

T1

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
- CC CSA Space Qualified ESA/SCC Detail Spec. No.: 5513/030 Type Variant No.s 04 to 07

ESD: Electrostatic discharge sensitive device, observe handling precautions!

Туре	Marking	Ordering Code	Pin Configuration	Package
BXY44-T (ql)	-	see below	1-2	Т
BXY44-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	200	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	Tj	150	°C
Thermal Resistance Junction-Case	R _{th(j-c)}		K/W
BXY44-T		110	
BXY44-T1		140	

Notes.:

1.) For BXY44-T; -T2, -FP: At $T_{CASE} = 95$ °C. For $T_{CASE} > 95$ °C derating is required. For BXY44-T1: At $T_{CASE} = 80$ °C. For $T_{CASE} > 80$ °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 Symb		Values		Unit
	min.	typ.	max.	

DC Characteristics

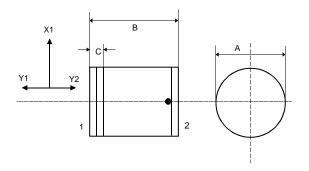
Reverse Current 1	I _{R1}	-	-	100	nA
V _{R1} =200V					
Reverse Current 2	I _{R2}	-	-	5	nA
V _{R2} =100V					
Forward Voltage	V _F	-	1,0	1,05	V
I _F =100mA					



Parameter	Symbol		Values		
		min.	typ.	max.	
AC Characteristics					
Total Capacitance	Ст				pF
V _R =50V; f=1MHz					
BXY44-T, -T1		-	0,20	0,35	
Forward Resistance 1	R _{F1}				Ω
f=100MHz, I _{F1} =10µA					
BXY44-T, -T1		800	900	1300	
Forward Resistance 2	R _{F2}				Ω
f=100MHz, I _{F2} =1mA					
BXY44-T, -T1		12	16	28	
Forward Resistance 3	R _{F3}				Ω
f=100MHz, I _{F3} =10mA					
BXY44-T, -T1		2,0	3,0	5,0	
Minority Carrier Lifetime	TL	300	800	-	ns
I _F =10mA, I _R =6mA, I _R =3mA					

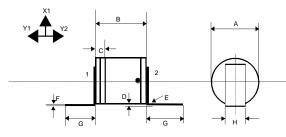


T Package



Symbol	Millimetre		
	min	max	
А	1,30	1,45	
В	1,15	1,35	
С	-	0,40	

T1 Package



Symbol	Millimetre		
	min	max	
А	1,30	1,45	
В	1,15	1,35	
С	-	0,40	
D	0,10	0,50	
E	-	0,30	
F	0,06	0,10	
G	5,50	-	
Н	0,40	0,60	



Edition 2011-02 Published by Infineon Technologies AG 85579 Neubiberg, Germany © Infineon Technologies AG 2011 All Rights Reserved.

Attention please!

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of an third party.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (<u>www.infineon.com</u>).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system.

Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.