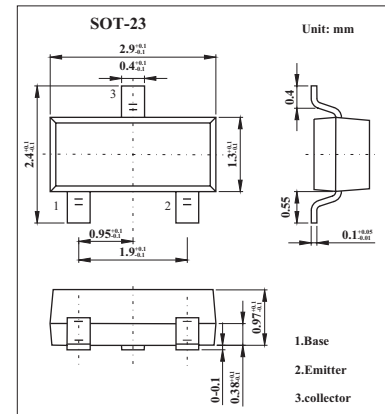


Silicon NPN Epitaxial

2SC2736



■ Features

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

| Parameter | Symbol | Rating | Unit |
|-----------------------------|-----------|-------------|------------------|
| Collector-base voltage | V_{CBO} | 30 | V |
| Collector-emitter voltage | V_{CEO} | 20 | V |
| Emitter-base voltage | V_{EBO} | 3 | V |
| Collector current | I_C | 50 | mA |
| Collector power dissipation | P_C | 150 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit |
|---|---------------|---|------|------|-----|------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = 10\mu\text{A}$, $I_E = 0$ | 30 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = 1\text{mA}$, $R_{BE} = \infty$ | 20 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = 10\mu\text{A}$, $I_C = 0$ | 3 | | | V |
| Collector cutoff current | I_{CBO} | $V_{CB} = 15\text{V}$, $I_C = 0$ | | | 500 | nA |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 10\text{mA}$, $I_B = 5\text{mA}$ | | | 0.7 | V |
| DC current transfer ratio | h_{FE} | $V_{CE} = 10\text{V}$, $I_C = 5\text{mA}$ | 30 | | 200 | |
| Collector output capacitance | C_{ob} | $V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$ | | | 1.0 | pF |
| Gain bandwidth product | f_T | $V_{CE} = 10\text{V}$, $I_C = 5\text{mA}$ | 1400 | 2200 | | MHz |
| Conversion gain | CG1 | $V_{CC} = 12\text{V}$, $I_C = 2\text{mA}$, $f = 200\text{MHz}$, $f_{osc} = 230\text{MHz}$ (0dBm) | | 22.5 | | dB |
| | CG2 | $V_{CC} = 12\text{V}$, $I_C = 2\text{mA}$, $f = 900\text{MHz}$, $f_{osc} = 930\text{MHz}$ (0dBm), $f_{Out} = 30\text{MHz}$ | | 10 | | dB |
| Noise figure | NF | $V_{CC} = 12\text{V}$, $I_C = 2\text{mA}$, $f = 200\text{MHz}$, $f_{osc} = 230\text{MHz}$ (0dBm) | | 4.0 | | dB |
| Oscillating output voltage | V_{osc1} | $V_{CC} = 12\text{V}$, $I_C = 7\text{mA}$, $f = 300\text{MHz}$ | | 300 | | mV |
| | V_{osc2} | $V_{CC} = 12\text{V}$, $I_C = 7\text{mA}$, $f_{osc} = 930\text{MHz}$ | | 200 | | mV |

■ Marking

| Marking | TC |
|---------|----|
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