

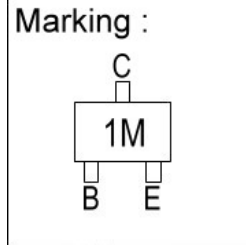
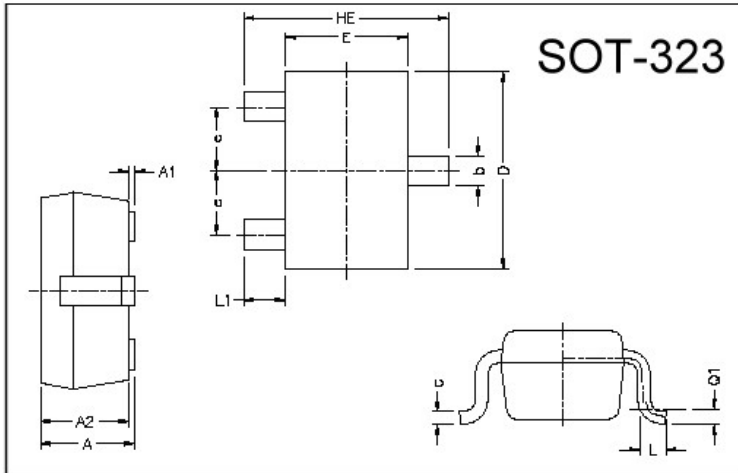
G SMBTA13

NPN EPITAXIAL PLANAR TRANSISTOR

Description

The GSMBTA13 is designed for Darlington amplifier applications.

Package Dimensions



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 0.80 | 1.10 | L1 | 0.42 REF. | |
| A1 | 0 | 0.10 | L | 0.15 | 0.35 |
| A2 | 0.80 | 1.00 | b | 0.25 | 0.40 |
| D | 1.80 | 2.20 | c | 0.10 | 0.25 |
| E | 1.15 | 1.35 | e | 0.65 REF. | |
| HE | 1.80 | 2.40 | Q1 | 0.15 BSC. | |

Absolute Maximum Ratings at Ta = 25°C

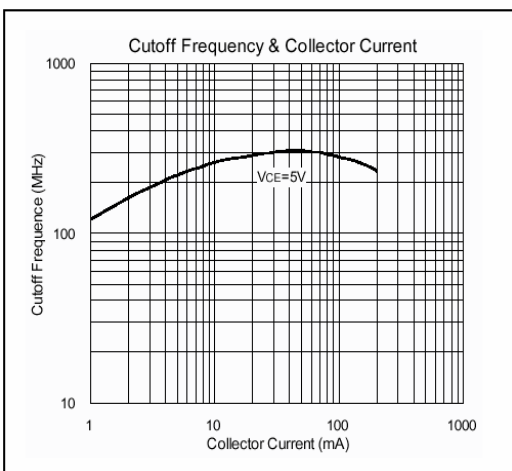
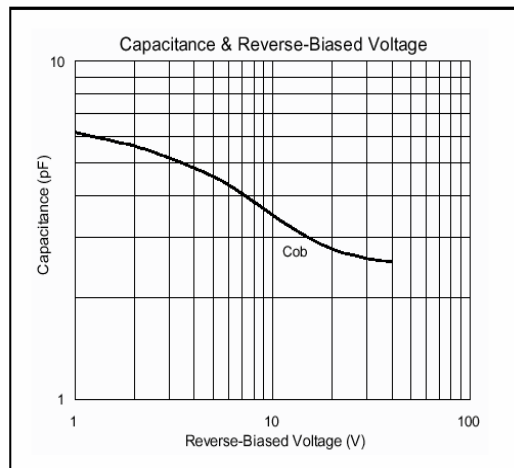
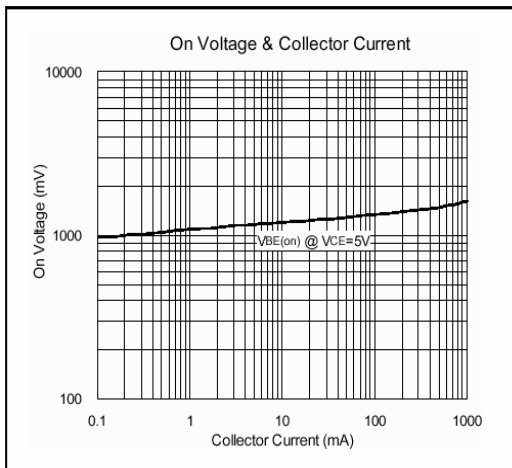
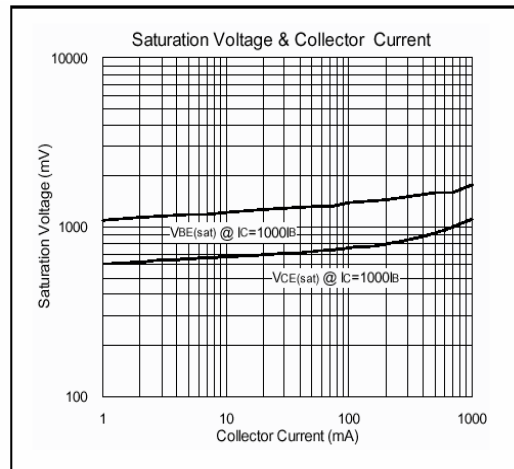
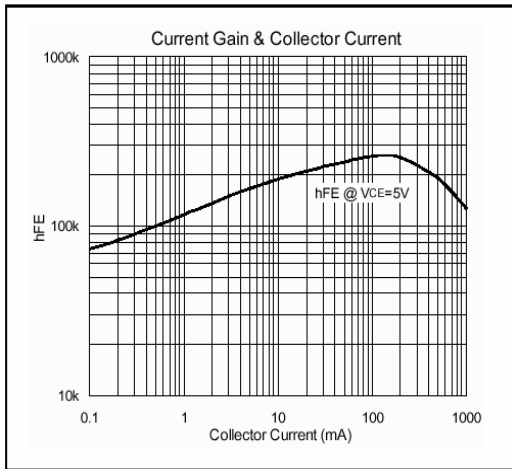
| Parameter | Symbol | Ratings | Unit |
|------------------------------|--------|----------|------|
| Junction Temperature | Tj | +150 | °C |
| Storage Temperature | Tstg | -55~+150 | °C |
| Collector to Base Voltage | Vcbo | 30 | V |
| Collector to Emitter Voltage | Vceo | 30 | V |
| Emitter to Base Voltage | Vebo | 10 | V |
| Collector Current | Ic | 500 | mA |
| Total Power Dissipation | PD | 225 | mW |

Electrical Characteristics (Ta = 25°C unless otherwise noted)

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------|------|------|------|------|---------------------------|
| BVcbo | 30 | - | - | V | Ic=100uA, IE=0 |
| BVceo | 30 | - | - | V | Ic=100uA, Ib=0 |
| BVebo | 10 | - | - | V | IE=10uA, Ic=0 |
| Icbo | - | - | 100 | nA | Vcb=30V, IE=0 |
| IEBO | - | - | 100 | nA | VEB=10V, Ic=0 |
| *VCE(sat) | - | - | 1.5 | V | Ic=100mA, Ib=0.1mA |
| *VBE(on) | - | - | 2.0 | V | VCE=5V, Ic=100mA |
| *hFE1 | 5K | - | - | | VCE=5V, Ic=10mA |
| *hFE2 | 10K | - | - | | VCE=5V, Ic=100mA |
| fT | 125 | - | - | MHz | VCE=5V, Ic=10mA, f=100MHz |
| Cob | - | - | 6 | pF | Vcb=10V, IE=0, f=1MHz |

* Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Characteristics Curve



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