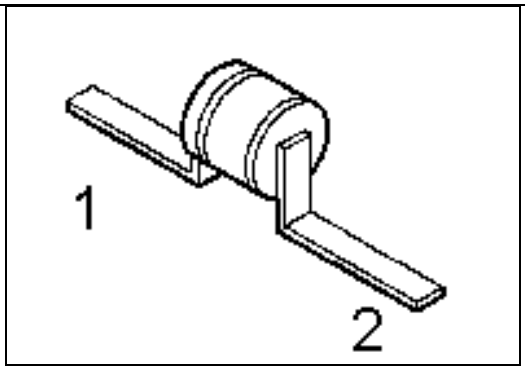
HiRel Silicon Schottky Diode



- ***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 Qualified**
  ESA/SCC Detail Spec. No.: 5512/020
  Type Variant No. 03

ESD: **E**lectro**s**tatic **d**ischarge 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
H: High Rel Quality
S: Space Quality
ES: ESA Space Quality

(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°C; unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse Current 1, V_R=40V	I_{R1}	-	-	10	µA
Reverse Current 2, V_R=30V	I_{R2}	-	-	1	µA
Forward Voltage 1, I_{F1}=1mA	V_{F1}	0,29	0,33	0,39	V
Forward Voltage 2, I_{F2}=10mA	V_{F2}	0,42	0,45	0,54	V
Forward Voltage 3, I_{F3}=40mA	V_{F3}	0,68	0,7	0,85	V
Differential Forward Resistance [4] I_F=10mA, I_F=15mA	R_{FD}	7,5	10	11,5	Ω
AC Characteristics					
Total Capacitance V_R=0V; f=1MHz	C_T	2,2	2,9	5,0	pF

Notes.:

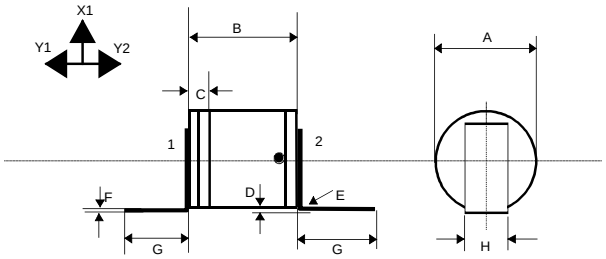
1.) t ≤ 10ms, Duty Cycle=10%

2.) At T_{CASE} = 125 °C. For T_{CASE} > 125 °C derating is required.

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

4.) $$R_{FD}=\frac{\Delta V_F}{5x10^{-3}\ A}$$

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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