
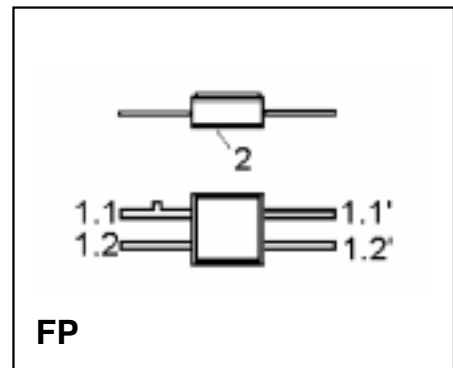


## HiRel Silicon PIN Diode

**BXY 44P**

### Features

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



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

Type	Marking	Ordering Code	Pin Configuration	Package
BXY 44P-FP (ql)	-	see below		FP

(ql) Quality Level: P: Professional Quality, Ordering Code: Q62702X166  
 H: High Rel Quality, Ordering Code: on request  
 S: Space Quality, Ordering Code: on request  
 ES: ESA Space Quality, Ordering Code: Q62702X165

(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	$R_{th(j-c)}$	110	K/W

**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 $V_R = 50\text{ V}, f = 1\text{ MHz}$	$C_T$	–	0.50	0.75	pF
Forward resistance $f = 100\text{ MHz}, I_{F1} = 10\text{ }\mu\text{A}$	$R_{F1}$	700	900	1200	$\Omega$
Forward resistance $f = 100\text{ MHz}, I_{F2} = 1\text{ mA}$	$R_{F2}$	11	20	27	$\Omega$
Forward resistance $f = 100\text{ MHz}, I_{F3} = 10\text{ mA}$	$R_{F3}$	2.0	3.8	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

**Table 4 Matching Requirements at  $T_A = 25\text{ °C}$  unless otherwise specified**

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Difference in forward resistance 2 <sup>1)</sup>	$R_{F2}$	–	–	15	%
Difference in forward resistance 3 <sup>1)</sup>	$R_{F3}$	–	–	15	%

<sup>1)</sup>  $\Delta R_F [\%] = 100 \times (R_{F\_Diode2} - R_{F\_Diode1}) / R_{F\_Diode1}$

## 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...  
BXY44P-(x) (ql)  
(x): Package Variant  
(ql): Quality Level

Ordering Example:

Ordering Code: Q62702X165  
BXY44P-FP ES  
For BXY44P 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)

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