

## GL359

### PNP SILICON PLANAR HIGH CURRENT TRANSISTOR

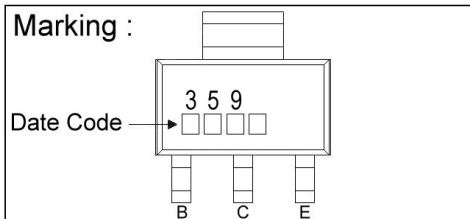
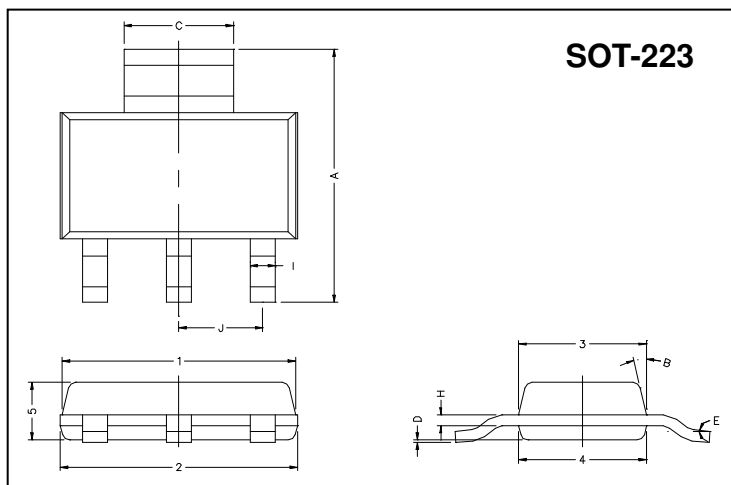
#### Description

The GL359 is designed for general purpose switching and amplifier applications.

#### Features

- 5 Amps continuous current, up to 10Amps peak current
- Excellent gain characteristic specified up to 10Amps
- Very low saturation voltages

#### Package Dimensions



| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 6.70       | 7.30 | B    | 13°TYP.    |      |
| C    | 2.90       | 3.10 | J    | 2.30 REF.  |      |
| D    | 0.02       | 0.10 | 1    | 6.30       | 6.70 |
| E    | 0°         | 10°  | 2    | 6.30       | 6.70 |
| I    | 0.60       | 0.80 | 3    | 3.30       | 3.70 |
| H    | 0.25       | 0.35 | 4    | 3.30       | 3.70 |
|      |            |      | 5    | 1.40       | 1.80 |

#### 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   | -140     | V    |
| Collector to Emitter Voltage | VCEO   | -100     | V    |
| Emitter to Base Voltage      | VEBO   | -6       | V    |
| Collector Current (DC)       | Ic     | -5       | A    |
| Collector Current (Pulse)    | Ic     | -10      | A    |
| Total Power Dissipation      | PD     | 3        | W    |

\*The power which can be dissipated assuming the device is mounted in a typical manner on a P.C.B. with copper equal to 4 square inch minimum.

#### Electrical Characteristics (Ta = 25°C, unless otherwise stated)

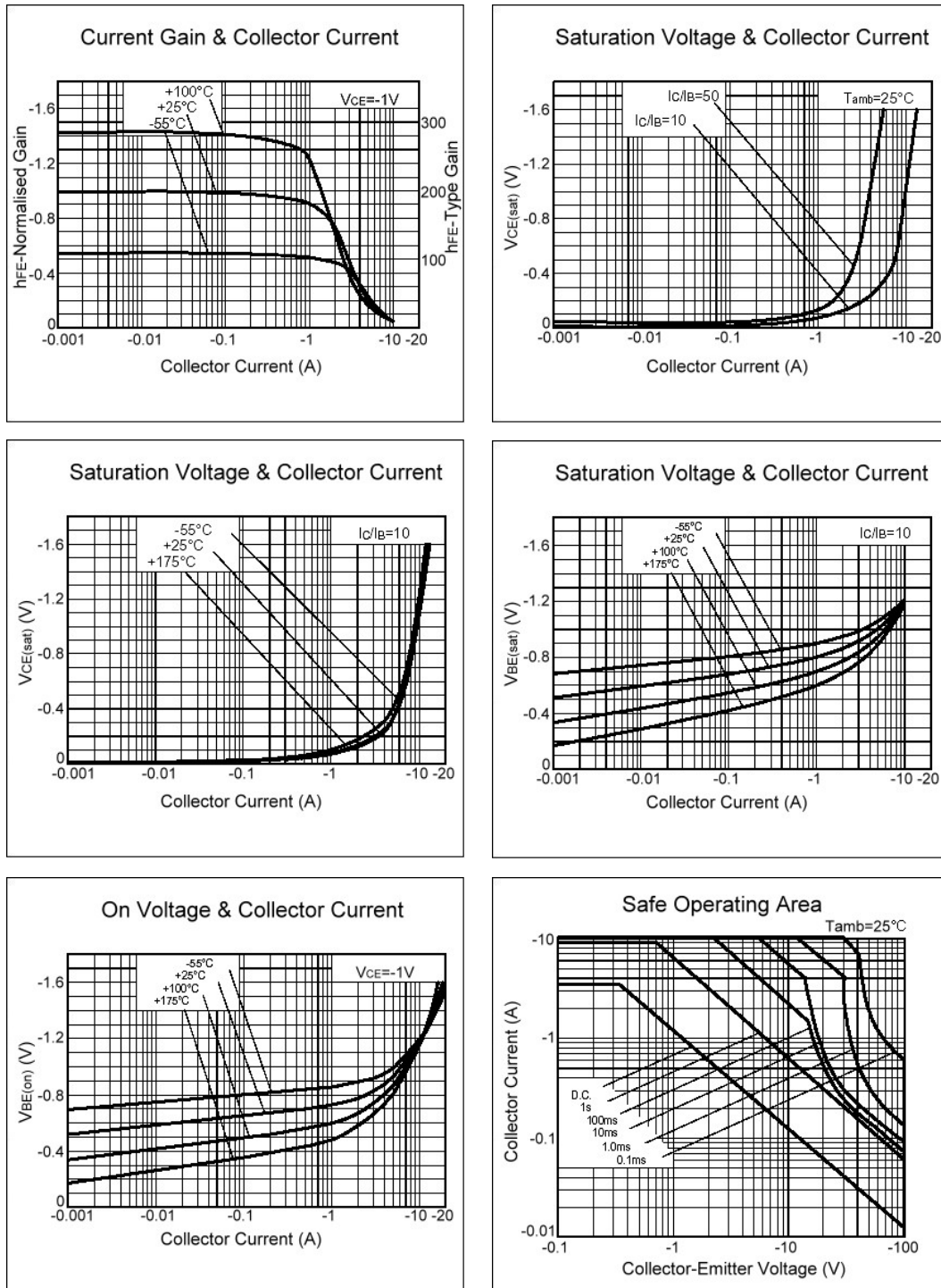
| Symbol     | Min. | Typ.   | Max.  | Unit | Test Conditions              |
|------------|------|--------|-------|------|------------------------------|
| BVCBO      | -140 | -      | -     | V    | IC=-100uA, IE=0              |
| *BVCEO     | -100 | -      | -     | V    | IC=-10mA, IB=0               |
| BVEBO      | -6   | -      | -     | V    | IE=-100uA, IC=0              |
| ICBO       | -    | -      | -50   | nA   | VCB=-100V, IE=0              |
| ICES       | -    | -      | -50   | nA   | VCE=-100V                    |
| IEBO       | -    | -      | -10   | nA   | VEB=-6V, IC=0                |
| *VCE(sat)1 | -    | -20    | -50   | mV   | IC=-100mA, IB=-10mA          |
| *VCE(sat)2 | -    | -90    | -115  | mV   | IC=-1A, IB=-100mA            |
| *VCE(sat)3 | -    | -160   | -220  | mV   | IC=-2A, IB=-200mA            |
| *VCE(sat)4 | -    | -300   | -420  | mV   | IC=-4A, IB=-400mA            |
| *VBE(sat)  | -    | -1.01  | -1.17 | V    | IC=-4A, IB=-400mA            |
| *VBE(on)   | -    | -0.925 | -1.16 | V    | VCE=-1V, IC=-4A              |
| *hFE1      | 100  | 200    |       |      | VCE=-1V, IC=-10mA            |
| *hFE2      | 100  | 200    | 300   |      | VCE=-1V, IC=-1A              |
| *hFE3      | 50   | 90     |       |      | VCE=-1V, IC=-3A              |
| *hFE4      | 30   | 50     |       |      | VCE=-1V, IC=-4A              |
| *hFE5      | -    | 15     |       |      | VCE=-1V, IC=-10A             |
| fT         | -    | 125    | -     | MHz  | VCE=-10V, IC=-100mA, f=50MHz |

|                  |   |     |   |    |                                                                                             |
|------------------|---|-----|---|----|---------------------------------------------------------------------------------------------|
| Cob              | - | 65  | - | pF | V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz                                            |
| t <sub>on</sub>  | - | 110 | - | ns | V <sub>CC</sub> =-10V, I <sub>C</sub> =-2A, I <sub>B1</sub> =-200mA, I <sub>B2</sub> =200mA |
| t <sub>off</sub> | - | 460 | - |    |                                                                                             |

\*Measured under pulse condition. Pulse width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

Spice parameter data is available upon request for this device.

## Characteristics Curve



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