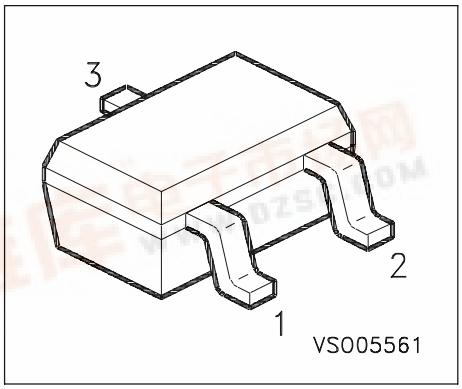
SIEMENS

**BF 569W**

**PNP Silicon RF Transistor**
**kein Status**

- For oscillators, mixer and self-oscillating mixer stages in UHF TV-tuner




| Type | Marking | Ordering Code | Pin Configuration | | | Package |
|---|---|---|---|---|---|---|
| BF 569W | LHs | Q62702-F1582 | 1 = B | 2 = E | 3 = C | SOT-323 |

**Maximum Ratings**

| Parameter | Symbol | Values | Unit |
|---|---|---|---|
| Collector-emitter voltage | $V_{CEO}$ | 35 | V |
| Collector-base voltage | $V_{CBO}$ | 40 | |
| Emitter-base voltage | $V_{EBO}$ | 3 | |
| Collector current | $I_C$ | 30 | mA |
| Base current | $I_B$ | 5 | |
| Total power dissipation<br>$T_S \leq 93$ °C | $P_{tot}$ | 280 | mW |
| Junction temperature | $T_j$ | 150 | °C |
| Storage temperature | $T_{stg}$ | - 65 ... + 150 | |

**Thermal Resistance**

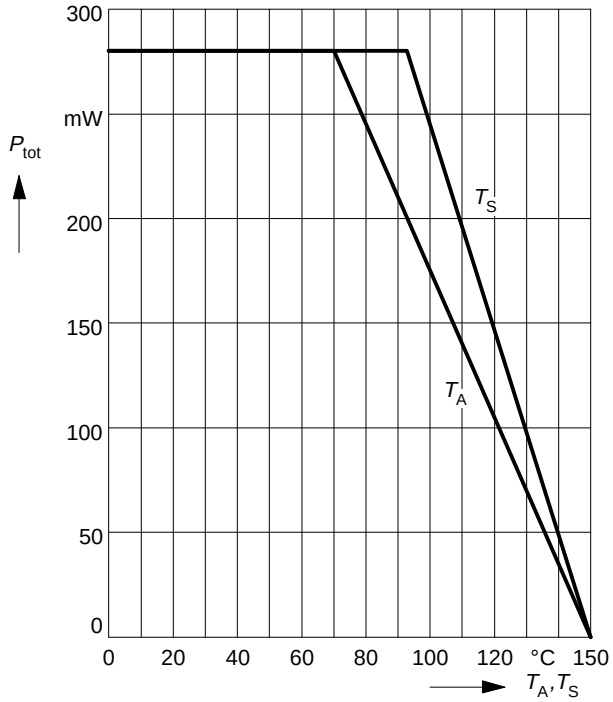
| | | | |
|---|---|---|---|
| Junction - soldering point | $R_{thJS}$ | ≤ 205 | K/W |

**Electrical Characteristics** at $T_A$ = 25°C, unless otherwise specified.

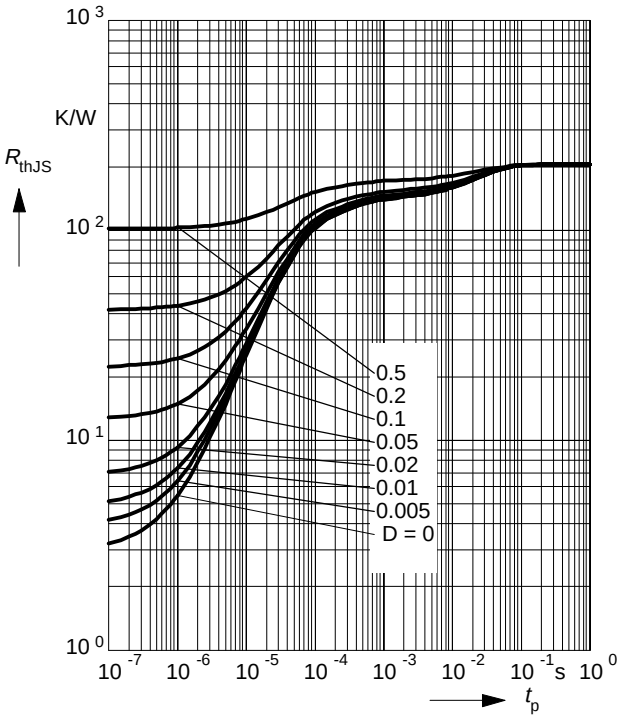
| Parameter | Symbol | Values | | | Unit |
|---|---|---|---|---|---|
| | | min. | typ. | max. | |
| **DC Characteristics** | | | | | |
| Collector-emitter breakdown voltage<br>$I_C$ = 1 mA, $I_B$ = 0 | $V_{(BR)CEO}$ | 35 | - | - | V |
| Collector-base cutoff current<br>$V_{CB}$ = 20 , $I_E$ = 0 | $I_{CBO}$ | - | - | 100 | nA |
| DC current gain<br>$I_C$ = 3 mA, $V_{CE}$ = 10 V | $h_{FE}$ | 20 | 50 | - | - |
| **AC Characteristics** | | | | | |
| Transition frequency<br>$I_C$ = 30 mA, $V_{CE}$ = 10 V, $f$ = 100 MHz | $f_T$ | - | 950 | - | MHz |
| Collector-base capacitance<br>$V_{CB}$ = 10 V, $V_{BE}$ = $v_{be}$ = 0 , $f$ = 1 MHz | $C_{cb}$ | - | 0.32 | - | pF |
| Collector-emitter capacitance<br>$V_{CE}$ = 10 V, $V_{BE}$ = $v_{be}$ = 0 , $f$ = 1 MHz | $C_{ce}$ | - | 0.15 | - | |
| Noise figure<br>$I_C$ = 3 mA, $V_{CE}$ = 10 V, $f$ = 800 MHz<br>$Z_S$ = 60 Ω | $F$ | - | 4.5 | - | dB |
| Cannon-base power gain<br>$I_C$ = 3 mA, $V_{CB}$ = 10 V, $f$ = 800 MHz<br>$R_L$ = 500 Ω | $G_p$ | - | 14.8 | - | |

**Total power dissipation** $P_{tot} = f(T_A^*, T_S)$

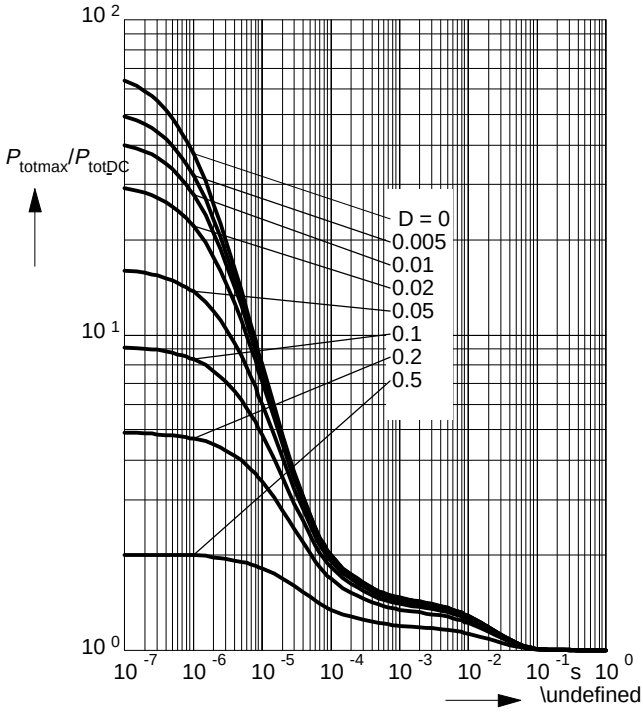
* Package mounted on epoxy




**Permissible Pulse Load** $R_{thJS} = f(t_p)$



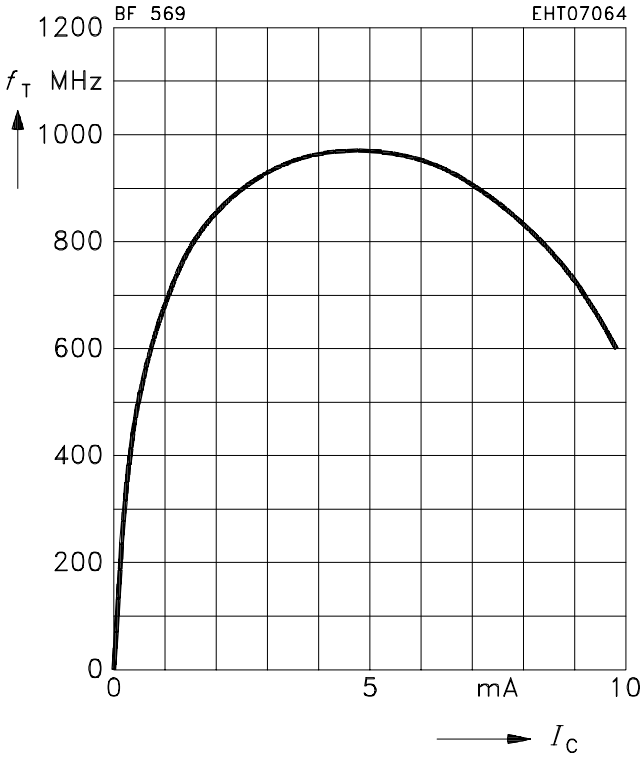

**Permissible Pulse Load** $P_{totmax}/P_{totDC} = f(t_p)$



**Transition frequency** $f_T = f(I_C)$

$f$ = 100MHz

$V_{CE}$ = 10V




**Collector-base capacitance** $C_{cb} = f(V_{CB})$

$V_{BE} = v_{be} = 0$, $f$ = 1MHz