

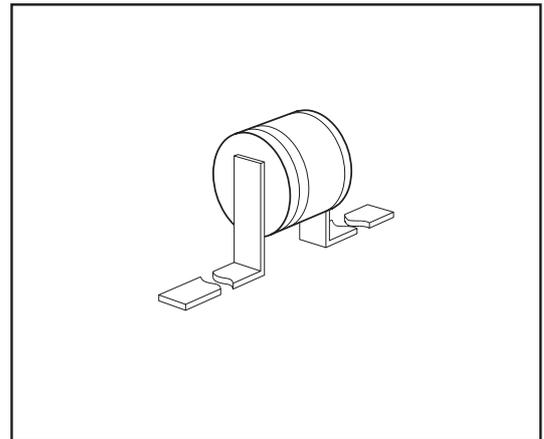
HiRel Silicon Schottky Diode

- **HiRel Discrete and Microwave Semiconductor**
- General-purpose diodes for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- Hermetically sealed microwaver package

- **esa Space Qualified**

ESA/SCC Detail Spec. No.: 5512/020

Type Variante No. 01


BAS70-T1


ESD (Electrostatic discharge) sensitive device, observe handling precaution!

Type	Package	Configuration	Marking
BAS70-T1	T1	single	-

(ql) Testing level: P: Professional testing
 H: High Rel quality
 S: Space quality
 ES: ESA qualified

Maximum Ratings

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	70	V
Forward current	I_F	70	mA
Surge forward current ¹⁾	I_{FSM}	85	mA
Total power dissipation ²⁾	P_{tot}	250	mW
Operating temperature range	T_{op}	-55 ... 150	°C
Soldering temperature ³⁾	T_{sol}	250	°C
Storage temperature	T_{stg}	-55 ... 150	°C

¹⁾ $t \leq 10ms$, duty Cycle = 10%

²⁾ At $T_{CASE} = 125^\circ C$. For $T_{CASE} > 125^\circ C$ derating is required

³⁾ During 5 sec. maximum. The terminal shall not be resoldered until 3 minutes have elapsed.

Thermal Resistance

Parameter	Symbol	Value	Unit
Thermal resistance junction-case	$R_{th(j-c)}$	100	K/W

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC Characteristics

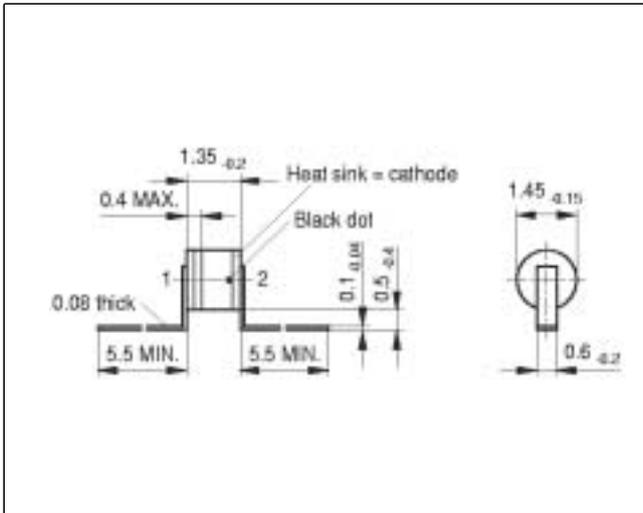
Reverse current 1 $V_{R1} = 70\text{ V}$	I_{R1}	-	-	2	μA
Reverse current 2 $V_{R2} = 56\text{ V}$	I_{R2}	-	-	0.1	
Forward Voltage 1	V_{F1}	0.3	0.38	0.44	V
		0.6	0.7	0.78	
		0.8	0.85	1	
Forward Voltage 2 $I_{F2} = 10\text{ mA}$	V_{F1}	0.3	0.38	0.44	
		0.6	0.7	0.78	
		0.8	0.85	1	
Differential Forward Resistance ¹⁾ $I_{F2} = 10\text{ mA}, I_{F3} = 15\text{ mA}$	R_{FD}	24	30	32	Ω

AC Characteristics

Diode capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	C_T	1.2	1.5	2	pF
---	-------	-----	-----	---	----

$$R_{FD} = \frac{\Delta V_F}{5 \times 10^{-3} \text{ A}}$$

T1 Package



Edition 2006-02-01
Published by
Infineon Technologies AG
81726 München, Germany
© Infineon Technologies AG 2007.
All Rights Reserved.

Attention please!

The information given in this dokument shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system.

Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.