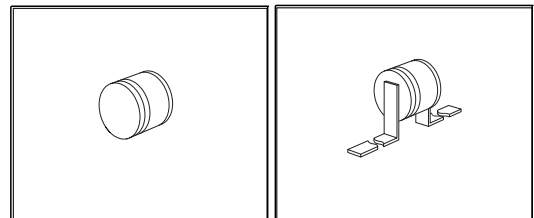
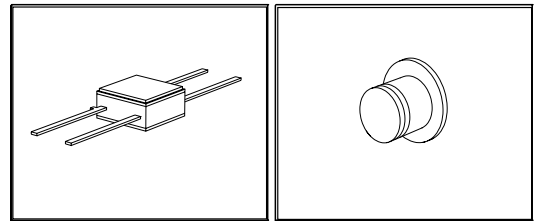


**HiRel Silicon PIN Diode**

• **HiRel Discrete and Microwave Semiconductor**

- Current controlled RF resistors 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

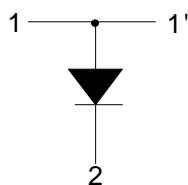


**BXY43-T**

**BXY43-FP**

**BXY43-T1**

**BXY43-P1**



**ESD (Electrostatic discharge)** sensitive device, observe handling precaution!

Type	Package	Configuration	Marking
BXY43-FP (ql)	FP	single	-
BXY43-P1 (ql)	T2	single	-
BXY43-T (ql)	T	single	-
BXY43-T1 (ql)	T1	single	-

(ql) Testing level: P: Professional testing  
 H: High Rel quality  
 S: Space quality  
 ES: ESA qualified

**Maximum Ratings**

Parameter	Symbol	Value	Unit
Reverse voltage	$V_R$	150	V
Forward current	$I_F$	400	mA
Total power dissipation <sup>1)</sup> BXY43-T BXY43-T1 BXY43-P1 BXY43-FP	$P_{tot}$	500	mW
Junction temperature	$T_j$	150	
Operating temperature range	$T_{op}$	-55 ... 150	°C
Soldering temperature <sup>2)</sup>	$T_{sol}$	150	°C
Storage temperature	$T_{stg}$	-65 ... 175	°C

**Thermal Resistance**

Parameter	Symbol	Value	Unit
Thermal resistance junction-case BXY43-FP BXY43-P1 BXY43-T BXY43-T1	$R_{th(j-c)}$	100 90 100 125	K/W

**Electrical Characteristics** at  $T_A = 25^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

**DC Characteristics**

Reverse current 1 $V_{R1} = 150\text{ V}$	$I_{R1}$	-	-	100	nA
Reverse current 2 $V_{R2} = 100\text{ V}$	$I_{R2}$	-	-	10	
Forward voltage $I_F = 100\text{ mA}$	$V_F$	-	0.97	1	V

<sup>1</sup>For BXY43-FP, -T: At  $T_{CASE} = 100^\circ\text{C}$ . For  $T_{CASE} > 100^\circ\text{C}$  derating is required

For BXY43-P1: At  $T_{CASE} = 105^\circ\text{C}$ . For  $T_{CASE} > 105^\circ\text{C}$  derating is required

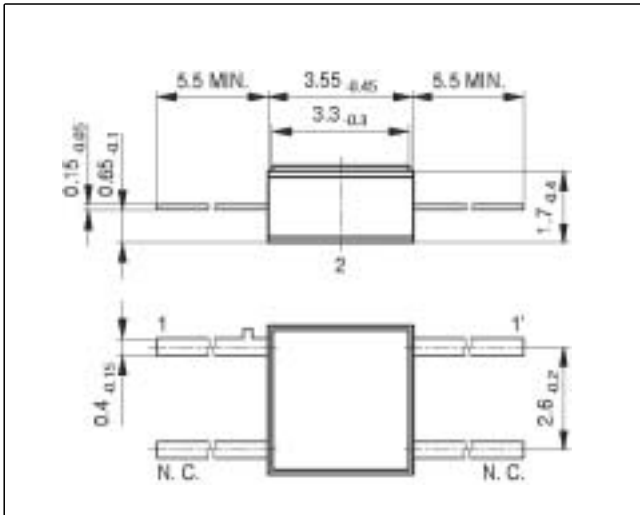
For BXY43-T1: At  $T_{CASE} = 87.5^\circ\text{C}$ . For  $T_{CASE} > 87.5^\circ\text{C}$  derating is required

<sup>2</sup>During 5 sec. maximum. The terminal shall not be resoldered until 5 minutes have elapsed.

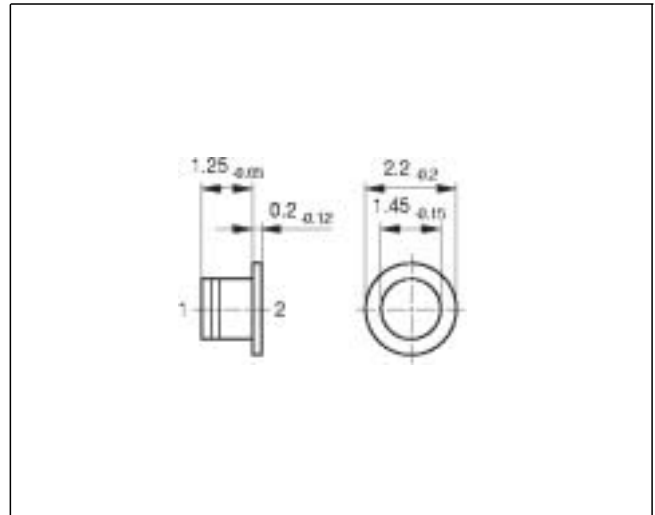
**Electrical Characteristics** at  $T_A = 25^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>AC Characteristics</b>					
Diode capacitance BXY43-FP, $V_R = 50\text{ V}$ , $f = 1\text{ MHz}$ BXY43-P1, $V_R = 50\text{ V}$ , $f = 1\text{ MHz}$ BXY43-T, -T1, $V_R = 50\text{ V}$ , $f = 1\text{ MHz}$	$C_T$	- 0.3 0.4	0.3 0.5 0.6	0.45 0.75 0.85	pF
Forward resistance 1 $I_{F1} = 20\ \mu\text{A}$ , $f = 100\text{ MHz}$	$R_{F1}$	-	55	70	$\Omega$
Forward resistance 2 $I_{F2} = 1\text{ mA}$ , $f = 100\text{ MHz}$	$R_{F2}$	-	2.2	3	
Forward resistance 3 $I_{F3} = 10\text{ mA}$ , $f = 100\text{ MHz}$	$R_{F3}$	-	0.9	1.5	
Minority carrier lifetime $I_F = 10\text{ mA}$ , $I_R = 6\text{ mA}$ , $I_R = 3\text{ mA}$	$\tau_L$	250	650	-	ns

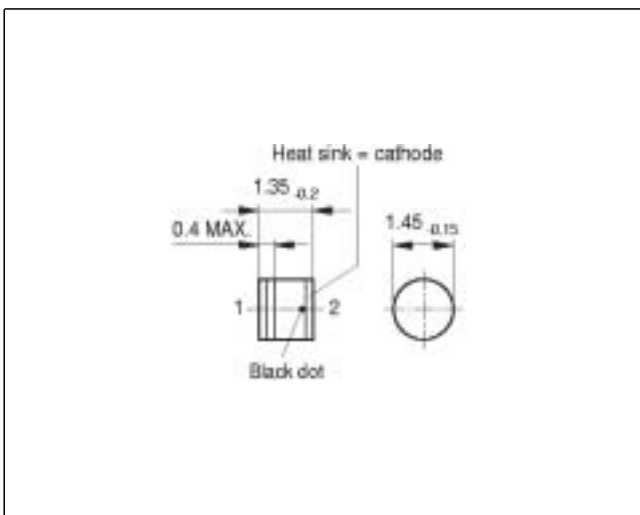
Package FP



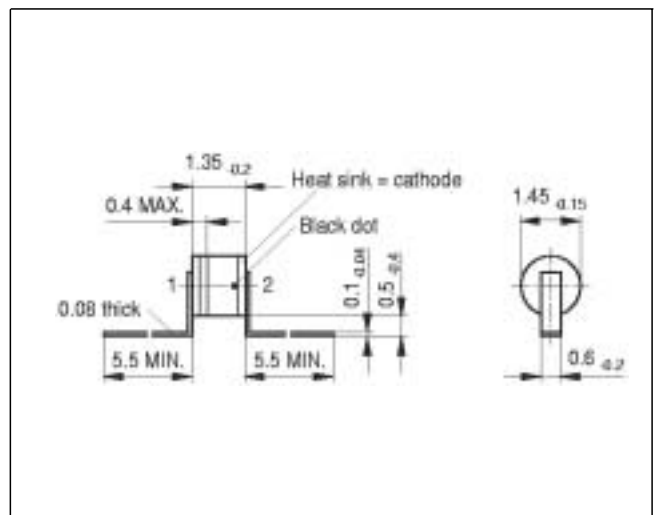
Package P1



Package T



Package T1



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