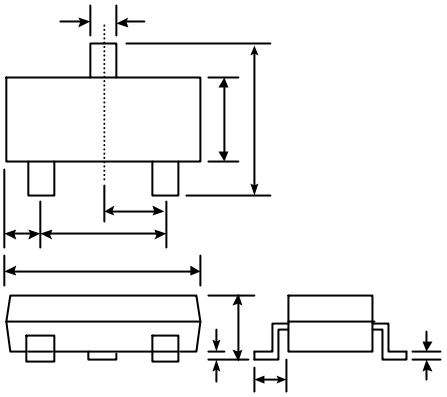
# BC817-16 / -25 / -40

NPN SURFACE MOUNT SMALL SIGNAL TRANSISTOR

## Features

mW Power Dissipation
Ideally Suited for Automatic Insertion
Epitaxial Planar Die Construction
For Switching, AF Driver and Amplifier Applications
Complementary PNP Types Available (BC807)



| SOT-23 | | |
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| | | |
| | 0.013 | |
| | | |
| | | |
| | 0.076 | 0.178 |
| All Dimensions in mm | | |

## Mechanical Data

Case: SOT-23, Molded Plastic
Terminals: Solderable per MIL-STD-202, Method 208
Pin Connections: See Diagram
Marking: BC817-16
BC817-25
BC817-40
Aprox. Weight: 0.008 grams
Mounting Position: Any

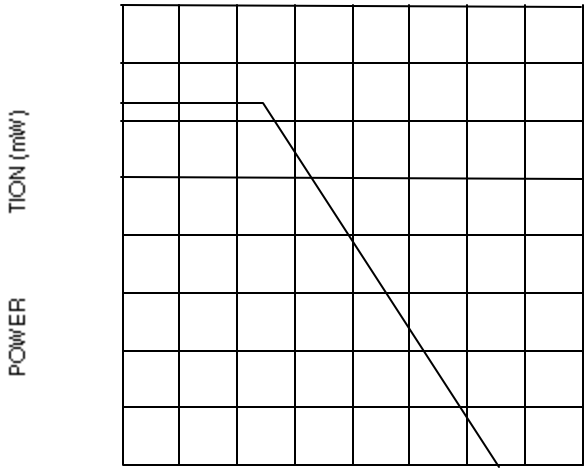
## Maximum Ratings @25 C unless otherwise specified

| Characteristic | Symbol | Value | |
|---|---|---|---|
| Collector-Emitter Voltage | | | |
| Emitter-Base Voltage | | | |
| Collector Current | | | |
| Peak Collector Current | | | |
| Peak Emitter Current | | | |
| Power Dissipation at C (Note 1) | | | |
| Operating and Storage Temperature Range | | -65 to +150 | |

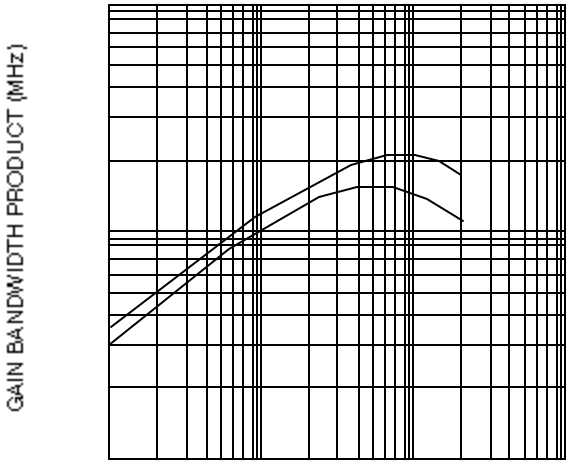
## Electrical Characteristics @25 C unless otherwise specified

| Characteristic | Symbol | | | | Test Condition |
|---|---|---|---|---|---|
| DC Current Gain Current Gain Group -16 | | | | | = 1.0V, I = 100mA |
| Current Gain Group -16 | | | — — — | — | = 1.0V, I = 300mA |
| Thermal Resistance, Junction to Substrate Backside | | — | | | Note 1 |
| Thermal Resistance, Junction to Ambient Air | | — | | | Note 1 |
| Collector-Emitter Saturation Voltage | CE(SAT) | — | | | = 500mA, = 50mA |
| Base-Emitter Voltage | | — | | | = 1.0V, I = 300mA |
| Collector-Emitter Cutoff Current | | — | | | = 45V<br>= 25V, = 150 |
| Emitter-Base Cutoff Current | | — | | | = 4.0V |
| Gain Bandwidth Product | | | — | | = 5.0V, I = 10mA, f = 50MHz |
| Collector-Base Capacitance | | — | | | = 10V, f = 1.0MHz |

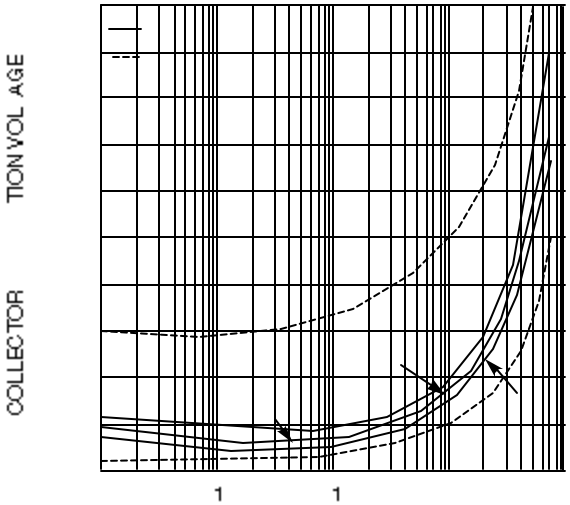
Notes: 1. Device mounted on Ceramic Substrate 0.7mm; 2.5cm



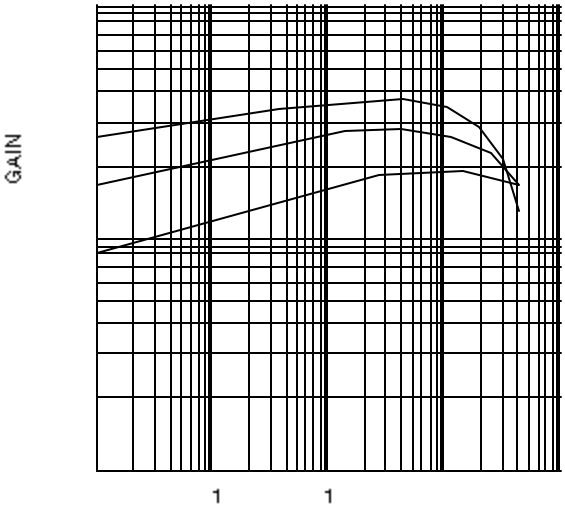

Power Deratin Curve



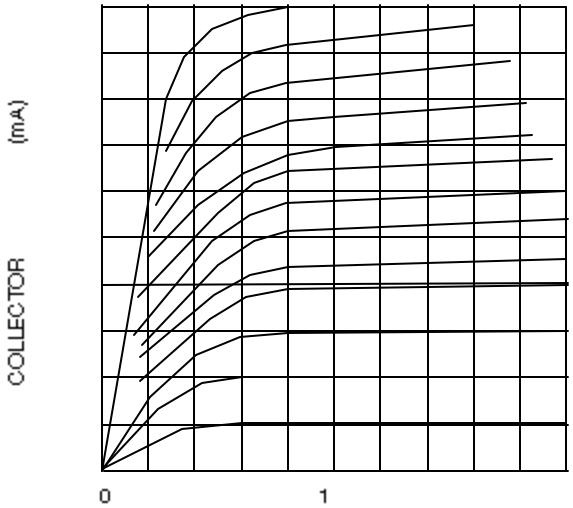

Gain-Bandwidth Product Collector Current



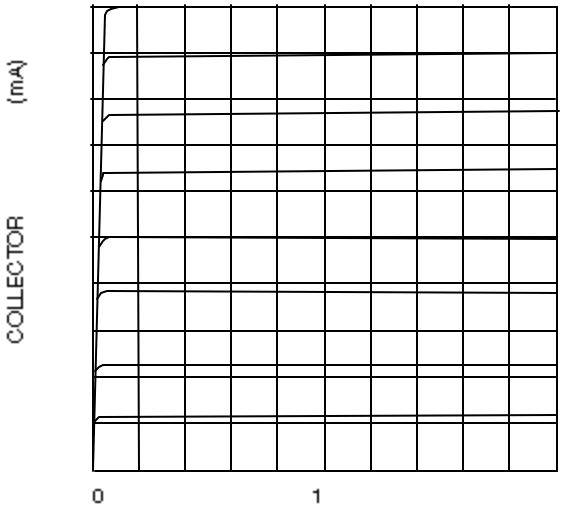

Collector Collector Current




Current Collector Current




Emitter-Collector Characteristics




Emitter-Collector Characteristics