

BU406/406H/408

High Voltage Switching

- Use In Horizontal Deflection Output Stage



TO-220
1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	7	A
I_{CP}	Collector Current (Pulse)	10	A
I_B	Base Current	4	A
P_C	Collector Dissipation	60	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
I_{CES}	Collector Cut-off Current	$V_{CE} = 400\text{V}, V_{BE} = 0$		5	mA
		$V_{CE} = 250\text{V}, V_{BE} = 0$		100	μA
		$V_{CE} = 250\text{V}, V_{BE} = 0 @ T_C=150^\circ\text{C}$		1	mA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = 6\text{V}, I_C = 0$		1	mA
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	: BU406 $I_C = 5\text{A}, I_B = 0.5\text{A}$		1	V
		: BU406H $I_C = 5\text{A}, I_B = 0.8\text{A}$		1	V
		: BU408 $I_C = 6\text{A}, I_B = 1.2\text{A}$		1	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	: BU406 $I_C = 5\text{A}, I_B = 0.5\text{A}$		1.2	V
		: BU406H $I_C = 5\text{A}, I_B = 0.5\text{A}$		1.2	V
		: BU408 $I_C = 6\text{A}, I_B = 1.2\text{A}$		1.5	V
f_T	Current Gain Bandwidth Product	$V_{CE} = 10\text{V}, I_C = 0.5\text{A}$	10		MHz
t_{OFF}	Turn OFF Time	: BU406 $I_C = 5\text{A}, I_B = 0.5\text{A}$		0.75	μs
		: BU406H $I_C = 5\text{A}, I_B = 0.8\text{A}$		0.4	μs
		: BU408 $I_C = 6\text{A}, I_B = 1.2\text{A}$		0.4	μs

Typical Characteristics

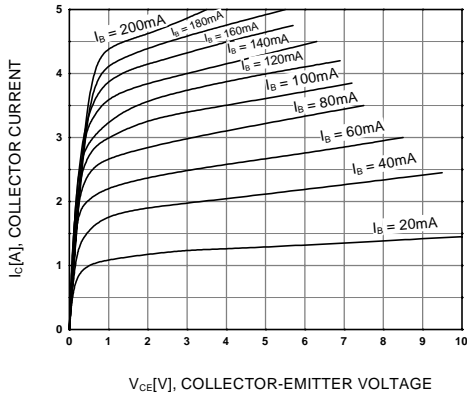


Figure 1. Static Characteristic

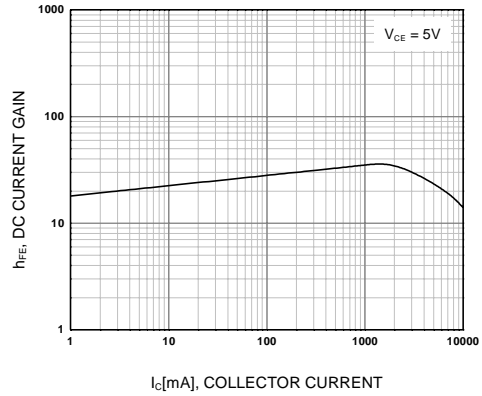


Figure 2. DC current Gain

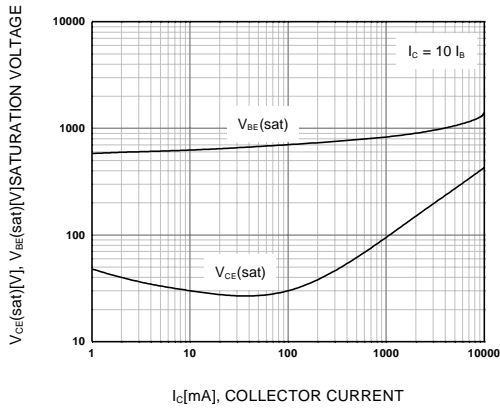


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

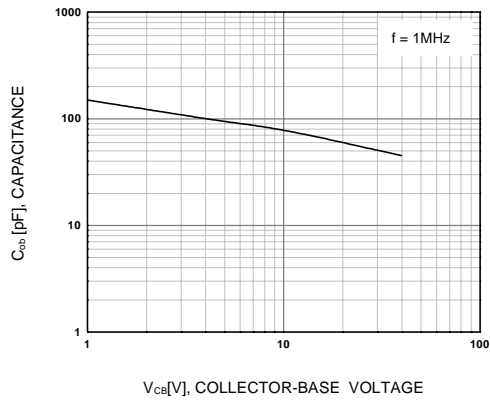


Figure 4. Collector Output Capacitance

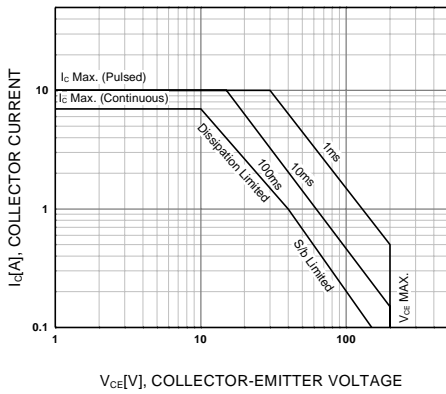


Figure 5. Safe Operating Area

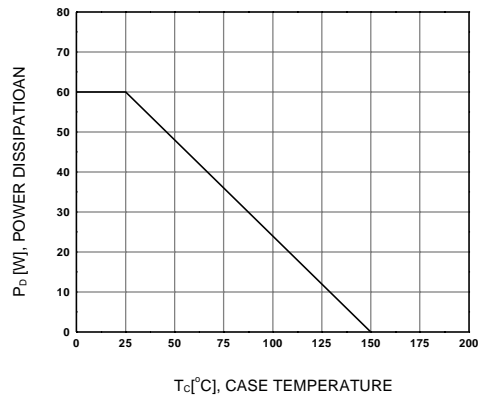


Figure 6. Power Derating

Typical Characteristics (Continued)

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Figure 7. Static Characteristic

Figure 8. DC current Gain

Package Dimensions

TO-220

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Dimensions in Millimeters

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