



Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

2SC1623

Features

- High DC Current Gain: $h_{FE}=200$ TYP. ($V_{CE}=6.0V$, $I_C=1.0mA$)
- High voltage: $V_{CEO}=50V$

Maximum Ratings

| Symbol | Rating | Rating | Unit |
|-----------|-----------------------------|-------------|------|
| V_{CEO} | Collector-Emmitter Voltage | 50 | V |
| V_{CBO} | Collector-Base Voltage | 60 | V |
| V_{EBO} | Emitter-Base Voltage | 5.0 | V |
| I_C | Collector Current | 100 | mA |
| P_C | Collector power dissipation | 200 | mW |
| T_J | Junction Temperature | -55 to +150 | °C |
| T_{STG} | Storage Temperature | -55 to +150 | °C |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Typ | Max | Units |
|---------------------|---|-----|-----|-----|--------------|
| OFF CHARACTERISTICS | | | | | |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=60Vdc, I_E=0$) | --- | --- | 0.1 | μA_{dc} |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=5.0Vdc, I_C=0$) | --- | --- | 0.1 | μA_{dc} |

ON CHARACTERISTICS

| | | | | | |
|---------------|--|------|------|------|-----|
| h_F | DC Current Gain* ($I_C=1.0mA_{dc}, V_{CE}=6.0Vdc$) | 90 | 200 | 600 | --- |
| $V_{CE(sat)}$ | Collector Saturation Voltage* ($I_C=100mA_{dc}, I_B=10mA_{dc}$) | --- | 0.15 | 0.3 | Vdc |
| $V_{BE(SAT)}$ | Base Saturation Voltage* ($I_C=100mA_{dc}, I_B=10mA_{dc}$) | --- | 0.86 | 1.0 | Vdc |
| V_{BE} | Base Emmitter Voltage* ($V_{CE}=6.0Vdc, I_C=1.0mA_{dc}$) | 0.55 | 0.62 | 0.65 | Vdc |
| C_{ob} | Collector Capacitance ($V_{CB}=6.0Vdc, I_E=0, f=1.0MHz$) | --- | 3.0 | --- | pF |
| f_T | Gain Bandwidth product ($V_{CE}=6.0Vdc, I_E=10mA_{dc}$) | --- | 250 | --- | MHz |

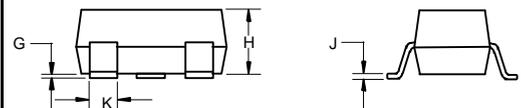
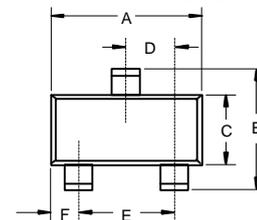
h_{FE} CLASSIFICATION

| Marking | L4 | L5 | L6 | L7 |
|----------|--------|---------|---------|---------|
| h_{FE} | 90-180 | 135-270 | 200-400 | 300-600 |

* Pulse Test $PW < 350\mu s$, duty cycle $< 2\%$

NPN Silicon Epitaxial Transistors

SOT-23



DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .110 | .120 | 2.80 | 3.04 | |
| B | .083 | .098 | 2.10 | 2.64 | |
| C | .047 | .055 | 1.20 | 1.40 | |
| D | .035 | .041 | .89 | 1.03 | |
| E | .070 | .081 | 1.78 | 2.05 | |
| F | .018 | .024 | .45 | .60 | |
| G | .0005 | .0039 | .013 | .100 | |
| H | .035 | .044 | .89 | 1.12 | |
| J | .003 | .007 | .085 | .180 | |
| K | .015 | .020 | .37 | .51 | |

Suggested Solder Pad Layout

