


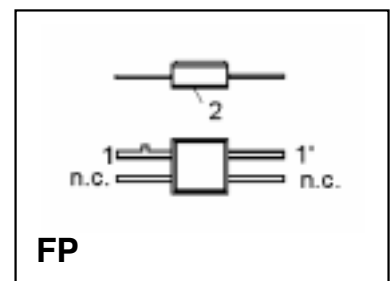
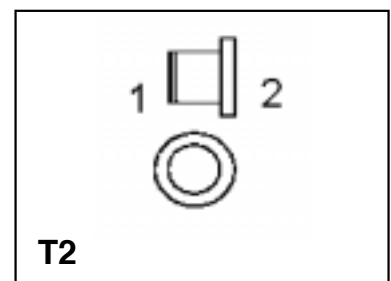
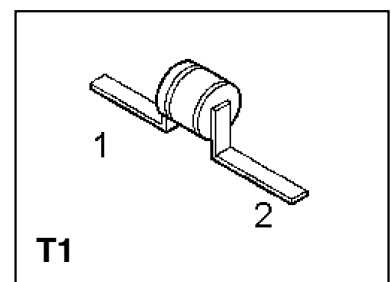
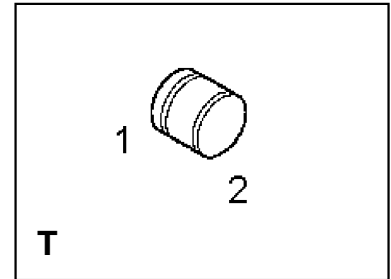
## HiRel Silicon PIN Diode




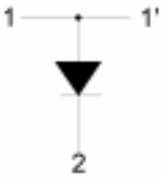
**BXY 44**

### Features

- **HiRel Discrete and Microwave Semiconductor**
- Current controlled RF resistor for RF attenuators and switches
- High reverse voltage
- Hermetically sealed microwave package
-  qualified
- ESA/SCC Detail Spec. No.: 5513/030

**ESD:** Electrostatic discharge sensitive device, observe handling precautions!



Type	Marking	Ordering Code	Pin Configuration	Pack.
BXY 44-T (ql)	–	see below		T
BXY 44-T1 (ql)	–	see below		T1
BXY 44-T2 (ql)	–	see below		T2
BXY 44-FP (ql)	–	see below		FP

(ql) Quality Level: P: Professional Quality, Ordering Code: Q62702X148  
 H: High Rel Quality, Ordering Code: on request  
 S: Space Quality, Ordering Code: on request  
 ES: ESA Space Quality, Ordering Code: Q62702X162

(see **Chapter Order Instructions** for ordering example)

**Table 1      Maximum Ratings**

Parameter	Symbol	Limit Values	Unit
Reverse voltage	$V_R$	200	V
Forward current	$I_F$	400	mA
Power dissipation	$P_{tot}$	500	mW
Operating temperature range	$T_{op}$	- 55 to + 150	°C
Storage temperature range	$T_{stg}$	- 65 to + 175	°C
Soldering temperature	$T_{sol}$	+ 235	°C
Junction temperature	$T_j$	175	°C
Thermal resistance junction-case	$R_{th(j-c)}$		K/W
BXY 44-T		110	
BXY 44-T1		140	
BXY 44-T2		110	
BXY 44-FP		110	

## Electrical Characteristics

**Table 2 DC Characteristics at  $T_A = 25\text{ °C}$  unless otherwise specified**

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Reverse current 1 $V_{R1} = 200\text{ V}$	$I_{R1}$	–	–	100	nA
Reverse current 2 $V_{R2} = 100\text{ V}$	$I_{R2}$	–	–	5	nA
Forward voltage $I_F = 100\text{ mA}$	$V_F$	–	1.0	1.05	V

**Table 3 AC Characteristics at  $T_A = 25\text{ °C}$  unless otherwise specified**

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Total capacitance $V_R = 50\text{ V}, f = 1\text{ MHz}$ BXY 44-T, -T1, T2 BXY 44-FP	$C_T$	– –	0.20 0.50	0.35 0.75	pF
Forward resistance $f = 100\text{ MHz}, I_{F1} = 10\text{ }\mu\text{A}$ BXY 44-T, -T1, T2 BXY 44-FP	$R_{F1}$	800 700	900 900	1300 1200	$\Omega$
Forward resistance $f = 100\text{ MHz}, I_{F2} = 1\text{ mA}$ BXY 44-T, -T1, T2 BXY 44-FP	$R_{F2}$	12 11	16 20	28 27	$\Omega$
Forward resistance $f = 100\text{ MHz}, I_{F3} = 10\text{ mA}$ BXY 44-T, -T1, T2 BXY 44-FP	$R_{F3}$	2.0 2.0	3.0 3.8	5.0 5.0	$\Omega$
Minority carrier lifetime $I_F = 10\text{ mA}, I_R = 6\text{ mA}, I_R = 3\text{ mA}$	$\tau_L$	300	800	–	ns

## 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...  
BXY44- (x) (ql)  
(x): Package Variant  
(ql): Quality Level

Ordering Example:

Ordering Code: Q62702X162  
BXY44-FP ES  
For BXY44 in Flatpack Package; ESA Space Quality Level

## Further Information

See our WWW-Pages:

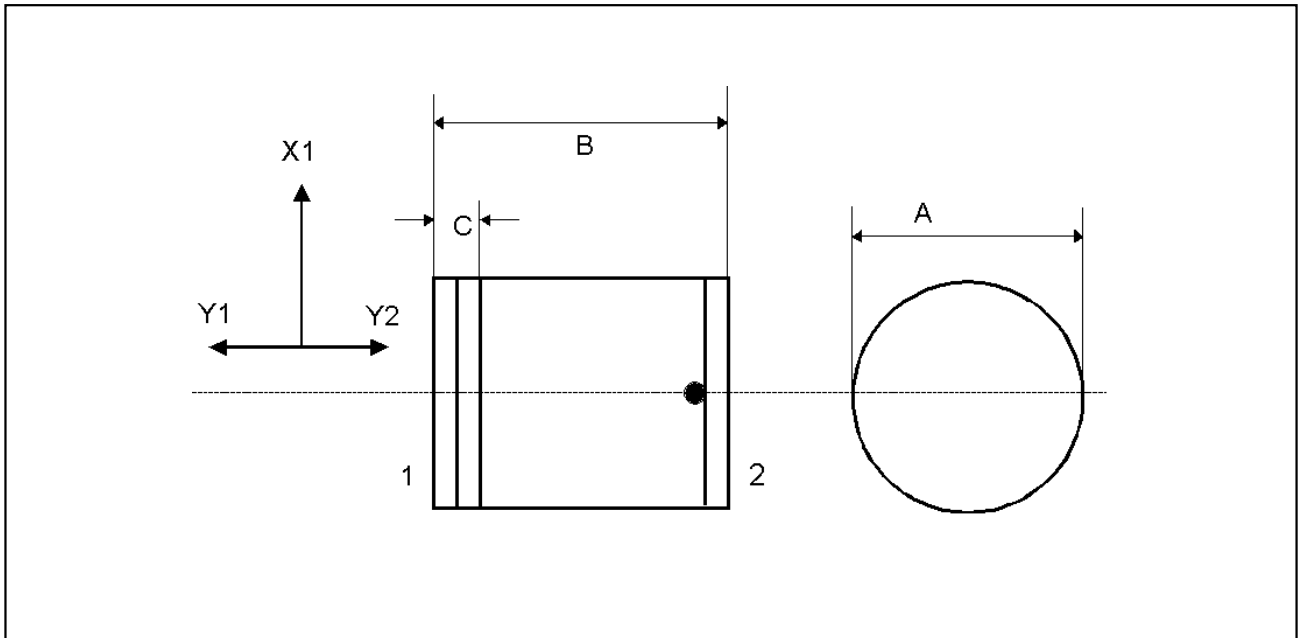
- Discrete and RF-Semiconductors (Small Signal Semiconductors)  
[www.siemens.de/semiconductor/products/35/35.htm](http://www.siemens.de/semiconductor/products/35/35.htm)
- HiRel Discrete and Microwave Semiconductors  
[www.siemens.de/semiconductor/products/35/353.htm](http://www.siemens.de/semiconductor/products/35/353.htm)

Please contact also our marketing division:

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**Figure 1 T Package**

Symbol	Millimetre	
	min.	max.
A	1.30	1.45
B	1.15	1.35
C	–	0.40

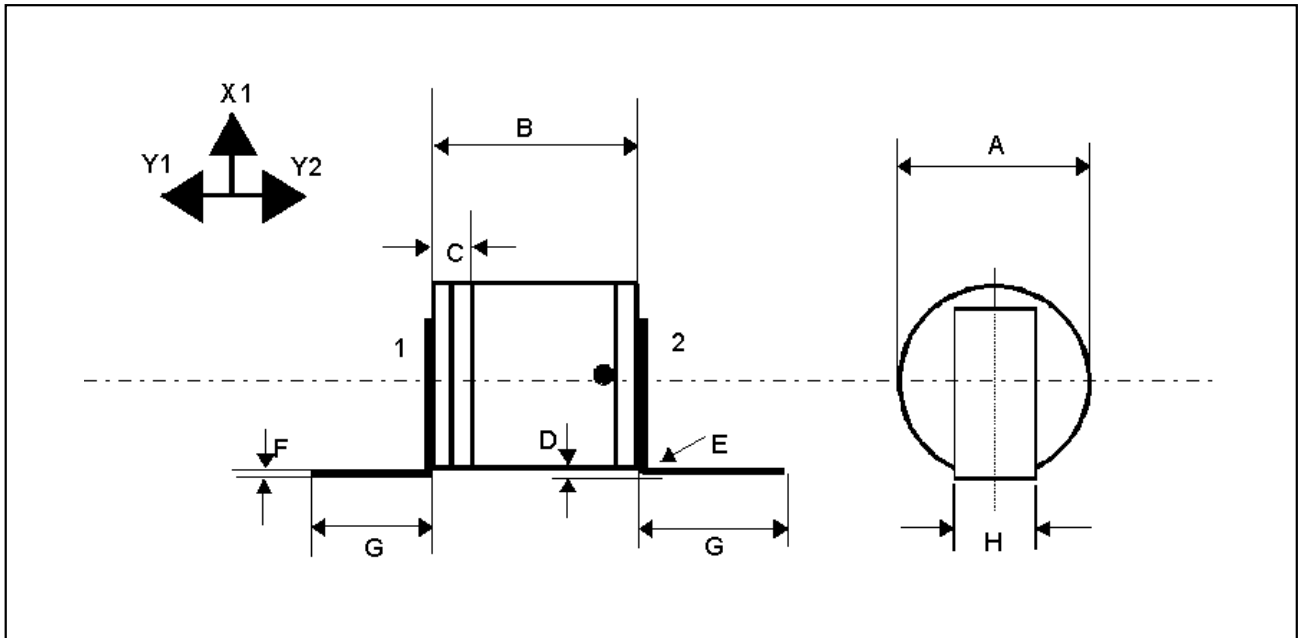
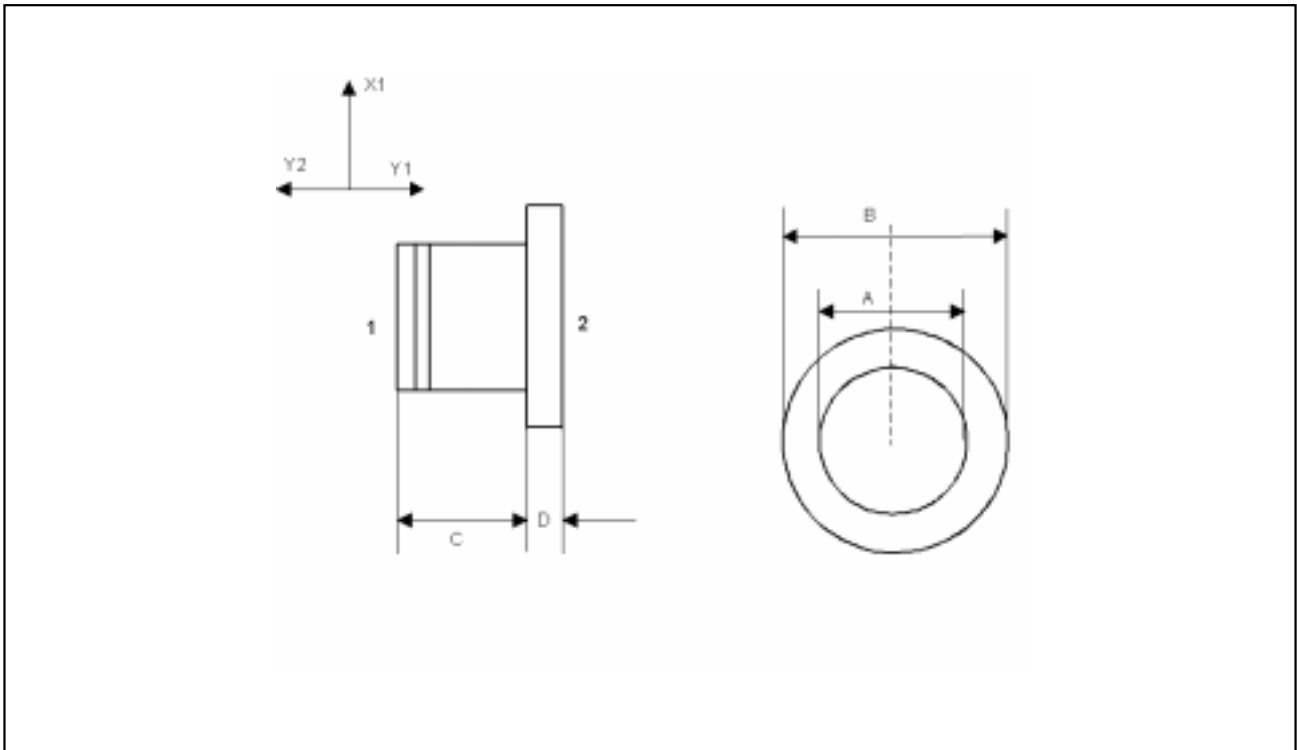


Figure 2 T1 Package

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



**Figure 3 T2 Package**

Symbol	Millimetre	
	min.	max.
$\varnothing A$	1.3	1.45
$\varnothing B$	2.0	2.20
C	0.6	1.25
D	0.08	0.20

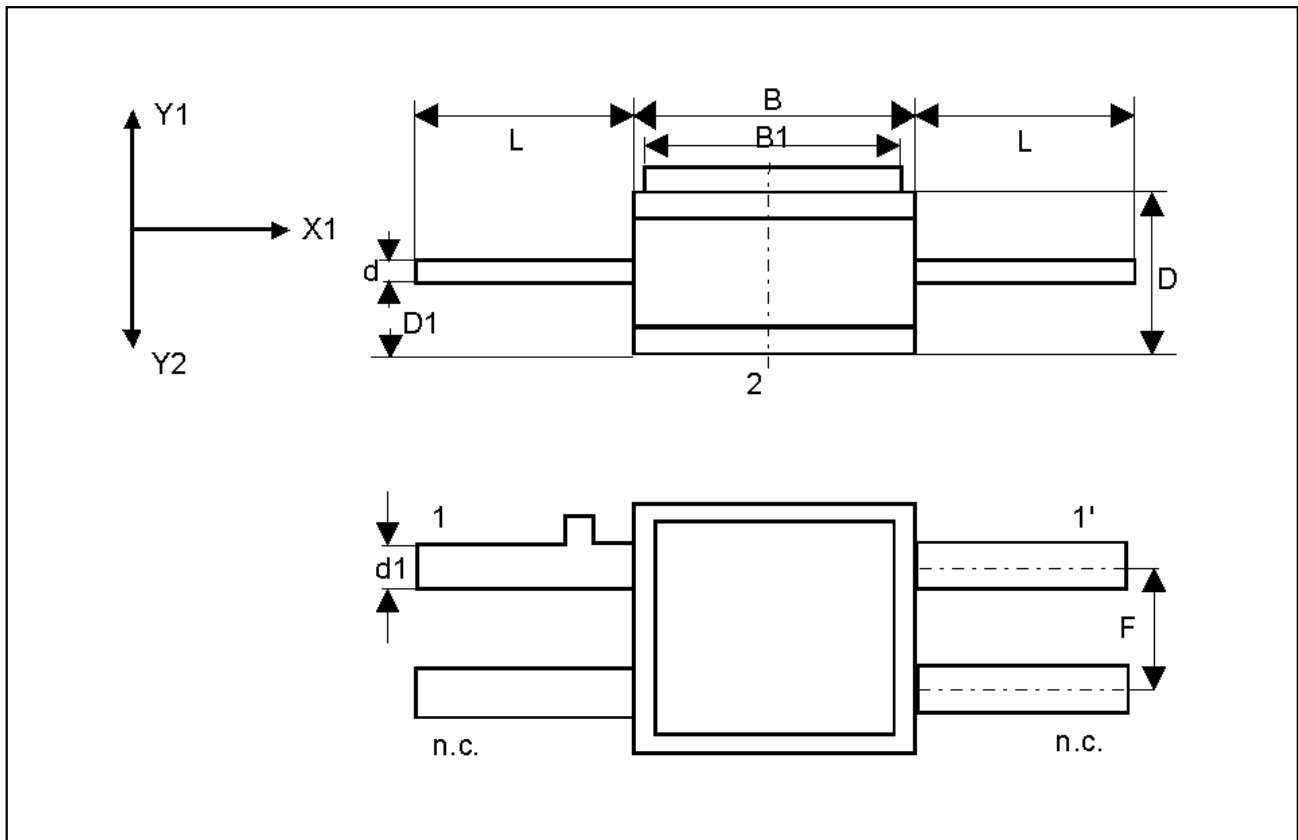


Figure 4 FP Package

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	—