

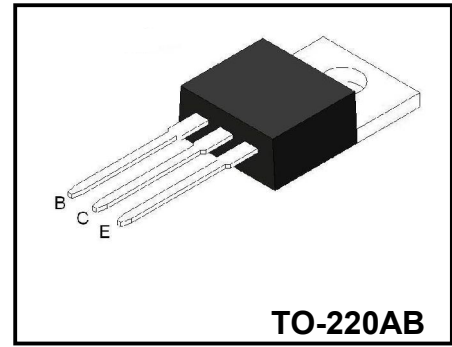
**Plastic-Encapsulate Transistors  
NPN High Voltage Switching**

**Application**

➤TV Horizontal output and switching

**Features**

➤High breakdown voltage



**Product Specification Classification**

Part Number	Package	Marking	Pack
BU406	TO-220AB	YFU BU406 XXXXX	1000PCS/box

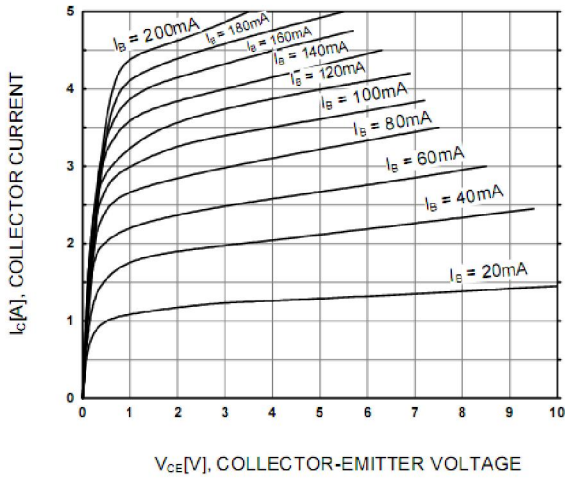
**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$BV_{CBO}$	400	V
Collector-Emitter Voltage	$BV_{CEO}$	200	V
Emitter-Base Voltage	$BV_{EBO}$	6	V
Collector Current	$I_C$	7	A
Collector Current Pulse	$I_{CP}$	10	A
Base Current	$I_B$	4	A
Collector Power Dissipation	$P_C$	60	W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~150	°C

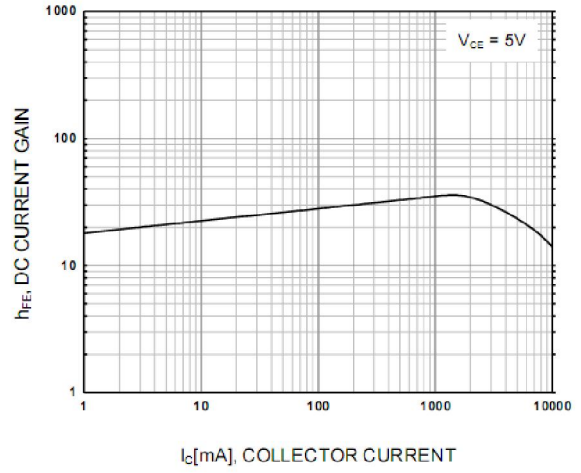
**Electrical Characteristics (Ta=25°C)**

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C = 100mA, I_B = 0$	200			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E = 1mA, I_C = 0$	6			V
Collector cut-off current	$I_{CES}$	$V_{CE} = 400V, V_{BE} = 0$			5	mA
		$V_{CE} = 200V, V_{BE} = 0$			100	μA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 6V, I_C = 0$			1	mA
DC current gain*	$h_{FE}$	$V_{CE} = 5V, I_B = 2A$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 0.5A$			1.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 0.5A$			1.2	V
Transition frequency	$f_T$	$V_{CE} = 10V, I_B = 0.5A$	10			MHz
Turn OFF Time	$t_{OFF}$	$I_C = 5A, I_B = 0.5A$			0.75	μs

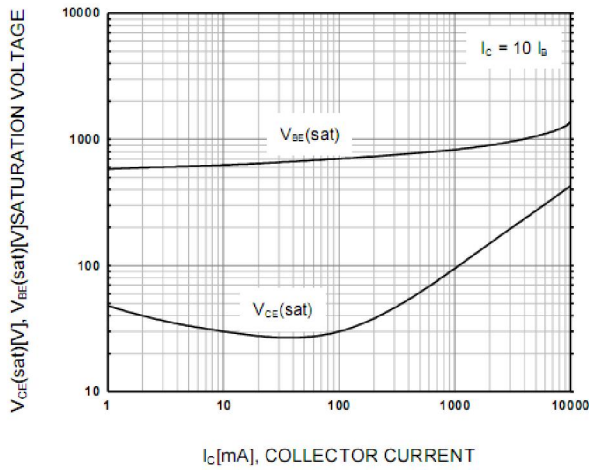
Typical Characteristic



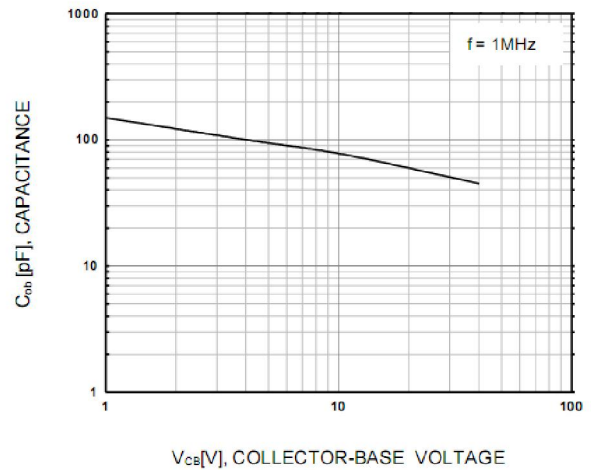
**Figure 1. Static Characteristic**



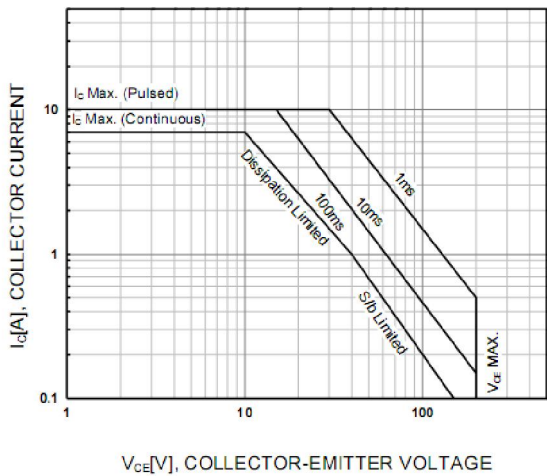
**Figure 2. DC current Gain**



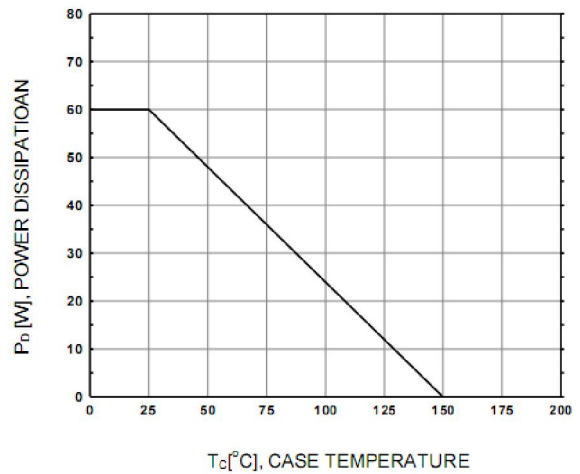
**Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



**Figure 4. Collector Output Capacitance**



**Figure 5. Safe Operating Area**



**Figure 6. Power Derating**

Package Dimensions

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.34	4.67	0.171	0.184
A1	2.52	2.82	0.099	0.111
b	0.71	0.91	0.028	0.036
b1	1.17	1.37	0.046	0.054
c	0.30	0.50	0.012	0.020
c1	1.17	1.37	0.046	0.054
D	9.90	10.20	0.390	0.402
E	8.50	8.90	0.335	0.350
E1	12.00	12.50	0.472	0.492
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	2.60	2.80	0.102	0.110
L	13.20	13.80	0.520	0.543
L1	3.80	4.20	0.150	0.165
Φ	3.60	3.96	0.142	0.156