



2SC2411K

NPN GENERAL PURPOSE SWITCHING TRANSISTOR

| | | | | | |
|----------------|-----------------|--------------|--------------|---------------|-------------------|
| VOLTAGE | 32 Volts | POWER | 225mW | SOT-23 | Unit: inch (mm) |
|----------------|-----------------|--------------|--------------|---------------|-------------------|

FEATURES

- NPN epitaxial silicon, planar design
- Collector-emitter voltage $V_{CE}=32V$
- Collector current $I_C=500mA$
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

Case : SOT-23 plastic
 Terminals : Solderable per MIL-STD-750, Method 2026
 Approx Weight : 0.008 gram
 Marking : 241

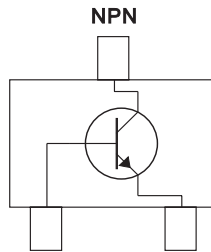
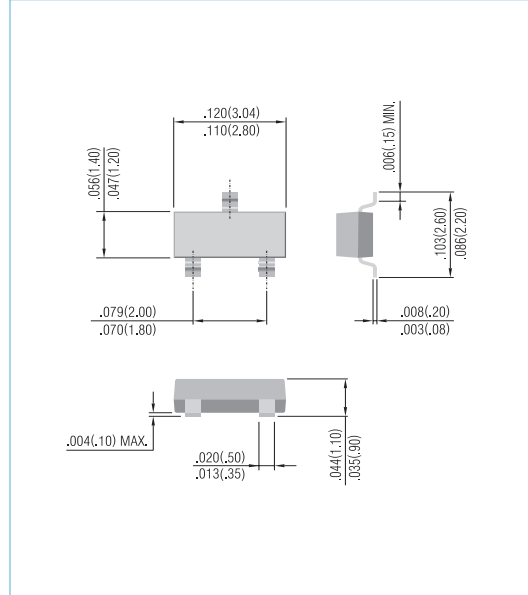


Fig.34



ABSOLUTE RATINGS ($T_A=25^\circ C$)

| Parameter | Symbol | Value | Units |
|------------------------------|-----------|-------|-------|
| Collector-Emitter Voltage | V_{CEO} | 32 | V |
| Collector-Base Voltage | V_{CBO} | 40 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current Continuous | I_C | 500 | mA |

THERMAL CHARACTERISTICS

| Parameter | Symbol | Value | Units |
|---|-----------------|-------------|--------------|
| Max. Power Dissipation (Note 1) | P_{TOT} | 225 | mW |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 556 | $^\circ C/W$ |
| Junction Temperature | T_J | -55 to +150 | $^\circ C$ |
| Storage Temperature | T_{STG} | -55 to +150 | $^\circ C$ |

NOTE : 1. Transistor mounted on FR-4 board 70 x 60 x 1mm



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ELECTRICAL CHARACTERISTICS(T_A=25°C)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|--------------------------------------|----------------------|--|------|------|------|-------|
| Collector-Base Breakdown Voltage | V _{(BR)CBO} | I _C =100 μA | 40 | - | - | V |
| Collector-Emitter Breakdown Voltage | V _{(BR)CEO} | I _C =1mA | 32 | - | - | V |
| Emitter-Base Breakdown Voltage | V _{(BR)EBO} | I _E =100μA | 5 | - | - | V |
| Collector Cutoff Current | I _{CBO} | V _{CB} =20V | - | - | 1 | μA |
| Emitter Cutoff Current | I _{EBO} | V _{EB} =4V | - | - | 1 | μA |
| DC Current Gain (Note 2) | h _{FE} | V _{CE} =3V, I _C =100mA | 120 | - | 390 | - |
| Collector-Emitter Saturation Voltage | V _{CE(SAT)} | I _C =500mA, I _B =50mA | - | - | 0.6 | V |
| Transition Frequency | f _T | V _{CE} =5V, I _E =-200mA, f=100MHz | - | 250 | - | MHz |
| Collector-Base Capacitance | C _{ob} | V _{CB} =10V, I _E =0A, f=1MHz | - | 6.5 | - | pF |

NOTE : 2.Pulse Test : Pulse width < 300μs, duty cycle < 2.0%



ELECTRICAL CHARACTERISTICS CURVE

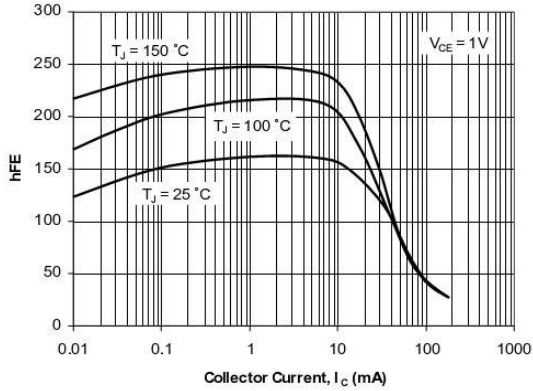


Fig. 1. Typical h_{FE} vs Collector Current

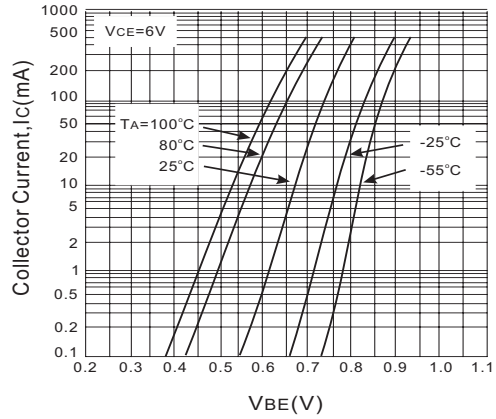


Fig. 2. Typical V_{BE} vs Collector Current

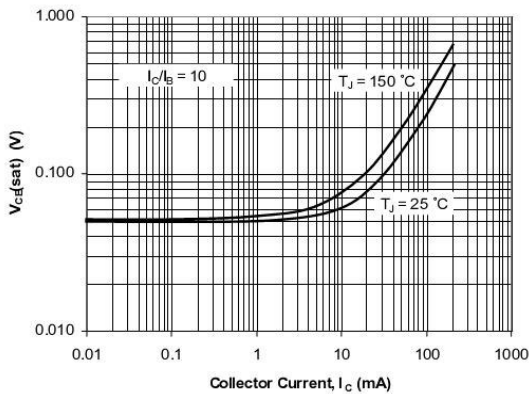


Fig. 3. Typical $V_{CE(SAT)}$ vs Collector Current

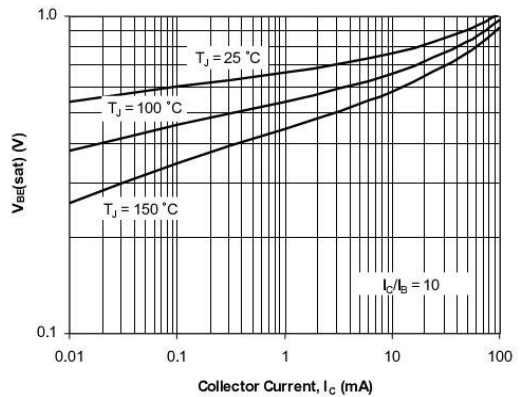


Fig. 4. Typical $V_{BE(SAT)}$ vs Collector Current

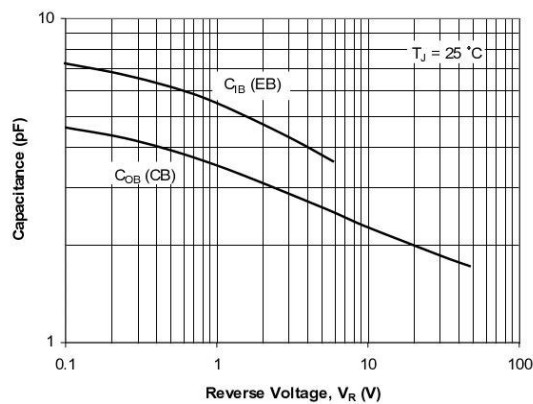
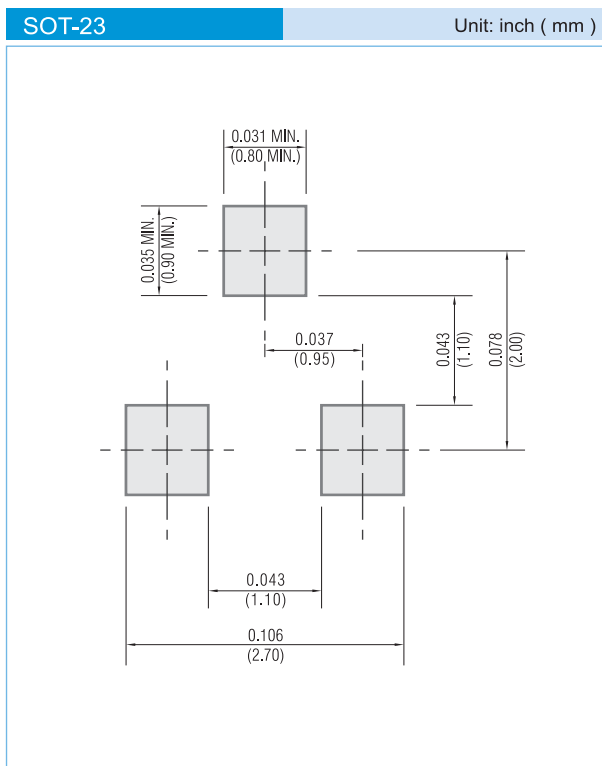


Fig. 5. Typical Capacitances vs Reverse Voltage



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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