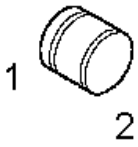
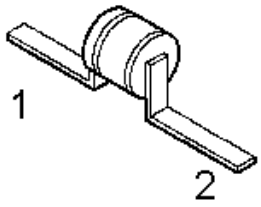
HiRel Silicon PIN Diode

T



T1



- ***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	1 — ▶ — 2	T
BXY43-T1 (ql)			1 — ▶ — 2	T1

(ql) 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 [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 BXY43-T BXY43-T1	$R_{th(j-c)}$	 100 125	K/W

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

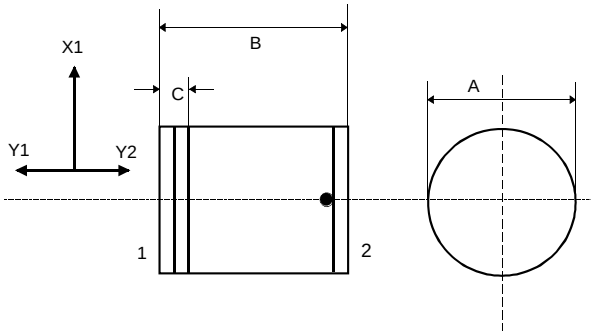
at T_A=25°C; unless otherwise specified

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)

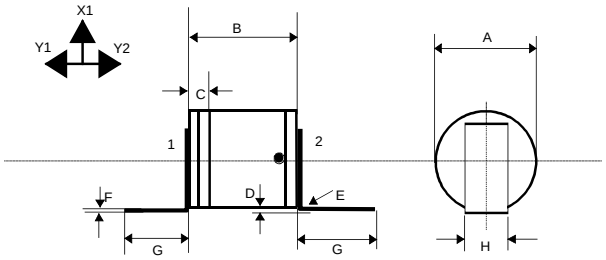
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
AC Characteristics					
Total Capacitance V_R=50V; f=1MHz BXY43-T, -T1	C_T	 -	 0,3	 0,45	pF
Forward Resistance 1 f=100MHz, I_{F1}=20µA	R_{F1}	-	55	70	Ω
Forward Resistance 2 f=100MHz, I_{F2}=1mA	R_{F2}	-	2,2	3,0	Ω
Forward Resistance 3 f=100MHz, I_{F3}=10mA	R_{F3}	-	0,9	1,5	Ω
Minority Carrier Lifetime I_F=10mA, I_R=6mA, I_R=3mA	τ_L	250	650		ns

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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