

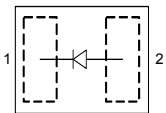


**THE DATASHEET OF
BAS3010S02LRHE6327XTSA1**



Low VF Schottky Diode

- Reverse voltage: 30 V
- Forward current: 1 A
- Low forward voltage and smallest package form factor (1.0 x 0.6 x < 4 mm) for mobile phone battery charger application
- Pb-free (RoHS compliant) package


BAS3010S-02LRH


Type	Package	Configuration	Marking
BAS3010S-02LRH	TSLP-2-17	single	1T

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

Parameter	Symbol	Value	Unit
Diode reverse voltage ¹⁾	V_R	30	V
Forward current ¹⁾ , $T_S \leq 114\text{ °C}$	I_F	1	A
Non-repetitive peak surge forward current ($t_p \leq 10\text{ ms}$)	I_{FSM}	4	
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ... 150	
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

Junction - soldering point ²⁾	R_{thJS}	≤ 60	K/W
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¹For $T_A > 25\text{ °C}$ the derating of V_R and I_F has to be considered

²For calculation of R_{thJA} please refer to Application Note Thermal Resistance

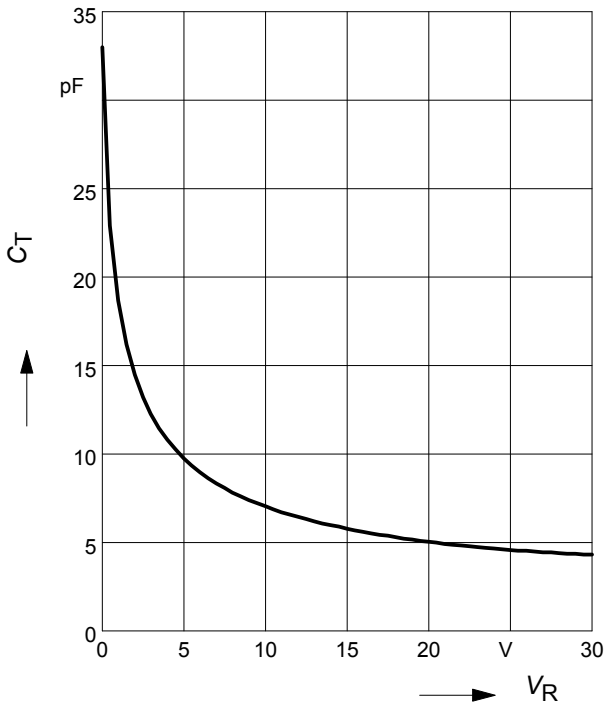
Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current ¹⁾ $V_R = 10\text{ V}$ $V_R = 30\text{ V}$	I_R	-	-	30 300	μA
Forward voltage ¹⁾ $I_F = 1\text{ mA}$ $I_F = 100\text{ mA}$ $I_F = 700\text{ mA}$ $I_F = 1000\text{ mA}$	V_F	-	200 340 500 570	250 390 570 650	mV
AC Characteristics					
Diode capacitance $V_R = 5\text{ V}, f = 1\text{ MHz}$	C_T	-	10	15	pF

¹⁾Pulsed test: $t_p = 300\ \mu\text{s}; D = 0.01$

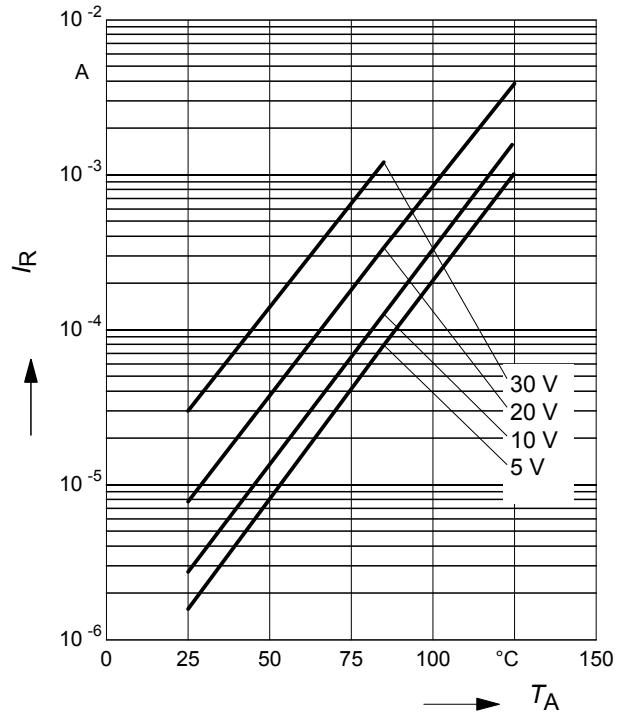
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



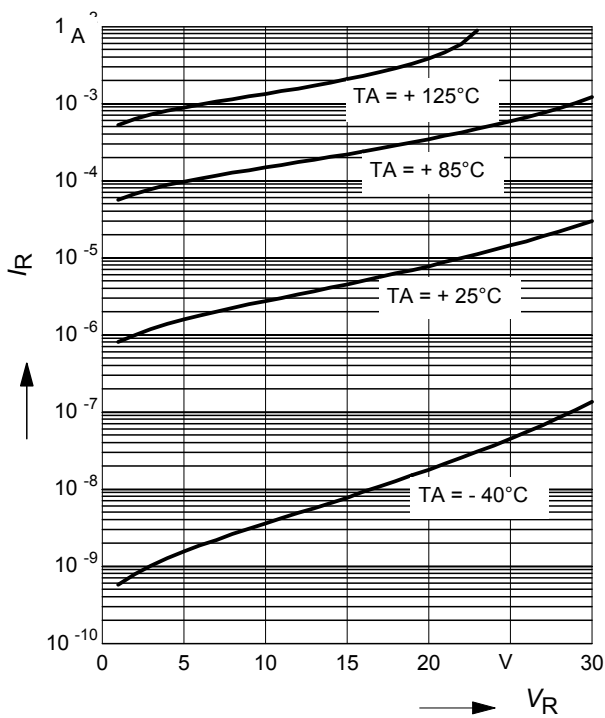
Reverse current $I_R = f(T_A)$

$V_R = \text{Parameter}$



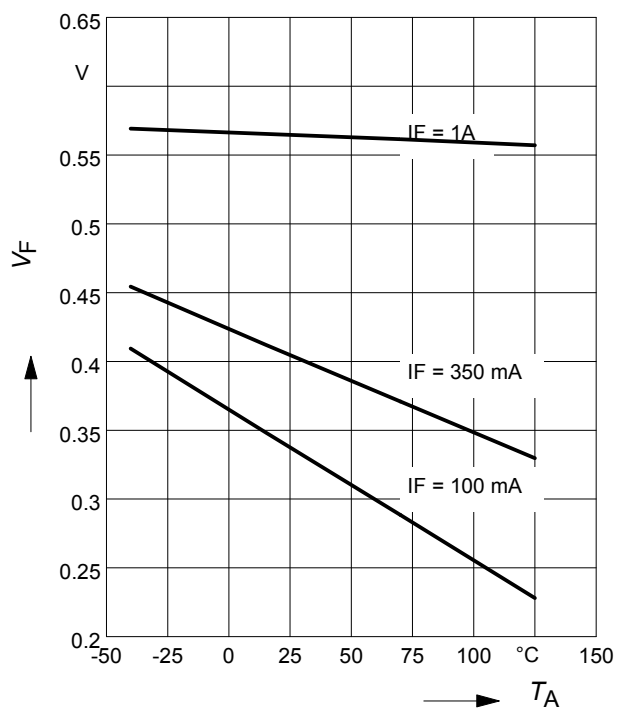
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$

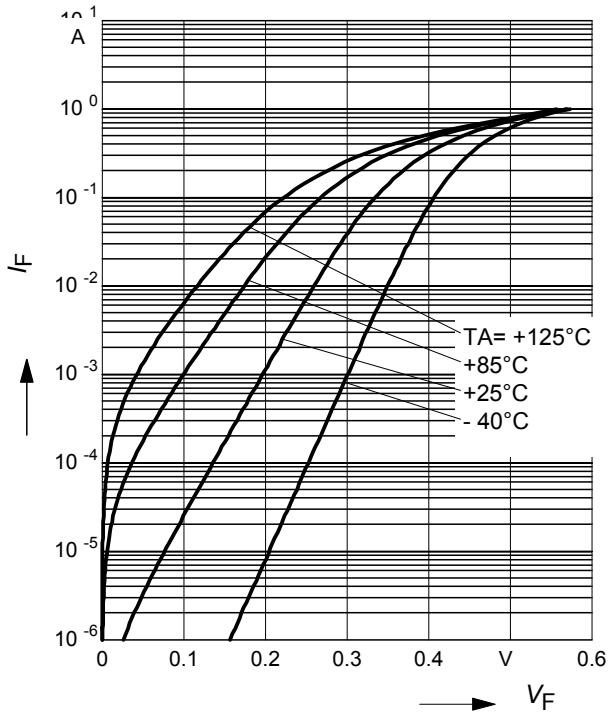


Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



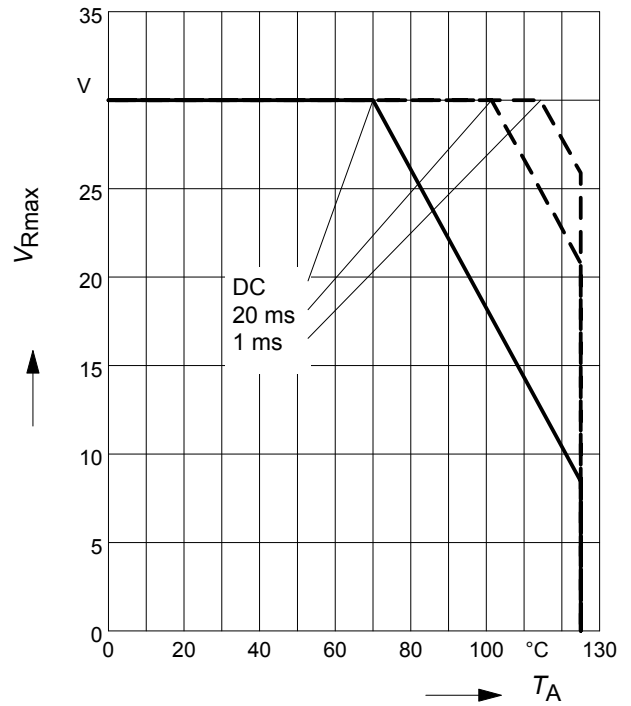
Forward current $I_F = f(V_F)$



Permissible Reverse voltage $V_R = f(T_A)$

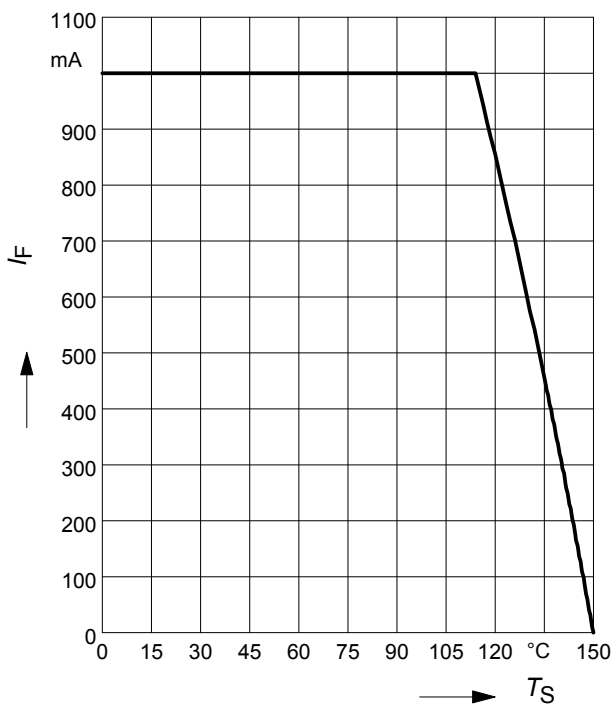
t_p = Parameter, Duty cycle < 0.01

Device mounted on PCB with $R_{th} = 160 \text{ K/W}$

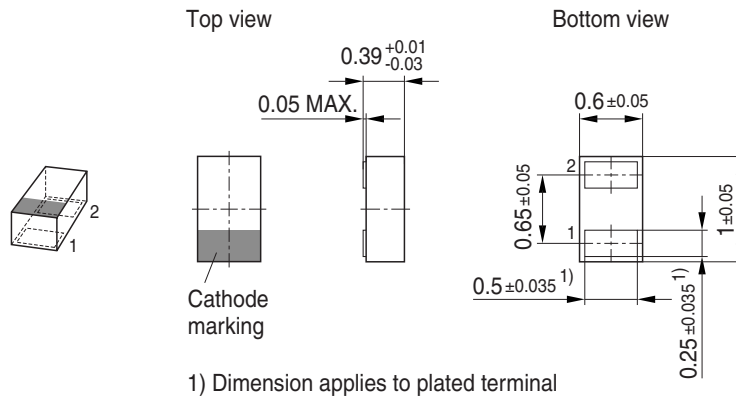


Forward current $I_F = f(T_S)$

BAS3010S-02LRH

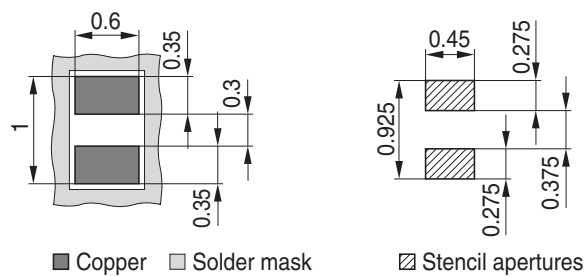


Package Outline

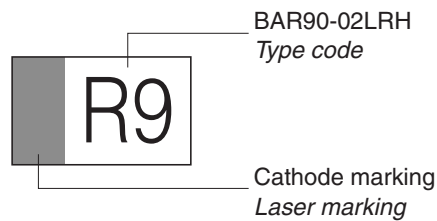


Foot Print

For board assembly information please refer to Infineon website "Packages"

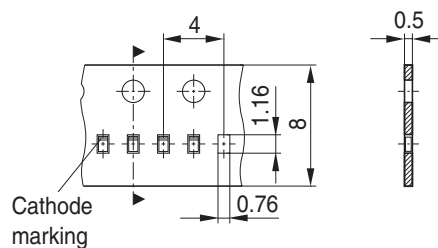


Marking Layout (Example)



Standard Packing

Reel \varnothing 180 mm = 15.000 Pieces/Reel
 Reel \varnothing 330 mm = 50.000 Pieces/Reel (optional)



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