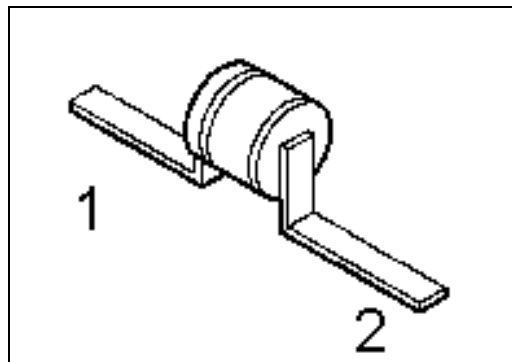


HiRel Silicon Schottky Diode

- **HiRel Discrete and Microwave Semiconductor**
- General-purpose diodes for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- Hermetically sealed microwave package
-  **ESA Space Qualification Expected 1998**
ESA/SCC Detail Spec. No.: 5512/020
Type Variant No. 03 (tbc.)



ESD: Electrostatic discharge sensitive device,
observe handling precautions!

Type	Marking	Ordering Code	Pin Configuration	Package
BAS40-T1 (ql)	-	see below	1 —  — 2	T1

(ql) Quality Level:	P: Professional Quality,	Ordering Code:	Q62702A1176
	H: High Rel Quality,	Ordering Code:	on request
	S: Space Quality,	Ordering Code:	on request

(see order instructions for ordering example)

Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse Voltage	V_R	40	V
Forward Current	I_F	120	mA
Surge Forward Current ¹⁾	I_{FSM}	170	mA
Power Dissipation ²⁾	P_{tot}	250	mW
Operating Temperature Range	T_{op}	-55 to +150	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Soldering Temperature ³⁾	T_{sol}	+250	°C
Junction Temperature	T_j	150	°C
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 $V_R=40\text{V}$	I_{R1}	-	-	10	μA
Reverse Current 2 $V_R=30\text{V}$	I_{R2}	-	-	1	μA
Forward Voltage 1 $I_{F1}=1\text{mA}$	V_{F1}	0,29	0,33	0,39	V
Forward Voltage 2 $I_{F2}=10\text{mA}$	V_{F2}	0,42	0,45	0,54	V
Forward Voltage 3 $I_{F3}=40\text{mA}$	V_{F3}	0,68	0,7	0,85	V
Differential Forward Resistance ⁴⁾ $I_F=10\text{mA}, I_F=15\text{mA}$	R_{FD}	7,5	10	11,5	Ω

AC Characteristics

Total Capacitance $V_R=0\text{V}; f=1\text{MHz}$	C_T	2,2	2,9	5,0	pF
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Notes.:

1.) $t \leq 10\text{ms}$, Duty Cycle=10%

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

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

4.)
$$R_{FD} = \frac{\Delta V_F}{5 \times 10^{-3} \text{ A}}$$

Order Instructions:

Full type variant including package variant and quality level must be specified by the orderer. For *HiRel* Discrete and Microwave Semiconductors the ordering code specifies device family and quality level only.

Ordering Form:

Ordering Code: Q.....
BAS40- (x) (ql)
(x): Package Variant
(ql): Quality Level

Ordering Example:

Ordering Code: Q62702A1176
BAS40-T1 P
For BAS40 in T1 Package; Professional Quality Level

Further Informations:

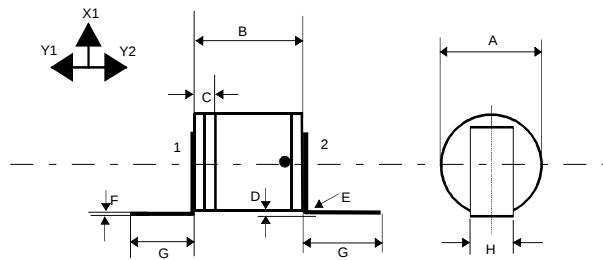
See our WWW-Pages:

- Discrete and RF-Semiconductors (Small Signal Semiconductors)
www.infineon.com/products/discrete/hirel.htm
- *HiRel* Discrete and Microwave Semiconductors
www.infineon.com/products/discrete/hirel.htm

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High Frequency Products Marketing,
P.O.Box 801709,
D-81617 Munich

T1 Package



Symbol	Millimetre	
	min	max
A	1,30	1,45
B	1,15	1,35
C	-	0,40
D	0,10	0,50
E	-	0,30
F	0,06	0,10
G	5,50	-
H	0,40	0,60

Published by Infineon Technologies Semiconductors,
High Frequency Products Marketing, P.O.Box 801709,
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