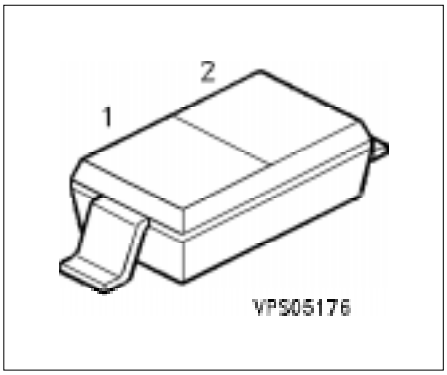
SIEMENS

## Silicon Schottky Diode — BAT 65

### Features

- Low-power Schottky rectifier diode
- For low-loss, fast-recovery rectification, meter protection, bias isolation and clamping purposes
- Miniature plastic package for surface mounting (SMD)




| Type | Marking | Ordering Code | Pin Configuration | | Package[1)] |
|---|---|---|---|---|---|
| | | | 1 | 2 | |
| BAT 65 | White/C | Q62702-A990 | C | A | SOD-123 |

[1)] Dimensions see page 313.

### Maximum Ratings

| Parameter | Symbol | Limit Values | Unit |
|---|---|---|---|
| Reverse voltage | $V_R$ | 40 | V |
| Forward current | $I_F$ | 750 | mA |
| Average forward current, $f$ = 50 Hz | $I_{FAV}$ | 500 | mA |
| Surage forward current, $t \leq 10$ ms | $I_{FSM}$ | 2.5 | A |
| Total power dissipation, $T_S \leq 100$ °C | $P_{tot}$ | 600 | mW |
| Junction temperature | $T_j$ | 150 | °C |
| Storage temperature range | $T_{stg}$ | – 55 … + 150 | °C |

## Thermal Resistance

| Parameter | Symbol | Limit Values | Unit |
|---|---|---|---|
| Junction - soldering point | $R_{thJS}$ | ≤ 80 | K/W |
| Junction to ambient[1)] | $R_{thJA}$ | ≤ 150 | K/W |

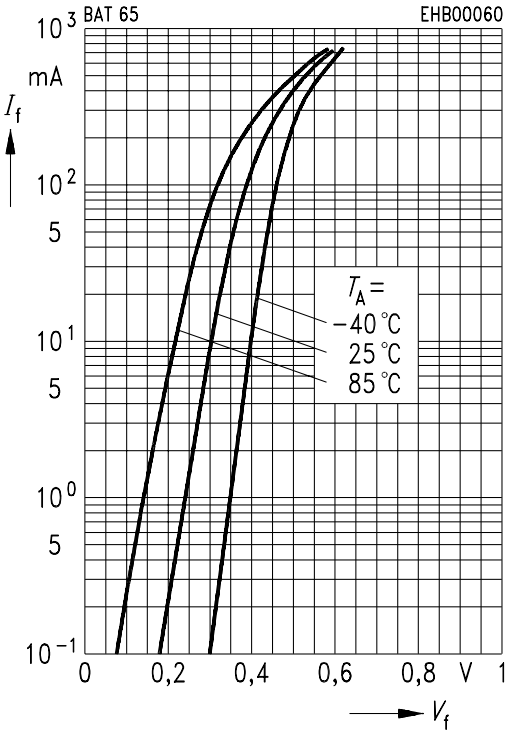
1) Package mounted on epoxy PCB 40 mm × 40 mm × 1.5 mm/6 cm² Cu.

## Electrical Characteristics

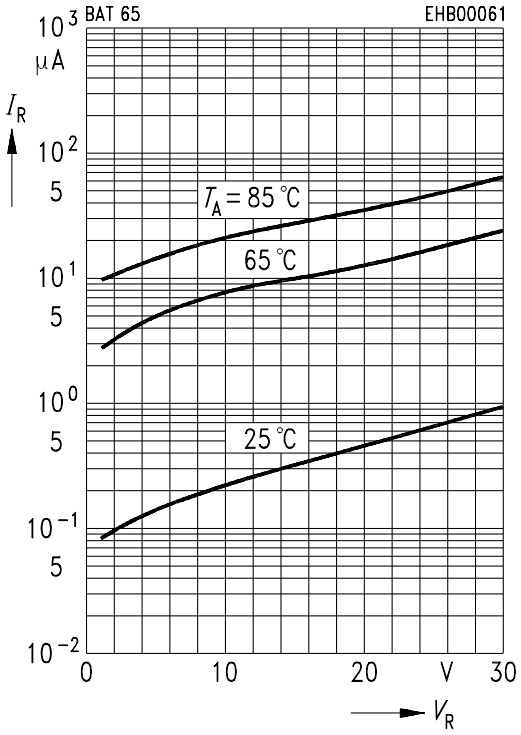
$T_A$ = 25 °C, unless otherwise specified.

| Parameter | Symbol | Limit Values | | | Unit |
|---|---|---|---|---|---|
| | | min. | typ. | max. | |
| Reverse current | $I_R$ | | | | µA |
| $V_R$ = 30 V | | – | – | 50 | |
| $V_R$ = 30 V, $T_A$ = 65 °C | | – | – | 900 | |
| Forward voltage | $V_F$ | | | | V |
| $I_F$ = 10 mA | | – | 0.305 | 0.40 | |
| $I_F$ = 100 mA | | – | 0.38 | – | |
| $I_F$ = 250 mA | | – | 0.44 | 0.70 | |
| $I_F$ = 750 mA | | – | 0.580 | – | |
| Diode capacitance | $C_T$ | | | | pF |
| $V_R$ = 10 V, $f$ = 1 MHz | | – | 8.4 | 12 | |

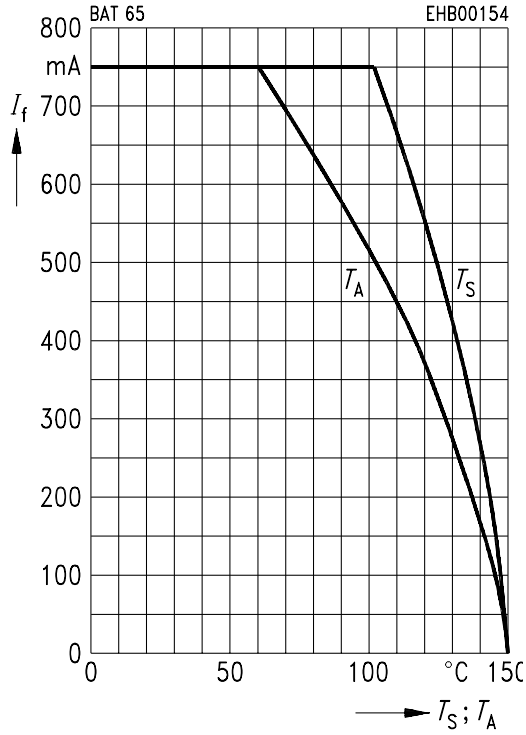
## Forward Current $I_F = f(V_F)$




## Reverse Current $I_R = f(V_R)$

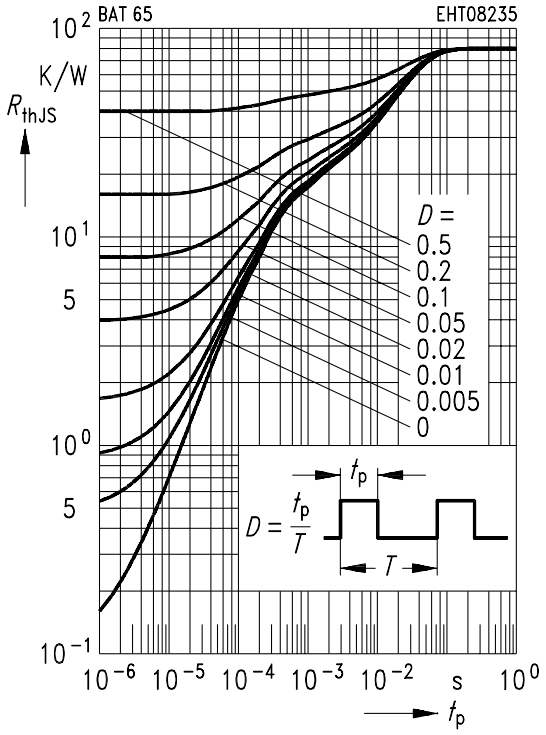



## Forward Current $I_F = f(T_S; T_A^{1)})$




[1] Package mounted on epoxy PCB 40 mm × 40 mm × 1.5 mm/6 cm² Cu.

## Permissible Load $R_{thJS} = f(t_P)$




## Permissible Pulse Load $I_{fmax}/I_{fDC} = f(t_P)$