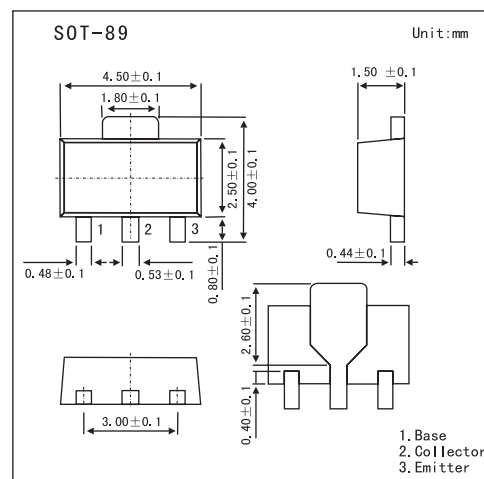


Small Signal Transistor

2SC3728

■ Features

- High $h_{FE}=150$ to 800.
- High collector current ($I_C=2A$).
- High collector dissipation $P_C=500mW$.
- Low $V_{CE(sat)}$: $V_{CE(sat)}=0.17V$ typ(@ $I_C=1A, I_B=50mA$).
- Small package for mounting.

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

| Parameter | Symbol | Rating | Unit |
|--|-----------|-------------|------------|
| Collector-base voltage | V_{CB0} | 20 | V |
| Emitter-base voltage | V_{EB0} | 6 | V |
| Collector-emitter voltage | V_{CE0} | 12 | V |
| Peak collector current | I_{CM} | 3 | A |
| Collector current | I_C | 2 | A |
| Collector dissipation ($T_a=25^\circ C$) | P_C | 500 | mW |
| Junction temperature | T_j | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ C$ |

■ Electrical Characteristics $T_a = 25^\circ C$

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|-----------------------------|-----|-----|------|---------|
| Collector-base breakdown voltage | $V_{(BR)CB0}$ | $I_C=10\mu A, I_E=0$ | 20 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EB0}$ | $I_E=10\mu A, I_C=0$ | 6 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CE0}$ | $I_C=5mA, R_{BE}=\infty$ | 12 | 14 | 16 | V |
| Collector cutoff current | I_{CBO} | $V_{CB}=16V, I_E=0$ | | | 0.1 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB}=4V, I_C=0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=4V, I_C=100mA$ | 150 | 350 | 800 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=1A, I_B=50mA$ | | 0.2 | 0.35 | V |
| Gain bandwidth product | f_T | $V_{CE}=2V, I_E=-10mA$ | 40 | 80 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1MHz$ | | 28 | | pF |

■ h_{FE} Classification

| Marking | YE | YF | YG |
|----------|---------|---------|---------|
| h_{FE} | 150~300 | 250~500 | 400~800 |