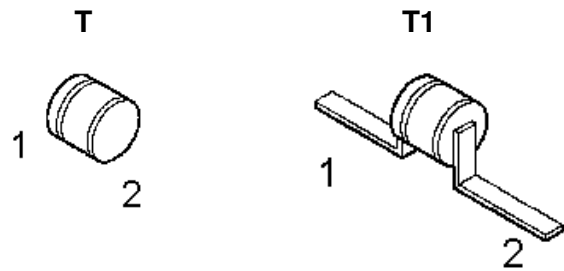


HiRel Silicon PIN Diode

- **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

(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	$R_{th(j-c)}$		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.	

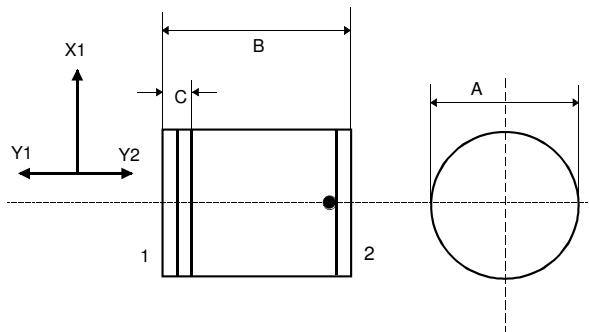
DC Characteristics

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)

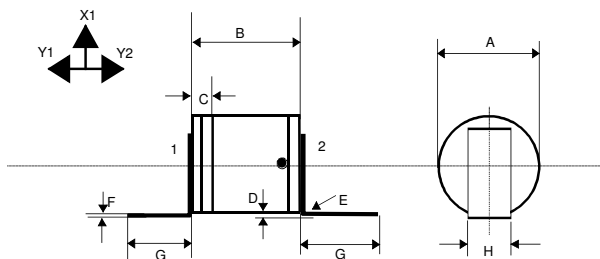
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
AC Characteristics					
Total Capacitance V _R =50V; f=1MHz BXY43-T, -T1	C _T	-	0,3	0,45	pF
Forward Resistance 1 f=100MHz, I _{F1} =20μA	R _{F1}	-	55	70	Ω
Forward Resistance 2 f=100MHz, I _{F2} =1mA	R _{F2}	-	2,2	3,0	Ω
Forward Resistance 3 f=100MHz, I _{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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