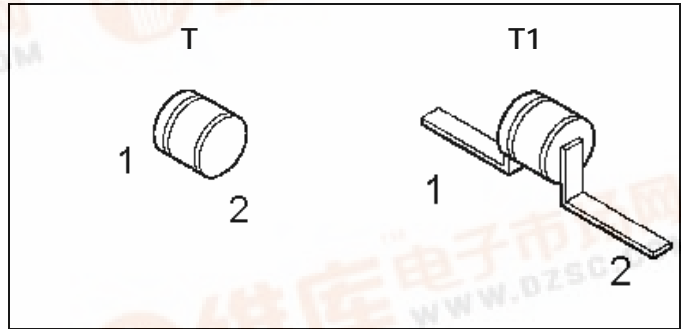


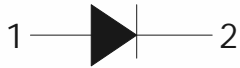
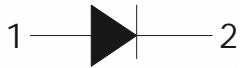


HiRel Silicon PIN Diode

- **HiRel Discrete and Microwave Semiconductor**
- PIN Diode for high speed switching of RF signals
- Very low capacitance
- Hermetically sealed microwave package
-  **esa Space Qualified**
ESA/SCC Detail Spec. No.: 5513/017
Type Variant No.s 01 to 02



ESD: Electrostatic discharge sensitive device, observe handling precautions!

Type	Marking	Ordering Code	Pin Configuration	Package
BXY42-T (ql)	-	see below		T
BXY42-T1 (ql)				T1

(ql) Quality Level:	P: Professional Quality,	Ordering Code:	Q62702X143
	H: High Rel Quality,	Ordering Code:	on request
	S: Space Quality,	Ordering Code:	on request
	ES: ESA Space Quality,	Ordering Code:	Q62702X168

(see order instructions for ordering example)



Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse Voltage	V_R	50	V
Peak Forward Current ¹⁾	I_{FM}	5	A
Power Dissipation BXY42-T ²⁾ BXY42-T1 ³⁾	P_{tot}	600 350	mW
Operating Temperature Range	T_{op}	-55 to +175	°C
Storage Temperature Range	T_{stg}	-65 to +175	°C
Soldering Temperature ⁴⁾	T_{sol}	+250	°C
Junction Temperature	T_j	175	°C
Thermal Resistance Junction-Case BXY42-T BXY42-T1	$R_{th(j-c)}$	200 350	K/W

Notes.:

- 1.) At $t_p = 1,0\mu s$, Duty Cycle=0,001%
- 2.) At $T_{CASE} = 55\text{ °C}$. For $T_{CASE} > 55\text{ °C}$ derating is required.
- 3.) At $T_{CASE} = 52,5\text{ °C}$. For $T_{CASE} > 52,5\text{ °C}$ derating is required.
- 4.) During 5 sec. maximum. The same terminal shall not be resoldered until 5 minutes have elapsed.

Electrical Characteristics

 at $T_A=25\text{ °C}$; unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse Current 1 $V_{R1}=50V$	I_{R1}	-	-	10	μA
Reverse Current 2 $V_{R2}=40V$	I_{R2}	-	-	5	nA
Forward Voltage $I_F=100mA$	V_F	-	0,97	1,1	V

Electrical Characteristics (continued)

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
AC Characteristics					
Total Capacitance $V_R=20V$; $f=1MHz$	C_T	-	0,22	0,24	pF
Forward Resistance 1 $f=100MHz$, $I_{F1}=1mA$	R_{F1}	-	2	3,5	Ω
Forward Resistance 2 $f=100MHz$, $I_{F2}=10mA$	R_{F2}	-	1	2,5	Ω
Minority Carrier Lifetime $I_F=10mA$, $I_R=6mA$, $I_R=3mA$	τ_L	35	50	-	ns

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.....
BXY42- (x) (ql)
(x): Package Variant
(ql): Quality Level

Ordering Example:

Ordering Code: Q62702X168
BXY42-T1 ES
For BXY42 in T1 Package; ESA Space Quality Level

Further Informations:

See our WWW-Pages:

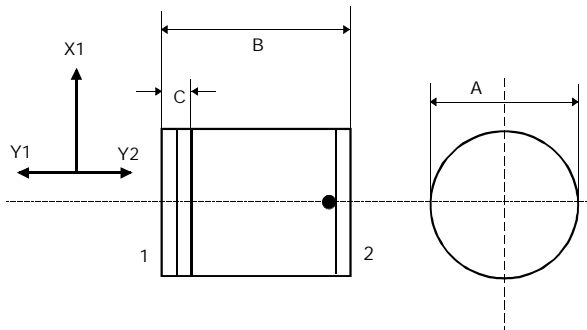
- Discrete and RF-Semiconductors (Small Signal Semiconductors)
www.infineon.com/products/discrete/hirel.htm

- *HiRel* Discrete and Microwave Semiconductors
www.infineon.com/products/discrete/hirel.htm

Please contact also our marketing division :

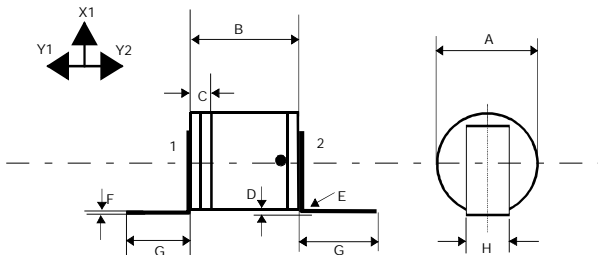
Tel.: ++89 234 24480
Fax.: ++89 234 28434
e-mail: martin.wimmers@infineon.com
Address: Infineon Technologies Semiconductors,
High Frequency Products Marketing,
P.O.Box 801709,
D-81617 Munich

T Package



Symbol	Millimetre	
	min	max
A	1,30	1,45
B	1,15	1,35
C	-	0,40

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, D-81617 Munich.

Infineon Technologies AG 1998. All Rights Reserved.

As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies.

The information describes the type of component and shall not be considered as assured characteristics.

Terms of delivery and rights to change design reserved.

For questions on technology, delivery and prices please contact the Offices of Semiconductor Group in Germany or the Infineon Technologies Companies and Representatives worldwide (see address list).

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

Infineon Technologies Semiconductors is a certified CECC and QS9000 manufacturer (this includes ISO 9000).