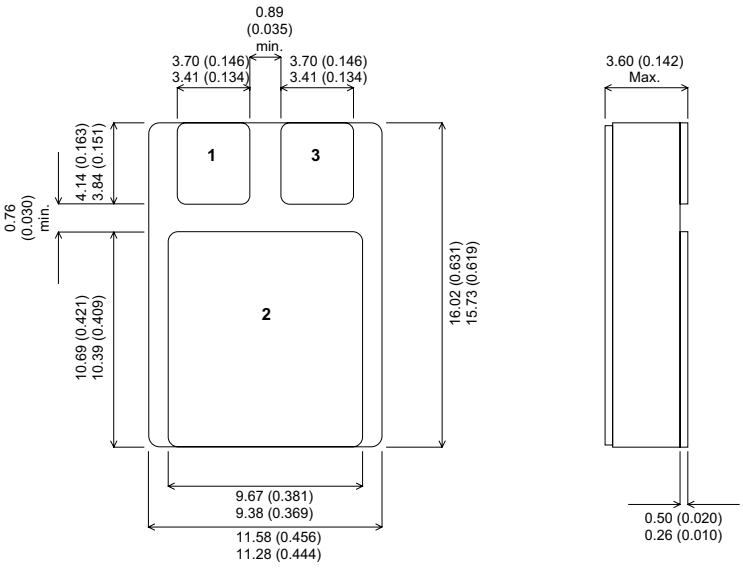
# 2N5664SMD

**MECHANICAL DATA**
Dimensions in mm (inches)




**SMD1**
**Underside View**

1 = Base 2 = Collector 3 = Emitter

## NPN BIPOLAR TRANSISTOR IN A CERAMIC SURFACE MOUNT PACKAGE FOR HIGH REL APPLICATIONS

## FEATURES

- **HIGH VOLTAGE**
- **FAST SWITCHING**
- **CERAMIC SURFACE MOUNT PACKAGE**
- **SCREENING OPTIONS AVAILABLE**

## ABSOLUTE MAXIMUM RATINGS ($T_{case}$ = 25°C unless otherwise stated)

| | | |
|---|---|---|
| $V_{CBO}$ | Collector – Base Voltage | 250V |
| $V_{CEO}$ | Collector – Emitter Voltage ($I_B$ = 0) | 200V |
| $V_{EBO}$ | Emitter – Base Voltage ($I_B$ = 0) | 6V |
| $I_B$ | Base Current | 0.6A |
| $I_C$ | Collector Current | 3A |
| $T_J$ , $T_{STG}$ | Operating and Storage Junction Temperature Range | –55 to +150°C |
| $R_{\theta JC}$ | Thermal Resistance Junction to Case | 4.16°C/W |
| $P_D$ | Power Dissipation | 30W |

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SEME LAB

# 2N5664SMD

## ELECTRICAL CHARACTERISTICS ($T_A$ = 25°C unless otherwise stated)

| | Parameter | Test Conditions | | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| $V_{CEO(sus)}$ | Collector – Emitter Sustaining Voltage | $I_C$ = 10mA | $I_B$ = 0 | 200 | | | V |
| $V_{CER(sus)}$ | Collector – Emitter Sustaining Voltage | $I_C$ = 10mA | $R_{EB}$ = 100Ω | 250 | | | |
| $I_{CES}$ | Collector – Emitter Cut-off Current | $V_{CE}$ = 200V | $I_B$ = 0 | | | 1.0 | µA |
| | | $V_{CE}$ = 175 | $T_C$ = 150°C | | | 100 | |
| $I_{EBO}$ | Emitter Base Cut-off Current | $V_{EB}$ = 6V | $I_E$ = 0 | | | 10 | µA |
| $V_{CE(sat)}$ | Collector – Emitter Saturation Voltage | $I_C$ = 3.0A | $I_B$ = 0.3A | | | 0.4 | V |
| $V_{BE(sat)}$ | Base – Emitter On Voltage | $I_C$ = 3.0A | $I_B$ = 0.3A | | | 1.2 | |
| $h_{FE}$ | DC Current Gain | $I_C$ = 0.5mA | $V_{CE}$ = 2V | 40 | | | — |
| | | $I_C$ = 1.0A | $V_{CE}$ = 5V | 40 | | 120 | |
| | | $I_C$ = 3.0A | $V_{CE}$ = 5V | 15 | | | |
| $C_{obo}$ | Output Capacitance | $V_{CB}$ = 5.0V | f = 1MHz | | | 125 | pF |
| $[h_{fe}]$ | Small Signal Current Gain | $V_{CE}$ = 5.0V<br>f = 10MHz | $I_C$ = 0.5A | 2.0 | | | — |
| $t_{on}$ | Turn on time | $I_C$ = 1.0A<br>$I_{B1}$ = - $I_{B2}$ = 30mA | $V_{CC}$ = 100V | | | 0.25 | µsec |
| $t_{off}$ | Turn off time | $I_C$ = 1.0A<br>$I_{B1}$ = - $I_{B2}$ = 30mA | $V_{CC}$ = 100V | | | 1.5 | µA |

1) $f_t$ is defined as the frequency at which $|h_{fe}|$ extrapolates to untity.

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# Part number search for devices beginning "2N5664SMD05"

Semelab Home

Datasheets are downloaded as Acrobat PDF files.

## Bipolar Products

| PRODUCT | Polarity | Package | $V_{CEO}$ | $I_{C(cont)}$ | $H_{FE(min)}$ | $H_{FE(max)}$ | @ $V_{CE}/I_C$ | $F_T$ | $P_D$ |
|---|---|---|---|---|---|---|---|---|---|
| 2N5664SMD05 | NPN | SMD0.5 (TO276AA) | 200V | 3A | 40 | 120 | 5/1 | 20MHz | 30W |
| 2N5664SMD05-JQR-B | NPN | SMD0.5 (TO276AA) | 200V | 3A | 40 | 120 | 5/1 | 20MHz | 30W |

**Searched through 3084 records and found 2 products matching your criteria.**

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If you are unable to find a suitable part, please contact us.