast switching high voltage transistor,more specially intended for operating in color TV supply systems.

NPN
BU426
BU426A

6.0 AMPERE
POWER
TRANSISTORS
375-400 VOLTS
113 WATTS

FEATURES:
* Collector-Emitter Sustaining Voltage -
  $V_{CEO(SUS)}$ = 375 V (Min.) - BU426
  = 400 V (Min.) - BU426A
* Low Collector-Emitter Saturation Voltage -
  $V_{CE(sat)}$ = 1.5V (Max.) @ I_C = 2.5 A, I_B = 0.5 A



TO-247(3P)

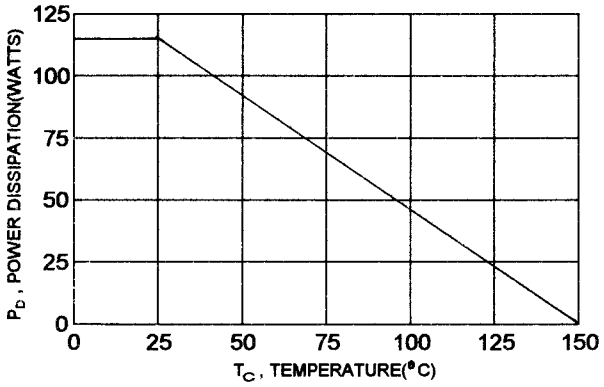
MAXIMUM RATINGS

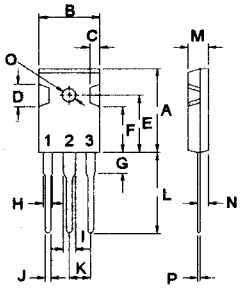
Characteristic	Symbol	BU326	BU326A	Unit
Collector-Emitter Voltage	V_{CEO}	375	400	V
Collector-Base Voltage	V_{CBO}	800	900	V
Emitter-Base Voltage	V_{EBO}	10		V
Collector Current - Continuous - Peak	I_C	6.0 8.0		A
Base Current - Continuous	I_B	3.0		A
Total Power Dissipation @T_C=25°C Derate above 25°C	P_D	113 0.904		W 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	Rθjc	1.106	°C/W

FIGURE -1 POWER DERATING





PIN 1.BASE
2.COLLECTOR
3.EMITTER

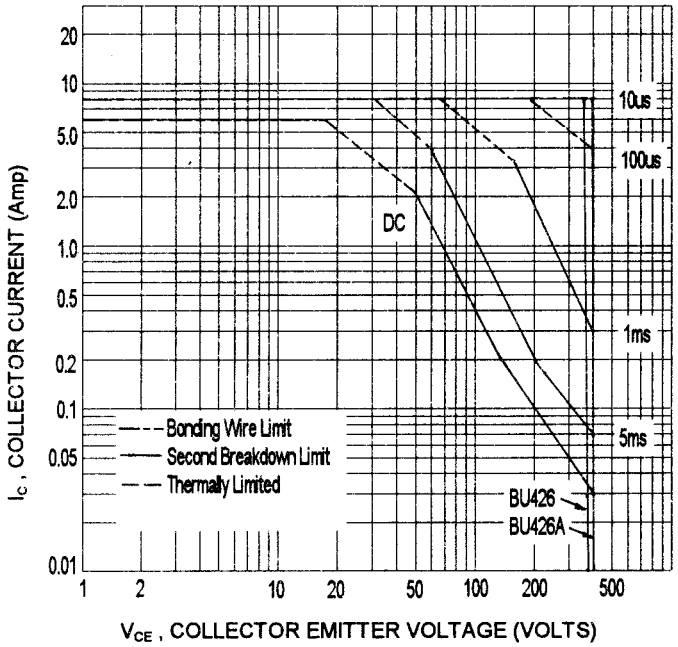
DIM	MILLIMETERS	
	MIN	MAX
A	20.63	22.38
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	4.20	4.50
H	1.82	2.46
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.50	21.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.55	0.70

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector - Emitter Sustaining Voltage (1) (I_C = 100 mA, I_B = 0)	BU426 BU426A	$V_{CEO(SUS)}$	 375 400		V
Collector Cutoff Current (V_{CE} = 800 V, V_{BE}= 0) (V_{CE} = 900 V, V_{BE} = 0)	 BU426 BU426A	I_{CES}		 1.0 1.0	mA
Emitter Cutoff Current (V_{EB}= 10 V , I_C = 0)		I_{EBO}		 10	mA
ON CHARACTERISTICS (1)					
DC Current Gain (I_C=0.6 A , V_{CE} = 5.0 V)		hFE	 8.0		
Collector - Emitter Saturation Voltage (I_C =2.5 A, I_B = 0.5 A) (I_C =4.0 A, I_B = 1.25 A)		$V_{CE(sat)}$		 1.5 3.0	V
Base - Emitter Saturation Voltage (I_C =2.5 A, I_B = 0.5 A) (I_C =4.0 A, I_B = 1.25 A)		$V_{BE(sat)}$		 1.4 1.6	V
DYNAMIC CHARACTERISTICS					
Current Gain - Bandwidth Product (I_C = 0.2 A , V_{CE} = 10 V , f = 1.0 MHz)		f_T	4.0		MHz
SWITCHING CHARACTERISTICS					
Turn On Time	V_{CC}= 250V,I_C= 2.5A I_{B1}= 0.5A,I_{B2}= -1A	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 us , Duty Cycle $\leq$ 2.0%

ACTIVE-REGION SAFE OPERATING AREA (SOA)



There are two limitation on the power handling ability of a transistor:average junction temperature and second breakdown safe operating area curves indicate I_C-V_{CE} limits of the transistor that must be observed for reliable operation i.e., the transistor must not be subjected to greater dissipation than curves indicate.

The data of SOA curve is base on $T_{J(PK)}$=150 °C;T_C is variable depending on conditions. second breakdown pulse limits are valid for duty cycles to 10% provided $T_{J(PK)}$≤150°C,At high case temperatures, thermal limita - tion will reduce the power that can be handled to values less than the limitations imposed by second breakdown.