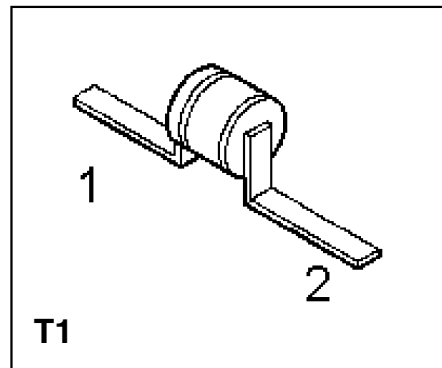


## HiRel Silicon Schottky Diode


**BAS 40**

### Features

- **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 Qualification pending



**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 **Chapter Order Instructions** for ordering example)

**Table 1 Maximum Ratings**

Parameter	Symbol	Limit 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	$P_{tot}$	250	mW
Operating temperature range	$T_{op}$	– 55 to + 150	°C
Storage temperature range	$T_{stg}$	– 65 to + 150	°C
Soldering temperature	$T_{sol}$	+ 250	°C
Junction temperature	$T_j$	150	°C
Thermal resistance junction-case	$R_{th(j-c)}$	100	K/W

<sup>1)</sup>  $t \leq 10$  ms, duty cycle = 10%

## Electrical Characteristics

**Table 2 DC Characteristics** at  $T_A = 25\text{ °C}$  unless otherwise specified

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
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>2)</sup> $I_{F2} = 10\text{ mA}, I_{F3} = 15\text{ mA}$	$R_{FD}$	7.5	10	11.5	$\Omega$

$$^2) R_{FD} = \frac{\Delta V_F}{5 \times 10^{-3}} \Omega$$

**Table 3 AC Characteristics** at  $T_A = 25\text{ °C}$  unless otherwise specified

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Total capacitance, $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_T$	2.2	2.9	5.0	pF

## Order Instructions

Full type variant including type 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 Information

See our WWW-Pages:

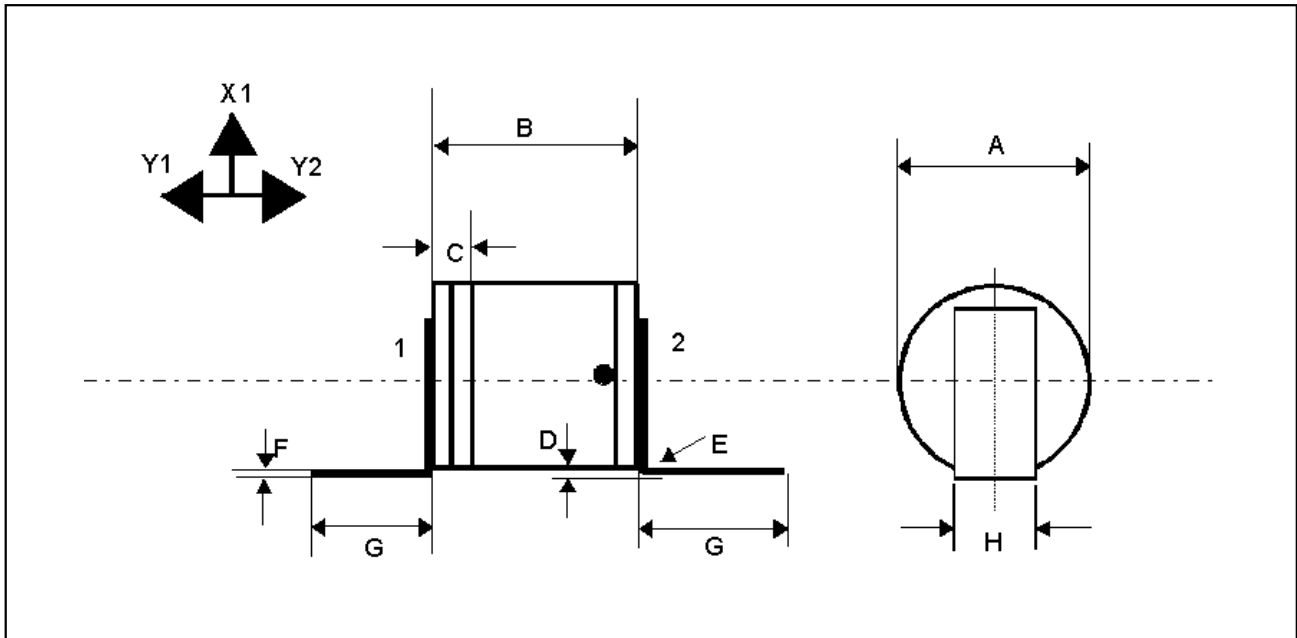
- Discrete and RF-Semiconductors (Small Signal Semiconductors)  
[www.siemens.de/semiconductor/products/35/35.htm](http://www.siemens.de/semiconductor/products/35/35.htm)
- HiRel Discrete and Microwave Semiconductors  
[www.siemens.de/semiconductor/products/35/353.htm](http://www.siemens.de/semiconductor/products/35/353.htm)

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**Figure 1 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