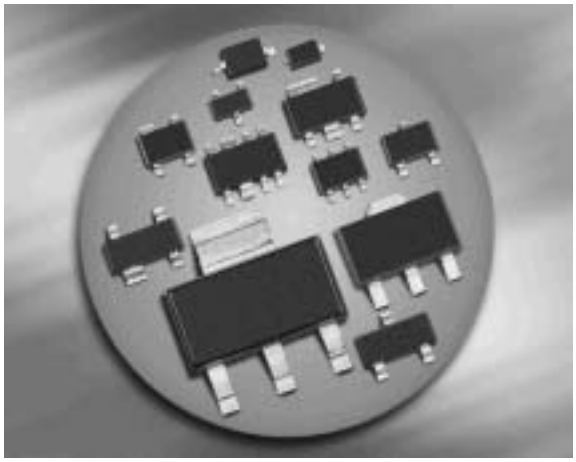
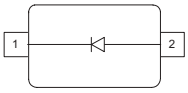
**Medium Power AF Schottky Diode**

- Forward current: 1 A
- Reverse voltage: 30 V
- Very low forward voltage (typ. 0.41V @ $I_F$ = 1A)
- For high efficiency DC/DC conversion, fast switching, protection and clamping applications
- Pb-free (RoHS compliant) package [1)]
- Qualified according AEC Q101



AEC Qualified RoHS

**BAS 3010A-03W**




| Type | Package | Configuration | Marking |
|---|---|---|---|
| BAS3010A-03W | SOD323 | single | 4/ blue |

**Maximum Ratings** at $T_A$ = 25°C, unless otherwise specified

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Diode reverse voltage[2)] | $V_R$ | 30 | V |
| Forward current[2)] | $I_F$ | 1 | A |
| Average rectified forward current (50/60Hz, sinus) | $I_{FAV}$ | 1 | |
| Repetitive peak forward current ($t_p \leq 1$ ms, $D \leq 0.5$) | $I_{FRM}$ | 3.5 | |
| Non-repetitive peak surge forward current ($t \leq 10$ms) | $I_{FSM}$ | 10 | |
| Junction temperature | $T_j$ | 150 | °C |
| Operating temperature range | $T_{op}$ | -65 ... 125 | |
| Storage temperature | $T_{stg}$ | -65 ... 150 | |

[1]Pb-containing package may be available upon special request
[2]For $T_A$ > 25°C the derating of $V_R$ and $I_F$ has to be considered. Please refer to the attached curves.

**Thermal Resistance**

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Junction - soldering point[1)] | $R_{thJS}$ | ≤ 82 | K/W |

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

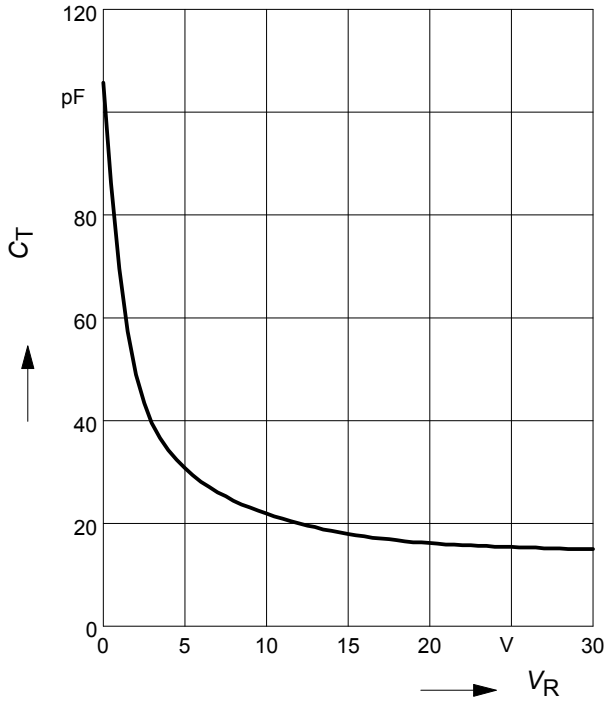
| Parameter | Symbol | Values | | | Unit |
|---|---|---|---|---|---|
| | | min. | typ. | max. | |
| **DC Characteristics** | | | | | |
| Reverse current[2)] | $I_R$ | | | | µA |
| $V_R$ = 5 V | | - | 5 | 25 | |
| $V_R$ = 10 V | | - | 10 | 50 | |
| $V_R$ = 30 V | | - | 40 | 200 | |
| Forward voltage[2)] | $V_F$ | | | | mV |
| $I_F$ = 1 mA | | - | 170 | 220 | |
| $I_F$ = 10 mA | | - | 220 | 270 | |
| $I_F$ = 100 mA | | - | 290 | 340 | |
| $I_F$ = 500 mA | | - | 350 | 410 | |
| $I_F$ = 1 A | | - | 410 | 470 | |
| **AC Characteristics** | | | | | |
| Diode capacitance | $C_T$ | - | 28 | 35 | pF |
| $V_R$ = 5 V, $f$ = 1 MHz | | | | | |

[1]For calculation of $R_{thJA}$ please refer to Application Note Thermal Resistance

[2]Pulsed test: $t_p$ = 300 µs; D = 0.01

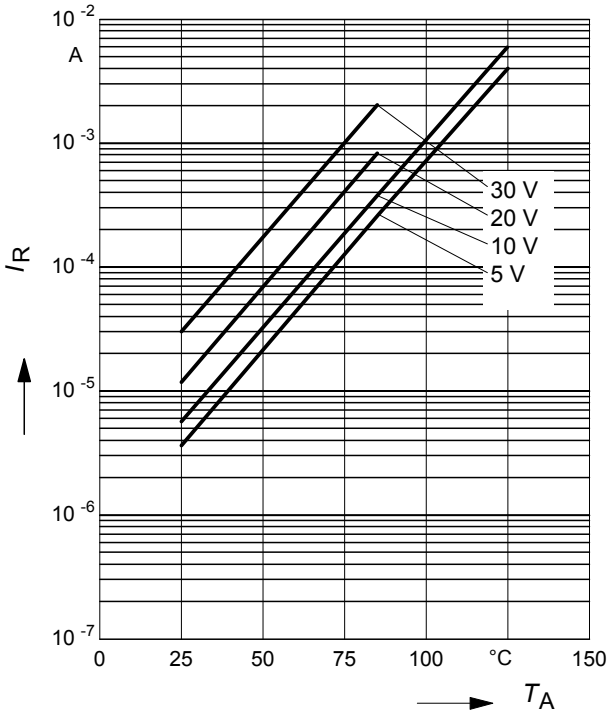
**Diode capacitance** $C_T = f(V_R)$

$f$ = 1MHz



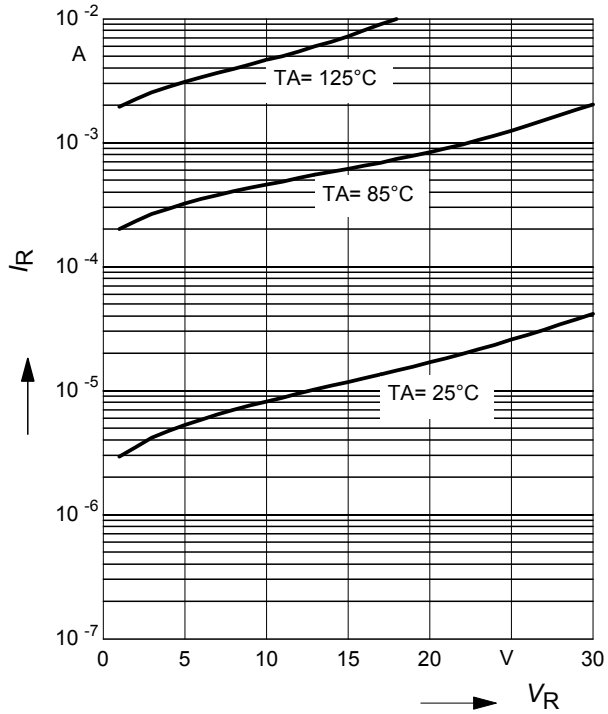

**Reverse current** $I_R = f(T_A)$

$V_R$ = Parameter



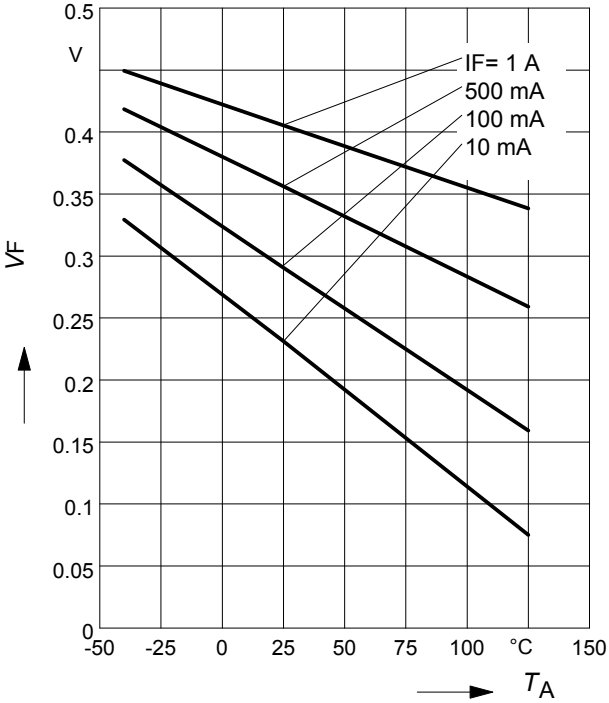

**Reverse current** $I_R = f(V_R)$

$T_A$ = Parameter



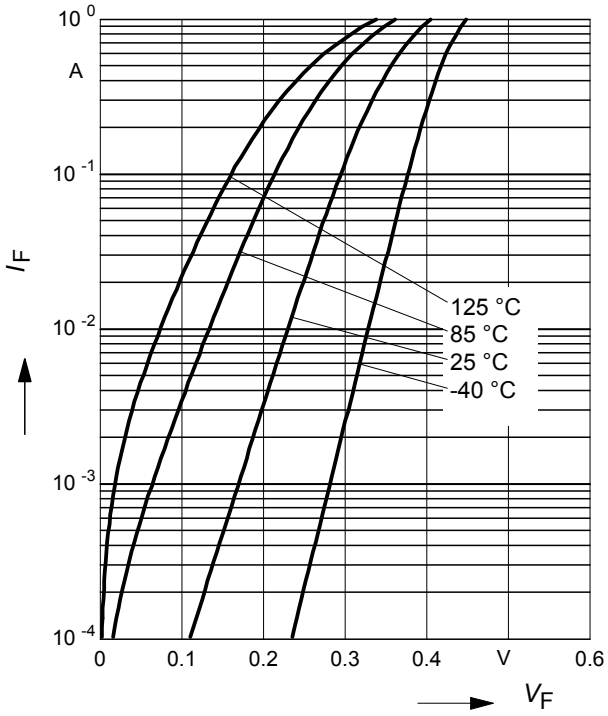

**Forward Voltage** $V_F = f(T_A)$

$I_F$ = Parameter



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

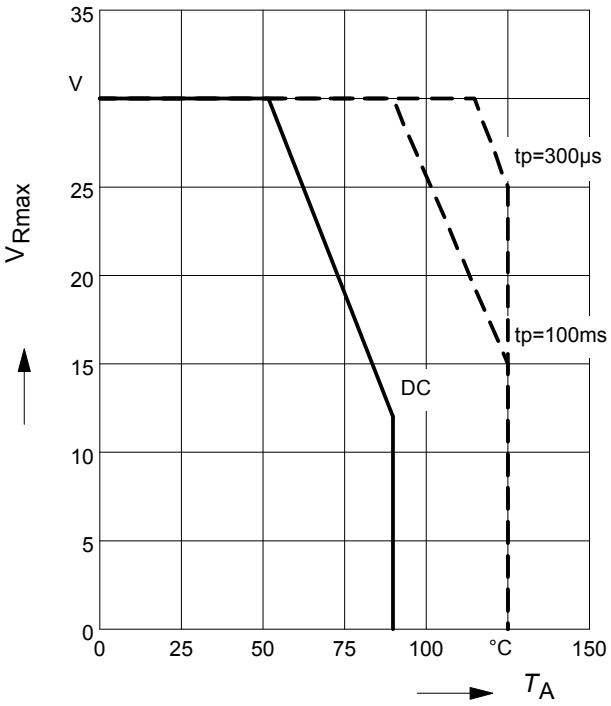
$T_A$ = Parameter



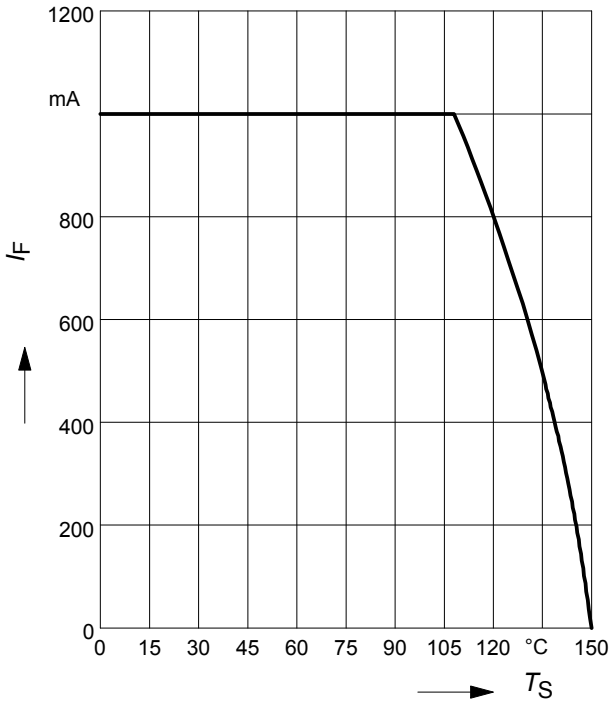

**Permissible Reverse voltage** $V_R = f(T_A)$

$t_p$ = Parameter, Duty cycle < 0.01

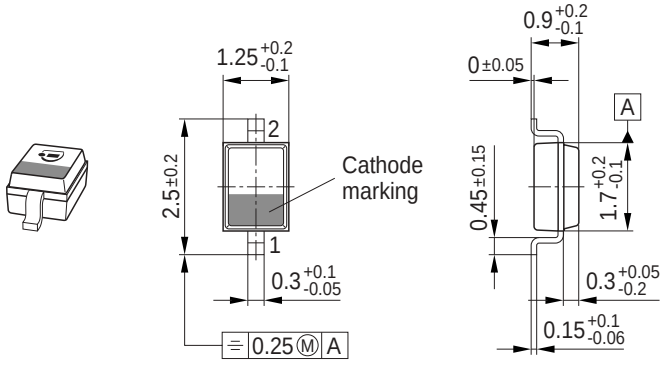
Device mounted on PCB with $R_{th}$ = 160 k/W



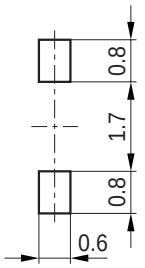

**Forward current** $I_F = f(T_S)$



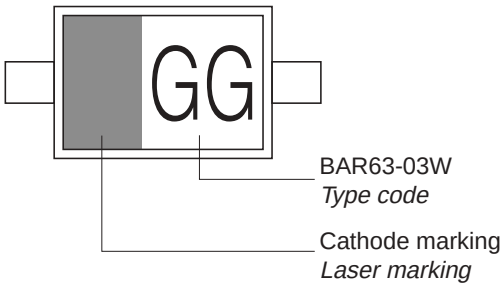
## Package Outline




## Foot Print

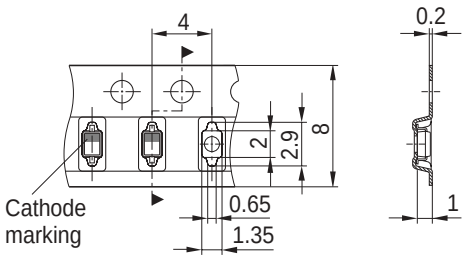



## Marking Layout (Example)




## Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



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