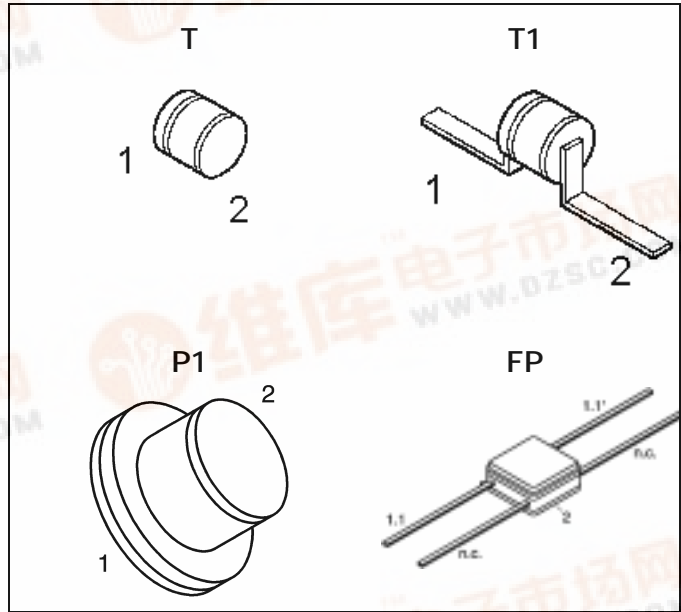




HiRel Silicon PIN Diode

- **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 ¹⁾	P_{tot}	500	mW
Operating Temperature Range	T_{op}	-55 to +150	°C
Storage Temperature Range	T_{stg}	-65 to +175	°C
Soldering Temperature ²⁾	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.	
AC Characteristics					
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	Ω
Forward Resistance 2 $f=100MHz$, $I_{F2}=1mA$	R_{F2}	-	2,2	3,0	Ω
Forward Resistance 3 $f=100MHz$, $I_{F3}=10mA$	R_{F3}	-	0,9	1,5	Ω
Minority Carrier Lifetime $I_F=10mA$, $I_R=6mA$, $I_R=3mA$	τ_L	250	650		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.....
BXY43- (x) (ql)
(x): Package Variant
(q): 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:

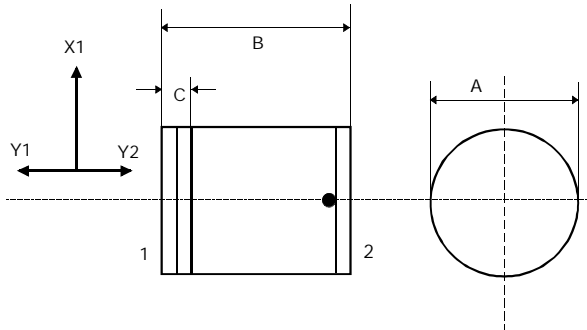
- Discrete and RF-Semiconductors (Small Signal Semiconductors)
www.infineon.com/products/discrete/hirel.htm

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

Please contact also our marketing division :

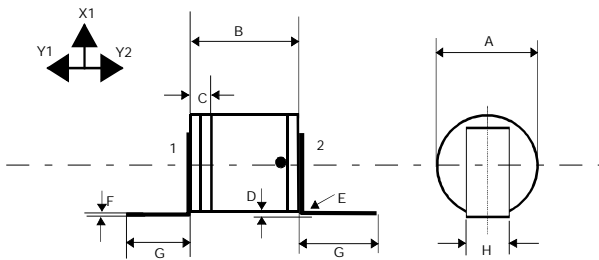
Tel.: ++89 234 24480
Fax.: ++89 234 25568
e-mail: martin.wimmers@infineon.com
Address: Infineon Technologies Semiconductors,
High Frequency Products Marketing,
P.O.Box 801709,
D-81617 Munich

T Package



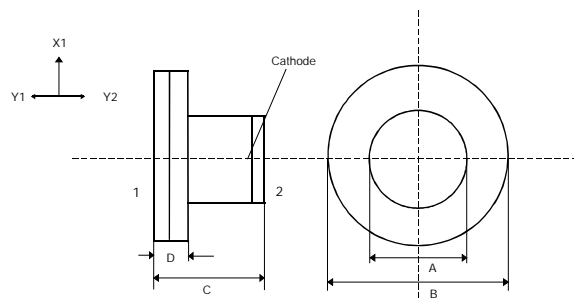
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	min	max
A	1,30	1,45
B	1,15	1,35
C	-	0,40

T1 Package



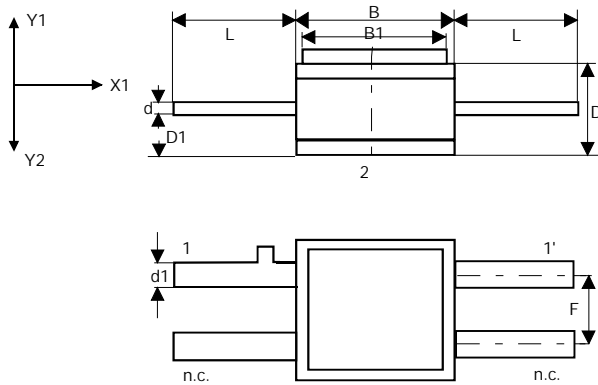
Symbol	Millimetre	
	min	max
A	1,30	1,45
B	1,15	1,35
C	-	0,40
D	0,10	0,50
E	-	0,30
F	0,06	0,10
G	5,50	-
H	0,40	0,60

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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