
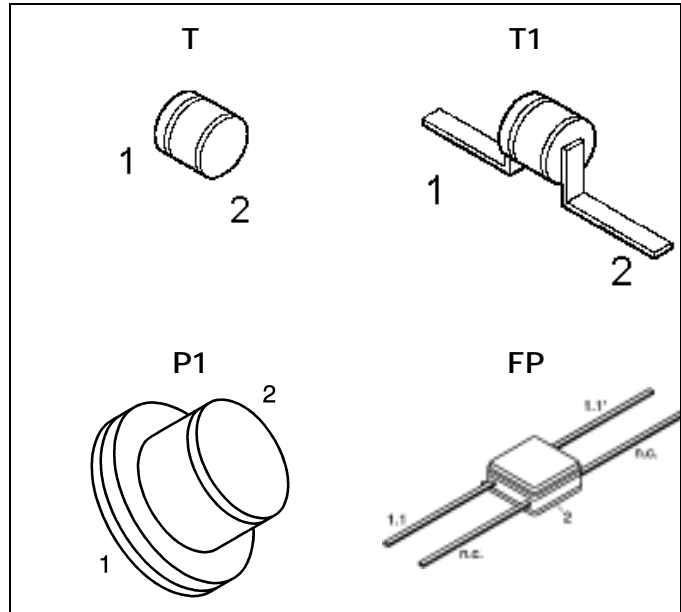

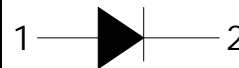

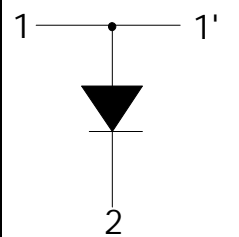


### HiRel Silicon PIN Diode

- **HiRel Discrete and Microwave Semiconductor**
- Current controlled RF resistor for RF attenuators and switches
- High reverse voltage
- Hermetically sealed microwave package
-  **ESA Space Qualified**  
ESA/SCC Detail Spec. No.: 5513/030  
Type Variant No.s 01 to 03



**ESD:** Electrostatic discharge sensitive device, observe handling precautions!

Type	Marking	Ordering Code	Pin Configuration	Package
BXY43-T (ql)	-	see below		T
BXY43-T1 (ql)				T1
BXY43-P1 (ql)				T2
BXY43-FP (ql)				FP

(ql) Quality Level:	P: Professional Quality,	Ordering Code:	Q62702X151
	H: High Rel Quality,	Ordering Code:	on request
	S: Space Quality,	Ordering Code:	on request
	ES: ESA Space Quality,	Ordering Code:	Q62702X169

(see order instructions for ordering example)

**Maximum Ratings**

Parameter	Symbol	Values	Unit
Reverse Voltage	$V_R$	150	V
Forward Current	$I_F$	400	mA
Power Dissipation <sup>1)</sup>	$P_{tot}$	500	mW
Operating Temperature Range	$T_{op}$	-55 to +150	°C
Storage Temperature Range	$T_{stg}$	-65 to +175	°C
Soldering Temperature <sup>2)</sup>	$T_{sol}$	+235	°C
Junction Temperature	$T_j$	150	°C
Thermal Resistance Junction-Case	$R_{th(j-c)}$		K/W
BXY43-T		100	
BXY43-T1		125	
BXY43-P1		90	
BXY43-FP		100	

**Notes.:**

- 1.) For BXY43-T: At  $T_{CASE} = 100$  °C. For  $T_{CASE} > 100$  °C derating is required.  
 For BXY43-T1: At  $T_{CASE} = 87,5$  °C. For  $T_{CASE} > 87,5$  °C derating is required.  
 For BXY43-P1: At  $T_{CASE} = 105$  °C. For  $T_{CASE} > 105$  °C derating is required.  
 For BXY43-FP: At  $T_{CASE} = 100$  °C. For  $T_{CASE} > 100$  °C derating is required.
- 2.) During 5 sec. maximum. The same terminal shall not be resoldered until 5 minutes have elapsed.

**Electrical Characteristics**

 at  $T_A=25$ °C; unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

**DC Characteristics**

Reverse Current 1 $V_{R1}=150V$	$I_{R1}$	-	-	100	nA
Reverse Current 2 $V_{R2}=100V$	$I_{R2}$	-	-	10	nA
Forward Voltage $I_F=100mA$	$V_F$	-	0,97	1	V

**Electrical Characteristics (continued)**

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>AC Characteristics</b>					
Total Capacitance $V_R=50V$ ; $f=1MHz$ BXY43-T, -T1 BXY43-P1 BXY43-FP	$C_T$	- 0,3 0,4	0,3 0,50 0,6	0,45 0,75 0,85	pF
Forward Resistance 1 $f=100MHz$ , $I_{F1}=20\mu A$	$R_{F1}$	-	55	70	$\Omega$
Forward Resistance 2 $f=100MHz$ , $I_{F2}=1mA$	$R_{F2}$	-	2,2	3,0	$\Omega$
Forward Resistance 3 $f=100MHz$ , $I_{F3}=10mA$	$R_{F3}$	-	0,9	1,5	$\Omega$
Minority Carrier Lifetime $I_F=10mA$ , $I_R=6mA$ , $I_R=3mA$	$\tau_L$	250	650		ns

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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.....  
BXY43- (x) (ql)  
(x): Package Variant  
(ql): Quality Level

**Ordering Example:**

Ordering Code: Q62702X169  
BXY43-T1 ES  
For BXY43 in T1 Package; ESA Space Quality Level

**Further Informations:**

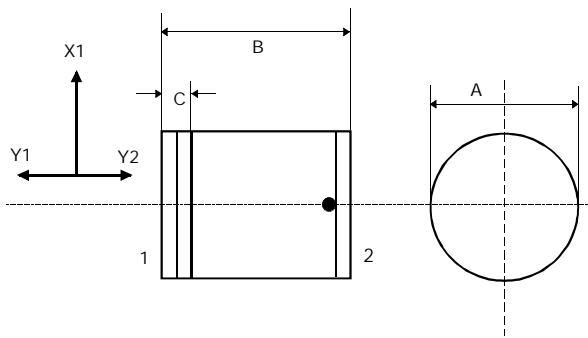
See our WWW-Pages:

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

Please contact also our marketing division :

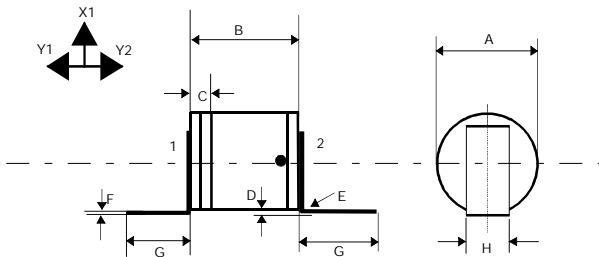
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Address: Infineon Technologies Semiconductors,  
High Frequency Products Marketing,  
P.O.Box 801709,  
D-81617 Munich

### T Package



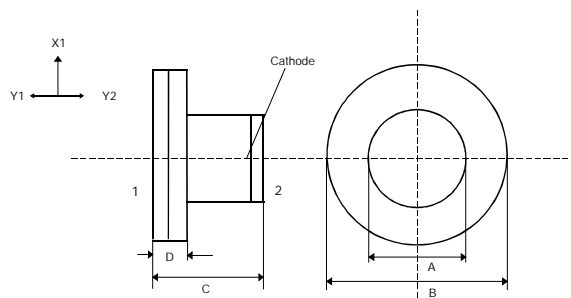
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	min	max
A	1,30	1,45
B	1,15	1,35
C	-	0,40

### T1 Package



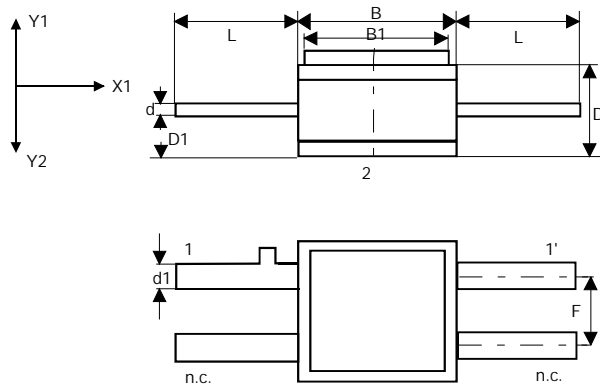
Symbol	Millimetre	
	min	max
A	1,30	1,45
B	1,15	1,35
C	-	0,40
D	0,10	0,50
E	-	0,30
F	0,06	0,10
G	5,50	-
H	0,40	0,60

### P1 Package



Symbol	Millimetre	
	min	max
$\varnothing A$	2,0	2,2
$\varnothing B$	3,0	3,2
C	1,45	1,7
D	0,4	0,6

## FP Package



Symbol	Millimetre	
	min	max
B	3,10	3,55
B1	3,00	3,30
D	1,30	1,70
D1	0,55	0,65
d	0,10	0,15
d1	0,25	0,40
F	2,40	2,60
L	5,50	-

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