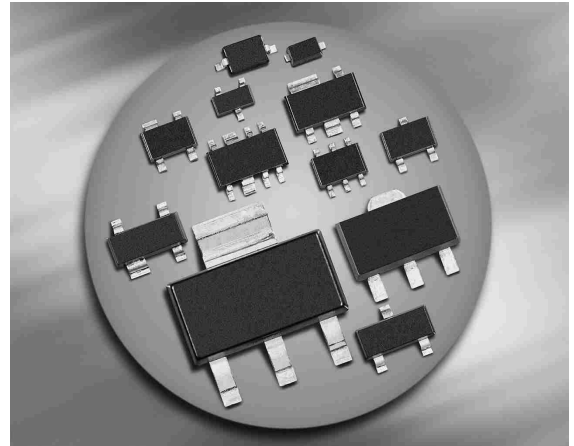
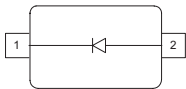


### Silicon Schottky Diode

- High current rectifier Schottky diode with extreme low  $V_F$  drop (typ. 0.12V at  $I_F = 10\text{mA}$ )
- For power supply applications
- For clamping and protection in low voltage applications
- For detection and step-up-conversion



### BAT60A



**ESD:** Electrostatic discharge sensitive device, observe handling precaution!

| Type   | Package | Configuration | Marking |
|--------|---------|---------------|---------|
| BAT60A | SOD323  | single        | white/3 |

**Maximum Ratings** at  $T_A = 25^\circ\text{C}$ , unless otherwise specified

| Parameter                                              | Symbol    | Value       | Unit             |
|--------------------------------------------------------|-----------|-------------|------------------|
| Diode reverse voltage                                  | $V_R$     | 10          | V                |
| Forward current                                        | $I_F$     | 3           | A                |
| Surge forward current, ( $t \leq 10\text{ms}$ )        | $I_{FSM}$ | 5           |                  |
| Total power dissipation<br>$T_S \leq 28^\circ\text{C}$ | $P_{tot}$ | 1350        | mW               |
| Junction temperature                                   | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage temperature                                    | $T_{stg}$ | -55 ... 150 |                  |

### Thermal Resistance

| Parameter                                | Symbol     | Value     | Unit |
|------------------------------------------|------------|-----------|------|
| Junction - soldering point <sup>1)</sup> | $R_{thJS}$ | $\leq 90$ | K/W  |

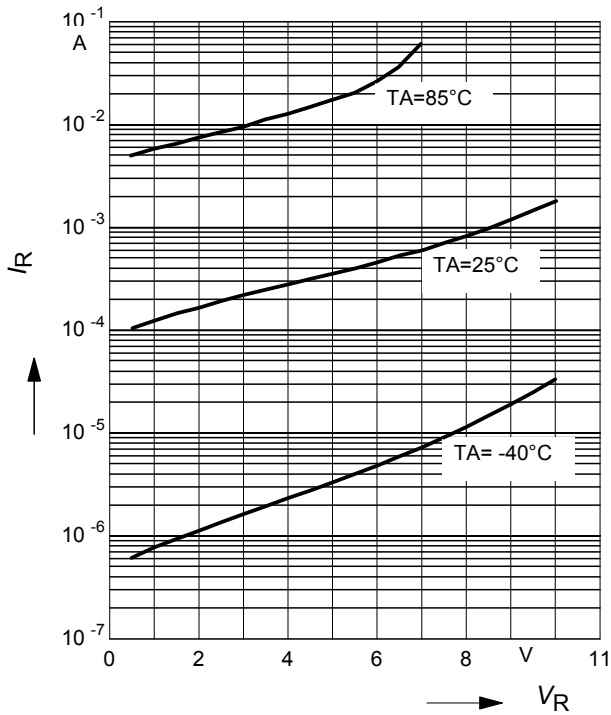
<sup>1)</sup>For calculation of  $R_{thJA}$  please refer to Application Note Thermal Resistance

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

| Parameter                                            | Symbol | Values |      |      | Unit |
|------------------------------------------------------|--------|--------|------|------|------|
|                                                      |        | min.   | typ. | max. |      |
| DC Characteristics                                   |        |        |      |      |      |
| Reverse current                                      | $I_R$  |        |      |      | mA   |
| $V_R = 5\text{ V}$                                   |        | -      | 0.3  | 1    |      |
| $V_R = 8\text{ V}$                                   |        | -      | 0.6  | 2.6  |      |
| $V_R = 5\text{ V}, T_A = 80\text{ }^{\circ}\text{C}$ |        | -      | 18   | -    |      |
| Forward voltage                                      | $V_F$  |        |      |      | V    |
| $I_F = 10\text{ mA}$                                 |        | 0.1    | 0.12 | 0.15 |      |
| $I_F = 100\text{ mA}$                                |        | 0.15   | 0.2  | 0.23 |      |
| $I_F = 1000\text{ mA}$                               |        | 0.22   | 0.3  | 0.37 |      |
| AC Characteristics                                   |        |        |      |      |      |
| Diode capacitance                                    | $C_T$  | -      | 20   | 35   | pF   |
| $V_R = 5\text{ V}, f = 1\text{ MHz}$                 |        |        |      |      |      |

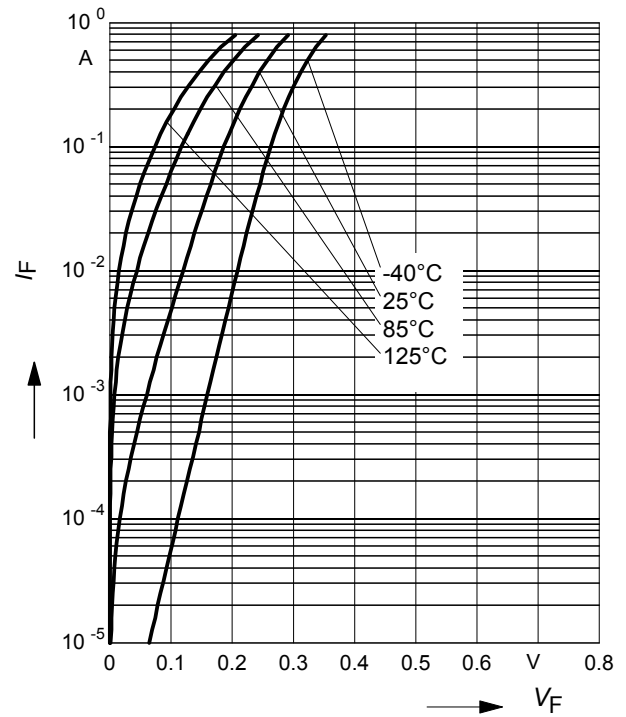
**Reverse current  $I_R = f(V_R)$**

$T_A$  = Parameter

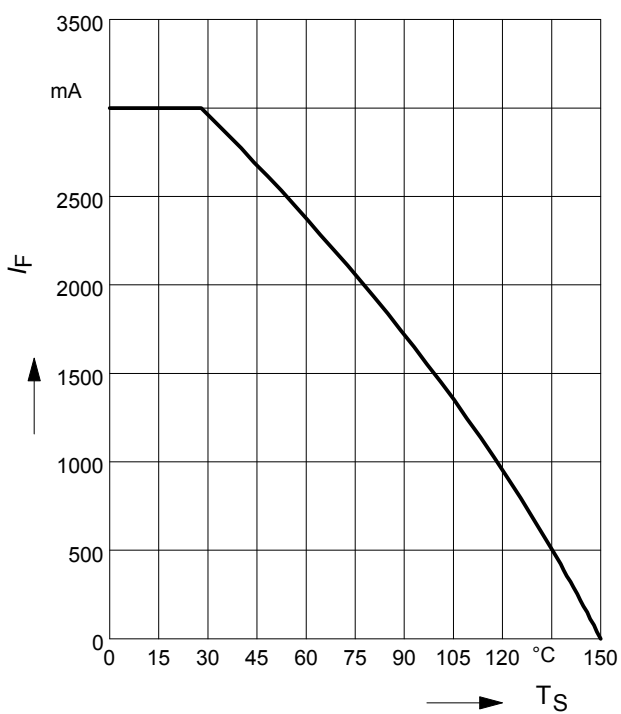


**Forward current  $I_F = f(V_F)$**

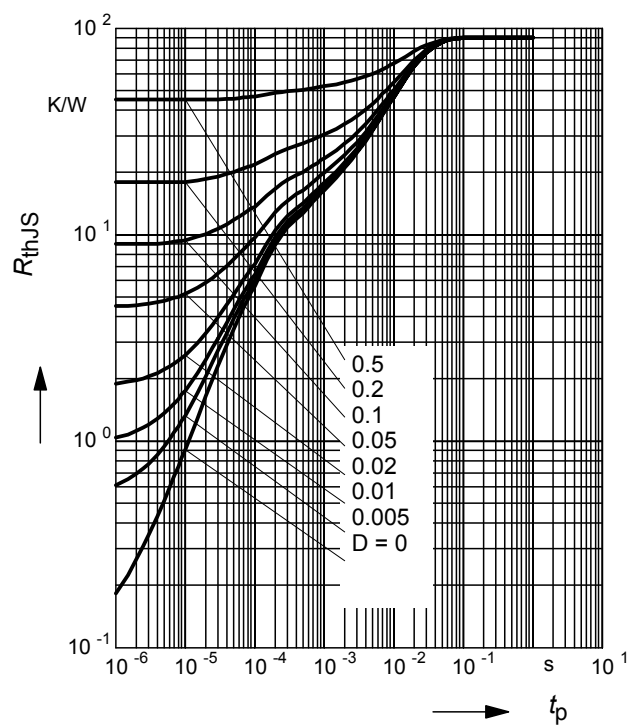
$T_A$  = Parameter



**Forward current  $I_F = f(T_S)$**



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



## Permissible Pulse Load

$$I_{Fmax}/I_{FDC} = f(t_p)$$

