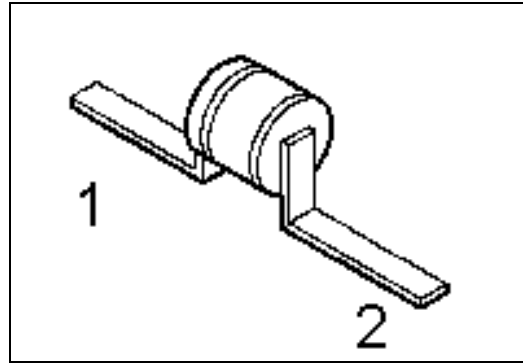



## HiRel Silicon Schottky Diode

- **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		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 <sup>1)</sup>	$I_{FSM}$	170	mA
Power Dissipation <sup>2)</sup>	$P_{tot}$	250	mW
Operating Temperature Range	$T_{op}$	-55 to +150	°C
Storage Temperature Range	$T_{stg}$	-55 to +150	°C
Soldering Temperature <sup>3)</sup>	$T_{sol}$	+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	$\mu\text{A}$
Reverse Current 2 $V_R=30\text{V}$	$I_{R2}$	-	-	1	$\mu\text{A}$
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 <sup>4)</sup> $I_F=10\text{mA}, I_F=15\text{mA}$	$R_{FD}$	7,5	10	11,5	$\Omega$

**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.

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

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**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:**

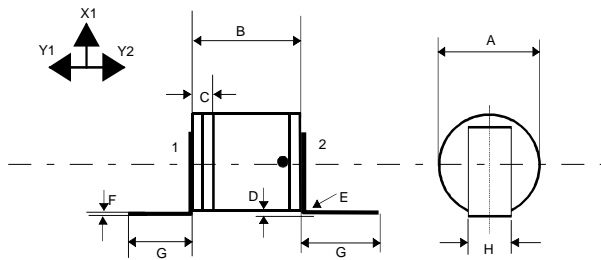
See our WWW-Pages:

- Discrete and RF-Semiconductors (Small Signal Semiconductors)  
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- *HiRel* Discrete and Microwave Semiconductors  
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Address: Infineon Technologies Semiconductors,  
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

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