
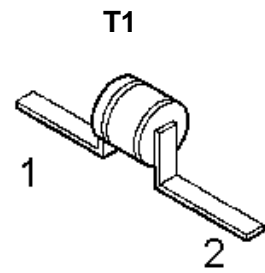
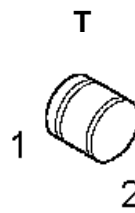




**HiRel Silicon PIN Diode**

- **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 (q)	-	see below		T
BXY43-T1 (q)				T1

(q) 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	$V_R$	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	

**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.
- 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

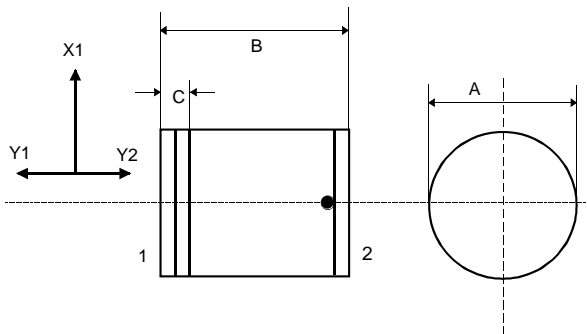
Parameter	Symbol	Values			Unit
		min.	typ.	max.	

**DC Characteristics**

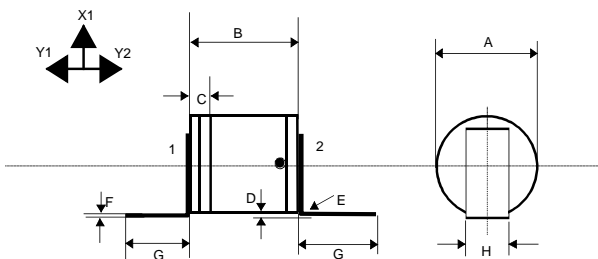
Reverse Current 1 $V_{R1}=150V$	$I_{R1}$	-	-	100	nA
Reverse Current 2 $V_{R2}=100V$	$I_{R2}$	-	-	10	nA
Forward Voltage $I_F=100mA$	$V_F$	-	0,97	1	V

**Electrical Characteristics (continued)**

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>AC Characteristics</b>					
Total Capacitance $V_R=50V$ ; $f=1MHz$ BXY43-T, -T1	$C_T$	-	0,3	0,45	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

**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

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