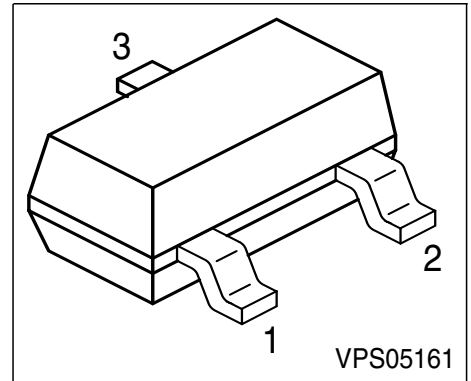
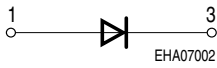
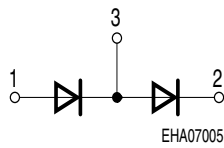
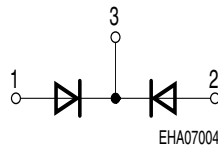
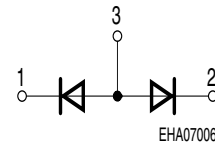


**Silicon RF Switching Diode**

- Low-loss VHF / UHF switch above 10 MHz
- PIN diode with low forward resistance


**BAT 18**

**BAT 18-04**

**BAT 18-05**

**BAT 18-06**


| Type      | Marking | Pin Configuration |        |           | Package |
|-----------|---------|-------------------|--------|-----------|---------|
| BAT 18    | A2s     | 1 = A             | 2 n.c. | 3 = C     | SOT-23  |
| BAT 18-04 | AUs     | 1 = A1            | 2 = C2 | 3 = C1/A2 | SOT-23  |
| BAT 18-05 | ASs     | 1 = A1            | 2 = A2 | 3 = C1/2  | SOT-23  |
| BAT 18-06 | ATs     | 1 = C1            | 2 = C2 | 3 = A1/2  | SOT-23  |

**Maximum Ratings**

| Parameter                   | Symbol    | Value       | Unit |
|-----------------------------|-----------|-------------|------|
| Diode reverse voltage       | $V_R$     | 35          | V    |
| Forward current             | $I_F$     | 100         | mA   |
| Operating temperature range | $T_{op}$  | -55 ... 150 | °C   |
| Storage temperature         | $T_{stg}$ | -55 ... 150 |      |

**Thermal Resistance**

|                                  |            |       |     |
|----------------------------------|------------|-------|-----|
| Junction - ambient <sup>1)</sup> | $R_{thJA}$ | ≤ 450 | K/W |
|----------------------------------|------------|-------|-----|

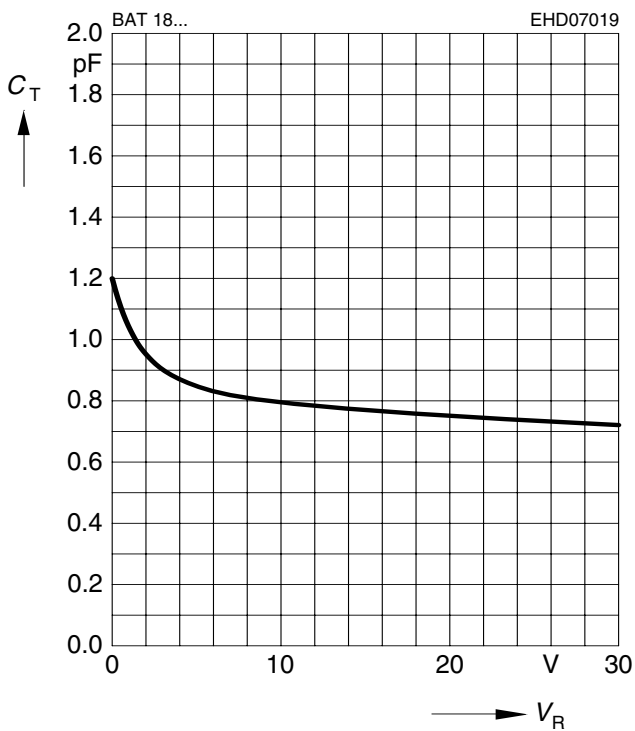
1) Package mounted on alumina 15mm x 16.7mm x 0.7mm

**Electrical Characteristics** at  $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified.

| Parameter  | Symbol | Values |      |      | Unit     |
|--|--------|--------|------|------|----------|
|  |        | min.   | typ. | max. |          |
| <b>DC characteristics</b>  |        |        |      |      |          |
| Reverse current<br>$V_R = 20\text{ V}$                                 | $I_R$  | -      | -    | 20   | nA       |
| Reverse current<br>$V_R = 20\text{ V}, T_A = 60\text{ }^\circ\text{C}$ | $I_R$  | -      | -    | 200  |          |
| Forward voltage<br>$I_F = 100\text{ mA}$                               | $V_F$  | -      | 0.38 | 1.2  | mV       |
| <b>AC characteristics</b>  |        |        |      |      |          |
| Diode capacitance<br>$V_R = 20\text{ V}, f = 1\text{ MHz}$             | $C_T$  | -      | 0.75 | 1    | pF       |
| Forward resistance<br>$I_F = 5\text{ mA}, f = 100\text{ MHz}$          | $r_f$  | -      | 0.4  | 0.7  | $\Omega$ |
| Series inductance  | $L_S$  | -      | 2    | -    | nH       |

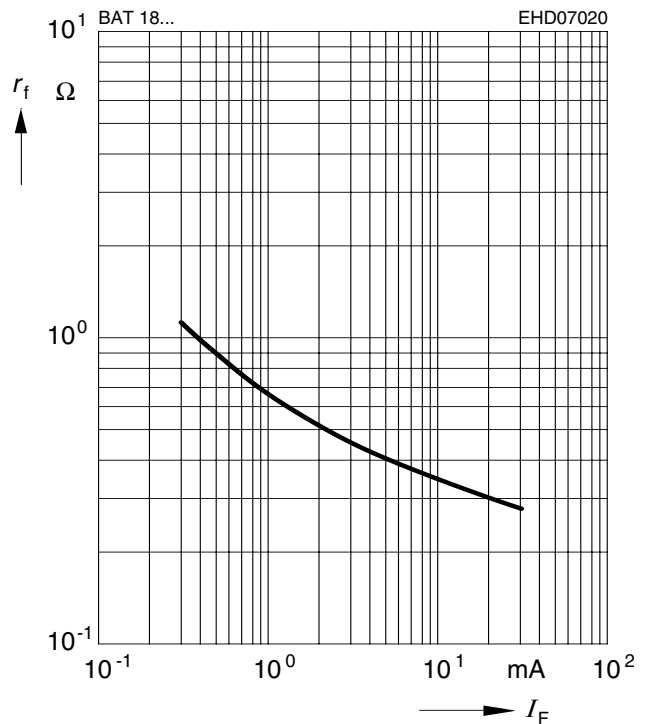
**Diode capacitance**  $C_T = f(V_R)$

$f = 1\text{ MHz}$



**Forward resistance**  $r_f = f(I_F)$

$f = 100\text{ MHz}$





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