

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)

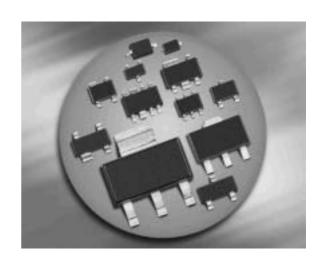
Qualified according AEC Q101





BAS 3010A-03W





Туре	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	Α
Average rectified forward current (50/60Hz, sinus)	I _{FAV}	1	
Repetitive peak forward current	/ _{FRM}	3.5	
$(t_p \le 1 \text{ ms}, D \le 0.5)$			
Non-repetitive peak surge forward current	I _{FSM}	10	
(<i>t</i> ≤ 10ms)			
Junction temperature	T_{i}	150	°C
Operating temperature range	Top	-65 125	
Storage temperature	$T_{\rm stg}$	-65 150	

¹Pb-containing package may be available upon special request

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 $^{^2}$ 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}				μΑ
V_{R} = 5 V		_	5	25	
V _R = 10 V		-	10	50	
<i>V</i> _R = 30 V		-	40	200	
Forward voltage ²⁾	V _F				mV
<i>I</i> _F = 1 mA		_	170	220	
<i>I</i> _F = 10 mA		_	220	270	
$I_{\rm F}$ = 100 mA		_	290	340	
I _F = 500 mA		_	350	410	
<i>I</i> _F = 1 A		_	410	470	
AC Characteristics					
Diode capacitance	C_{T}	-	28	35	pF
$V_{R} = 5 \text{ V}, f = 1 \text{ MHz}$					

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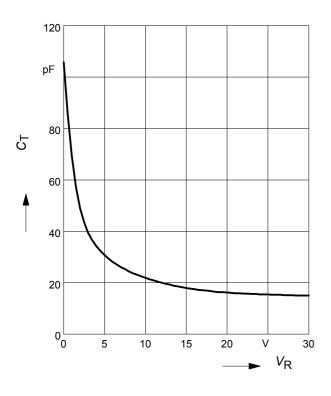
 $^{^{\}rm 1}{\rm For}$ calculation of $R_{\rm thJA}$ please refer to Application Note Thermal Resistance

²Pulsed test: $t_{\rm p}$ = 300 µs; D = 0.01



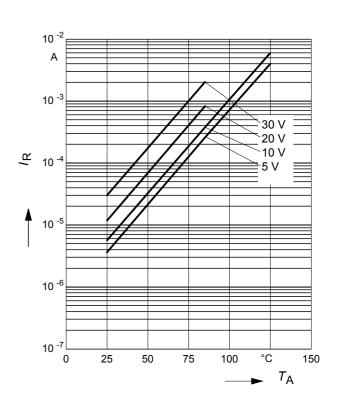
Diode capacitance $C_T = f(V_R)$

f = 1MHz



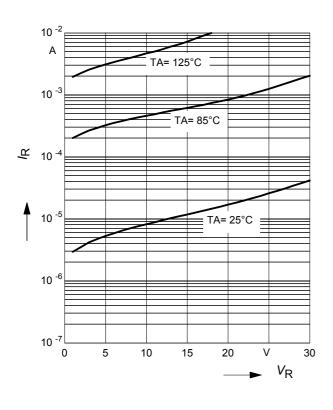
Reverse current $I_R = f(T_A)$

 V_{R} = Parameter



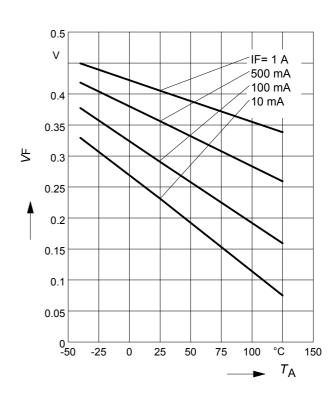
Reverse current $I_R = f(V_R)$

 T_A = Parameter



Forward Voltage $V_F = f(T_A)$

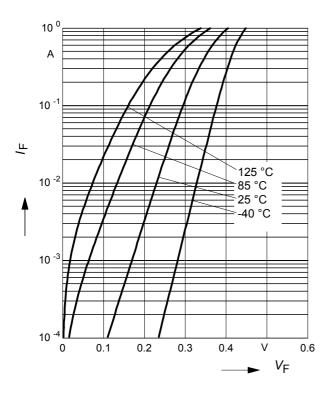
 I_{F} = Parameter





Forward current $I_F = f(V_F)$

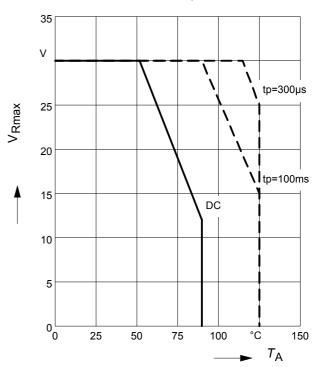
 T_A = Parameter



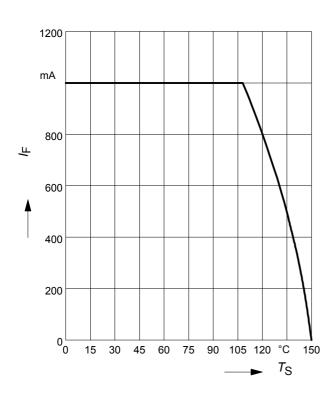
Permissible Reverse voltage $V_R = f(T_A)$

 $t_{\rm p}$ = Parameter, Duty cycle < 0.01

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



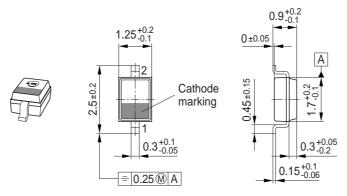
Forward current $I_F = f(T_S)$



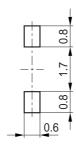
4



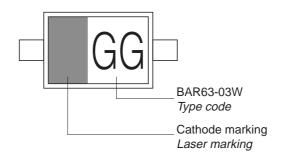
Package Outline



Foot Print

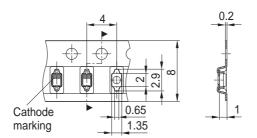


Marking Layout (Example)



Standard Packing

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





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