PNP Epitaxial Planar Silicon High Voltage Transistor, 150VcEo, 600mA Ic





RoHS Compliant

PNP



Absolute Max. Ratings Ta=25°C unless otherwise noted

| Parameter | Symbol | Value | Units |
|---|-----------------------|-------------|-------------|
| Collector-Emitter Voltage | VCEO | 150 | V |
| Collector-Base Voltage | Vсво | 160 | V |
| Emitter-Base Voltage | VEBO | 5 | V |
| Collector Current Continuous | Ic | 600 | mA |
| Power Dissipation @T _A = 25°C Derate Above 25°C | Po | 625 5 | mW mW/°C |
| Power Dissipation @Tc = 25°C Derate Above 25°C | Po | 1.5 12 | W mW/°C |
| Operating and Storage Junction Temperature Range | Т _J , Тsтg | -55 to +150 | °C |
| Thermal Resistance | | | |
| Junction to Case | Rth(j-c) | 83.3 | °C/W |
| Junction to Ambient | Rth(j-a) | 200 | °C/W |

Electrical Characteristics T_A = 25°C unless otherwise noted

| Parameter | Symbol | Test Condition | Min. | Type | Max. | Units |
|--------------------------------------|------------------------|--|----------------|-------------|---------------|----------|
| Collector -Emitter Voltage | Vceo* | Ic = 1mA, I _B = 0 | 150 | - | - | V |
| Collector -Base Voltage | Vсво | Ic = 100μA, Iε = 0 | 160 | - | - | V |
| Emitter -Base Voltage | VEBO | I _E = 10μA, I _C = 0 | 5 | - | - | V |
| Collector-Cut off Current | Ісво | V _{CB} = 160V, IE = 0 | - | - | 50 | nA |
| Emitter Cut-off Current | ІЕВО | TA = 100°C VCB = 160V, IE = 0 VEB = 4V, IC = 0 | - - | - - | 50 50 | μA nA |
| DC Current Gain | hFE* | Ic = 1mA, VCE = 5V Ic = 10mA, VCE = 5V Ic = 50mA, VCE = 5V | 50 60 50 | - - - | - 240 - | |
| Collector Emitter Saturation Voltage | Vce(sat)* | Ic = 10mA, I _B = 1mA Ic = 50mA, I _B = 5mA | - - | - | 0.2 0.5 | V |
| Base Emitter Saturation Voltage | V _{BE} (sat)* | Ic = 10mA, I _B = 1mA Ic = 50mA, I _B = 5mA | - - | - | 1.0 1.0 | V |

^{*}Pulse Test: Pulse Width = 300µs, Duty Cycle = 2% T

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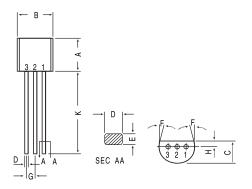
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Dynamic Characteristics

| Parameter | Symbol | Test Condition | Min. | Type | Max. | Units |
|---------------------------|--------|---|------|------|------|-------|
| Small Signal Current Gain | hfe | Ic = 1mA, VcE = 10V, f = 1kHz | 40 | - | 200 | |
| Transition Frequency | ft | Vce = 10V, Ic = 10mA, f = 100MHz | 100 | - | 300 | MHz |
| Output Capacitance | Cobo | V _{CB} = 10V, I _E = 0, f = 1MHz | - | - | 6 | pF |
| Noise Figure | NF | V_{CE} = SV, Ic = 250μA R = 1kΩ, f = 10Hz to 15.7kHz | - | - | 8 | dB |

TO-92 Plastic Package



PIN CONFIGURATION

- 1. COLLECTOR 2. BASE
- 3. EMITTER

| Dim. | Min. | Max. | |
|------|--------|------|--|
| Α | 4.32 | 5.33 | |
| В | 4.45 | 5.2 | |
| С | 3.18 | 4.19 | |
| D | 0.41 | 0.55 | |
| Е | 0.35 | 0.5 | |
| F | 5 Deg. | | |
| G | 1.14 | 1.4 | |
| Н | 1.14 | 1.53 | |
| K | 12.7 | - | |

Dimensions: Millimetres

Part Number Table

| Description | Part Number | |
|---|-------------|--|
| PNP Epitaxial Planar Silicon High Voltage Transistor, 150V, 600mA,TO-92 | 2N5401 | |

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