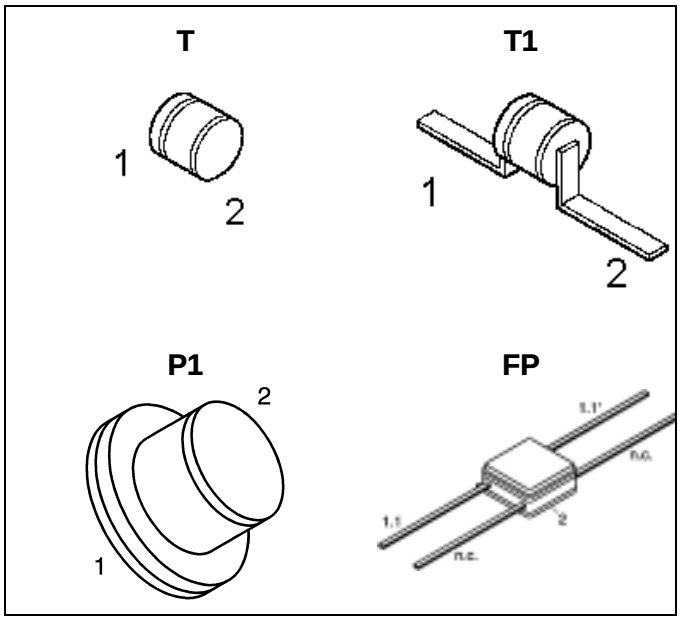
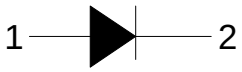
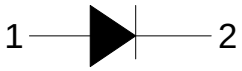
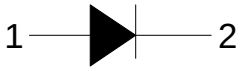
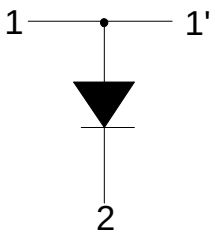
HiRel Silicon PIN Diode



- ***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: **E**lectro**s**tatic **d**ischarge 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	C_T				pF
V_R=50V; f=1MHz					
BXY43-T, -T1		-	0,3	0,45	
BXY43-P1		0,3	0,50	0,75	
BXY43-FP		0,4	0,6	0,85	
Forward Resistance 1	R_{F1}	-	55	70	Ω
f=100MHz, I_{F1}=20µA					
Forward Resistance 2	R_{F2}	-	2,2	3,0	Ω
f=100MHz, I_{F2}=1mA					
Forward Resistance 3	R_{F3}	-	0,9	1,5	Ω
f=100MHz, I_{F3}=10mA					
Minority Carrier Lifetime	τ_L	250	650		ns
I_F=10mA, I_R=6mA, I_R=3mA					

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

- *HiRel* Discrete and Microwave Semiconductors

  www.infineon.com/products/discrete/hirel.htm

Please contact also our marketing division :

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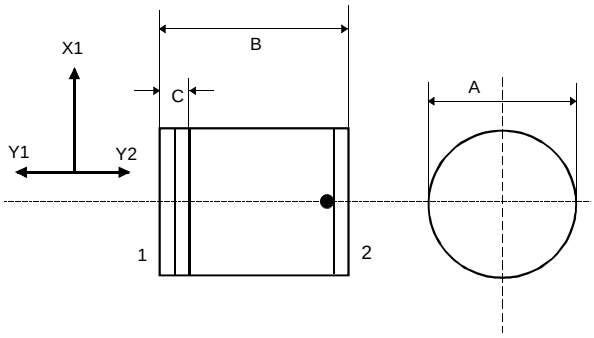
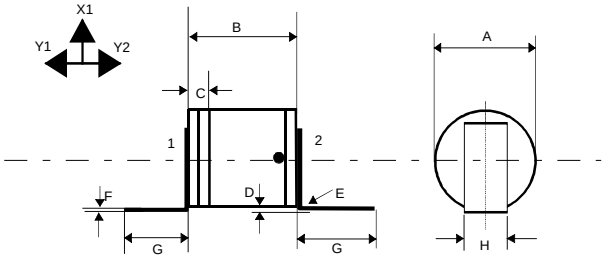
e-mail:	martin.wimmers@infineon.com
Address:	Infineon Technologies Semiconductors, High Frequency Products Marketing, P.O.Box 801709, D-81617 Munich

T Package



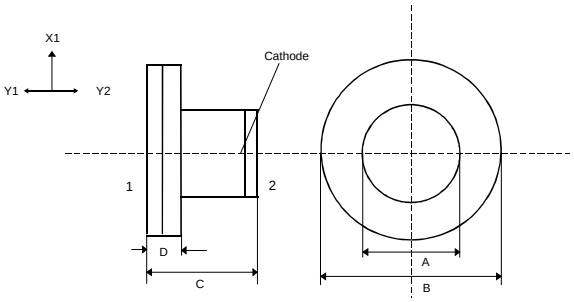
Symbol	Millimetre	
	min	max
A	1,30	1,45
B	1,15	1,35
C	-	0,40

T1 Package



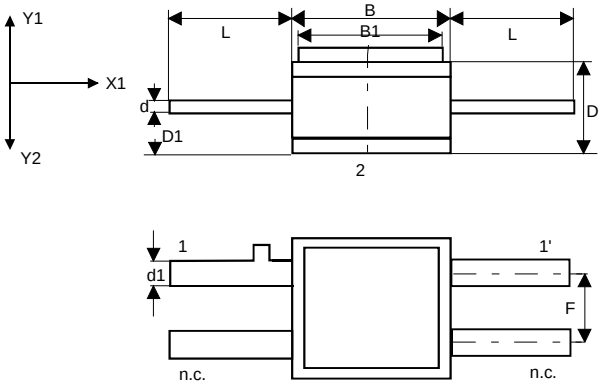
Symbol	Millimetre	
	min	max
A	1,30	1,45
B	1,15	1,35
C	-	0,40
D	0,10	0,50
E	-	0,30
F	0,06	0,10
G	5,50	-
H	0,40	0,60

P1 Package



Symbol	Millimetre	
	min	max
∅A	2,0	2,2
∅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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