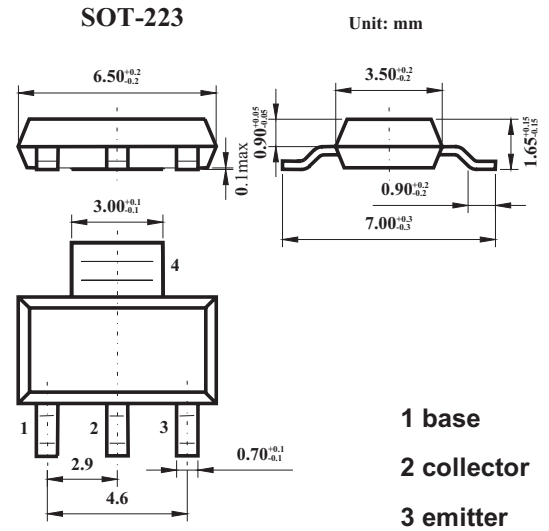


### Features

- 60 Volt  $V_{CE0}$ .
- 3 Amp continuous current.
- Low saturation voltage.




### Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter                               | Symbol         | Rating      | Unit             |
|---|----------------|-------------|------------------|
| Collector-base voltage                  | $V_{CBO}$      | 80          | V                |
| Collector-emitter voltage               | $V_{CEO}$      | 60          | V                |
| Emitter-base voltage                    | $V_{EBO}$      | 5           | V                |
| Peak pulse current                      | $I_c$          | 3           | A                |
| Continuous collector current            | $I_{CM}$       | 6           | A                |
| Power dissipation                       | $P_{tot}$      | 2           | W                |
| Operating and storage temperature range | $T_j, T_{stg}$ | -55 to +125 | $^\circ\text{C}$ |

## Electrical Characteristics Ta = 25

| Parameter                              | Symbol   | Testconditons                      | Min | Typ          | Max        | Unit |
|--|----------|------------------------------------|-----|--------------|------------|------|
| Collector-base breakdown voltage       | V(BR)CBO | IC=100μA                           | 80  |              |            | V    |
| Collector-emitter breakdown voltage *  | V(BR)CEO | IC=10mA                            | 60  |              |            | V    |
| Emitter-base breakdown voltage         | V(BR)EBO | IE=100μA                           | 5   |              |            | V    |
| Collector Cut-Off Current              | ICBO     | VCB=60V<br>VCB=60V, Ta = 100°C     |     |              | 0.1<br>10  | μA   |
| Emitter Cut-Off Current                | IEBO     | VEB=4V                             |     |              | 0.1        | μA   |
| Collector-emitter saturation voltage * | VCE(sat) | IC=1A, IB=100mA<br>IC=3A, IB=300mA |     | 0.12<br>0.43 | 0.3<br>0.6 | V    |
| Base-emitter saturation voltage *      | VBE(sat) | IC=1A, IB=100mA                    |     | 0.9          | 1.25       | V    |
| Base-Emitter Turn-On Voltage *         | VBE(on)  | IC=1A, VCE=2V                      |     | 0.8          | 1          | V    |
| Static Forward Current Transfer Ratio  | hFE      | IC=50mA, VCE =2V*                  | 70  | 200          |            |      |
|  |          | IC=500mA, VCE =2V*                 | 100 | 200          | 300        |      |
|  |          | IC=1A, VCE =2V*                    | 80  | 170          |            |      |
|  |          | IC=2A, VCE =2V*                    | 40  | 80           |            |      |
| Transitional frequency                 | fT       | IC=100mA, VCE=5V f=100MHz          | 140 | 175          |            | MHz  |
| Output capacitance                     | Cobo     | VCB=10V, f=1MHz                    |     |              | 30         | pF   |
| Switching times                        | ton      | IC=500mA, VCC=10V, IB1=IB2=50mA    |     | 45           |            | ns   |
|  | toff     |                                    |     | 800          |            | ns   |

\* Pulse test: tp = 300 μs; d ≤ 0.02.

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