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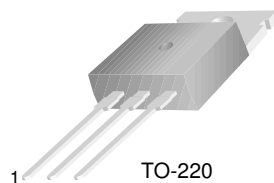
EN: This Datasheet is presented by the manufacturer.

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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

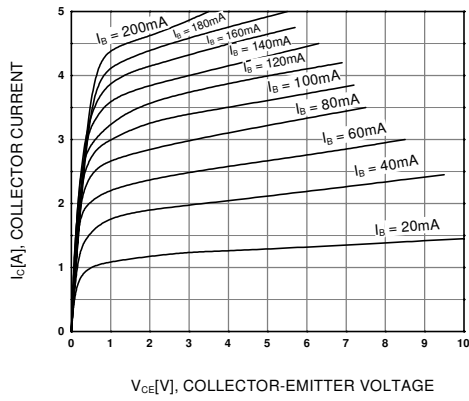


Figure 1. Static Characteristic

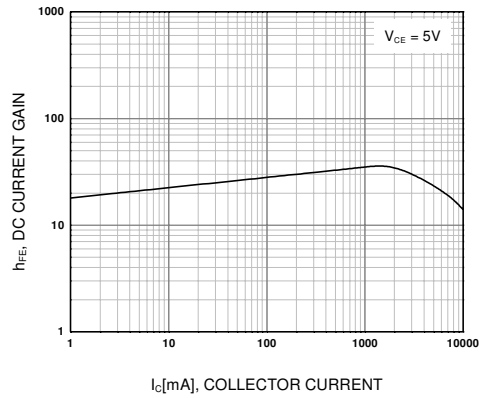


Figure 2. DC current Gain

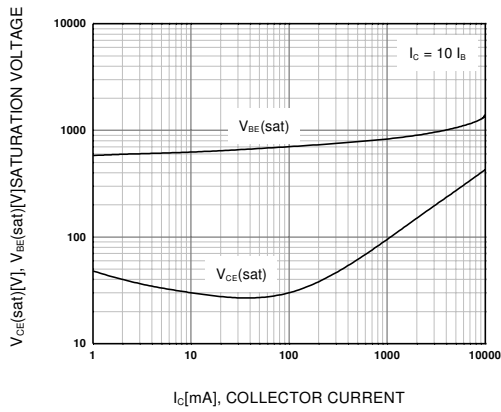


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

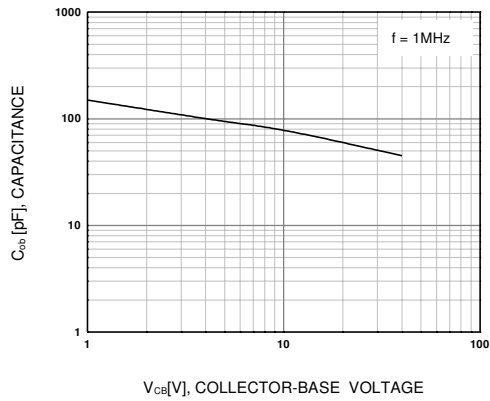


Figure 4. Collector Output Capacitance

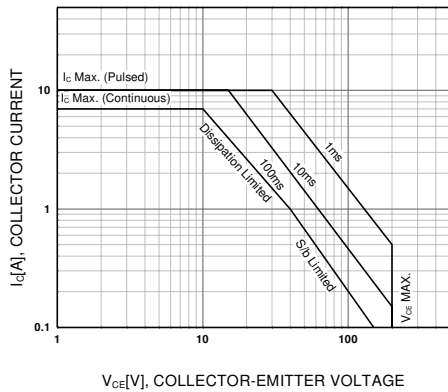


Figure 5. Safe Operating Area

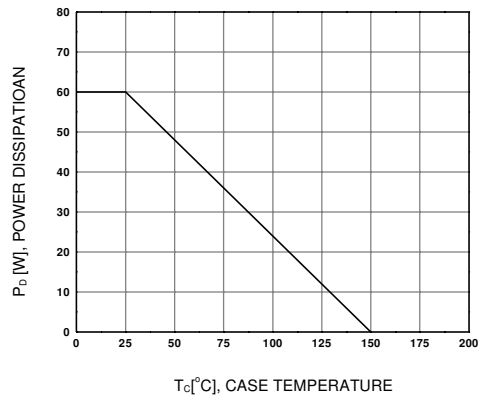


Figure 6. Power Derating

Typical Characteristics (Continued)

BU406/406H/408

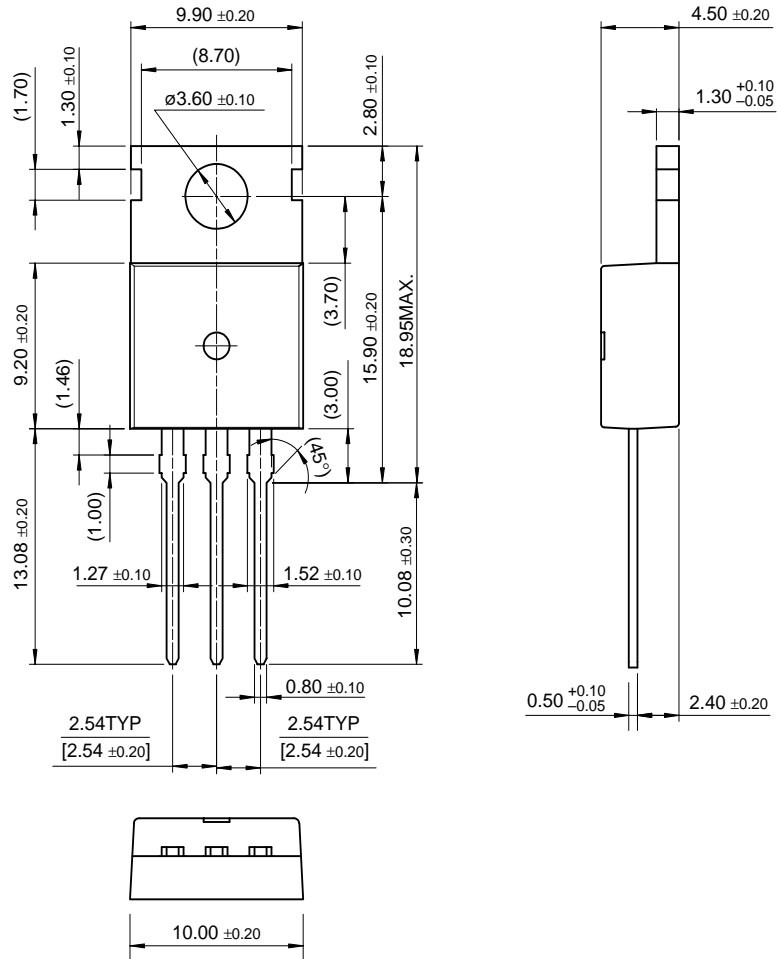
Figure 7. Static Characteristic

Figure 8. DC current Gain

Package Dimensions

TO-220

BU406/406H/408



Dimensions in Millimeters

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| E ² CMOS™ | PowerTrench® | VCX™ |
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| FACT Quiet Series™ | QS™ | |
| FAST® | Quiet Series™ | |
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