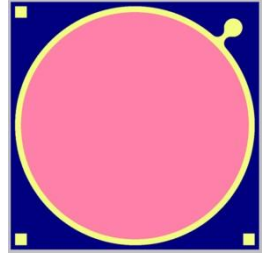


# InGaAs $\Phi$ 1000 $\mu$ m APD Chip

## 应用范围 Applications

距离测量、空间光传输、光时域反射计、低光级探测

Distance measurement、Spatial light transmission、OTDR、Low-light-level detection



## 最大绝对额定值 Absolute Maximum Rating

参数名称 Parameter	符号 Symbol	最小 Min.	最大 Max.	单位 Unit
APD 偏置电压 APD voltage supply	$V_{PD}$	—	$V_{BR}$	V
工作温度 Operating Temperature	$T_C$	-40	+85	$^{\circ}C$
贮存温度 Storage Temperature	$T_{STG}$	-55	+125	$^{\circ}C$
正向电流 Forward Current	$I_F$	—	5	mA
反向电流 Reverse Current	$I_R$	—	3	mA

## 光电性能 Electro-Optical Characteristics (@ $T_C=22\pm 3^{\circ}C$ )

特性参数 Parameter	符号 Symbol	测试条件 Test Condition	最小 Min.	典型 Typ.	最大 Max.	单位 Unit
光谱响应范围 Response Spectrum	$\lambda$	—	950 ~ 1700			nm
响应度 Responsivity	Re	$\lambda=1550nm$ $P_{in}=1\mu W, M=1$	0.70	—	—	A/W
倍增因子 Multiplication factor	M	$\lambda=1550nm$ $P_{in}=1\mu W, V_R=V_{BR}-3$	10.00	—	—	—
		$\lambda=1550nm$ $P_{in}=1\mu W, V_R=V_{BR}-2$	20.00	—	—	—
		$\lambda=1550nm$ $P_{in}=1\mu W, V_R=V_{BR}-1$	30.00	—	—	—
暗电流 Dark Current	$I_d$	$V_R=V_{BR}-3, P_{in}=0\mu W$	—	80.00	150.00	nA
-3dB 截止频率 -3dB cut-off frequency	BW	M=10 $R_L=50\Omega$	0.09	0.25	—	GHz
反向击穿电压 Reverse Breakdown Voltage	$V_{BR}$	$I_R=10\mu A, P_{in}=0\mu W$	40.00	—	60.00	V
电容 Capacitance	C	$V_R=V_{BR}-3, f=1MHz$	—	20.00	30.00	pF
击穿电压温度系数 Temperature coefficient of $V_{BR}$	$\gamma$	$I_R=10\mu A, P_{in}=0\mu W$ $-55^{\circ}C \sim +85^{\circ}C$	0.12	0.15	0.18	$V/^{\circ}C$

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典型特性曲线 Typical Performance Curves ( @Tc=22 $\pm$ 3 $^{\circ}$ C )

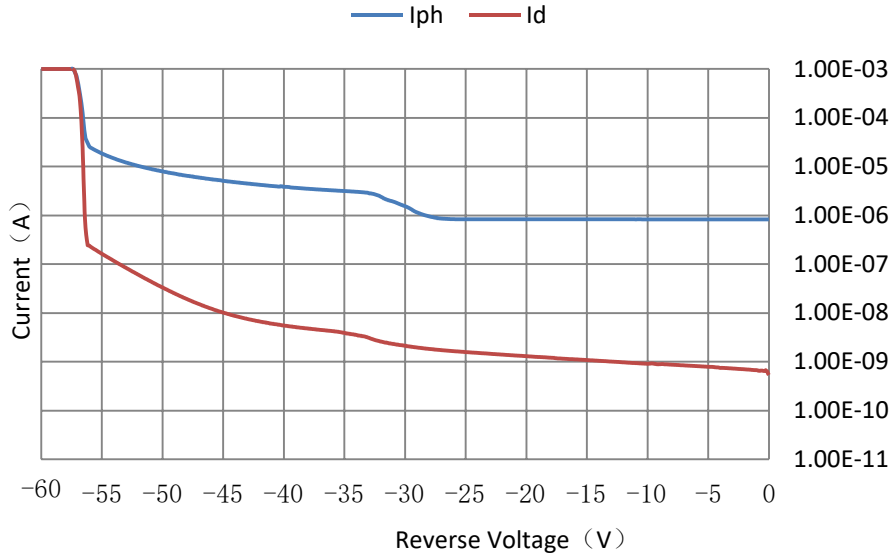


图 1 光电流、暗电流曲线

Figure 1 Photo Current and Dark Current vs. Reverse Voltage

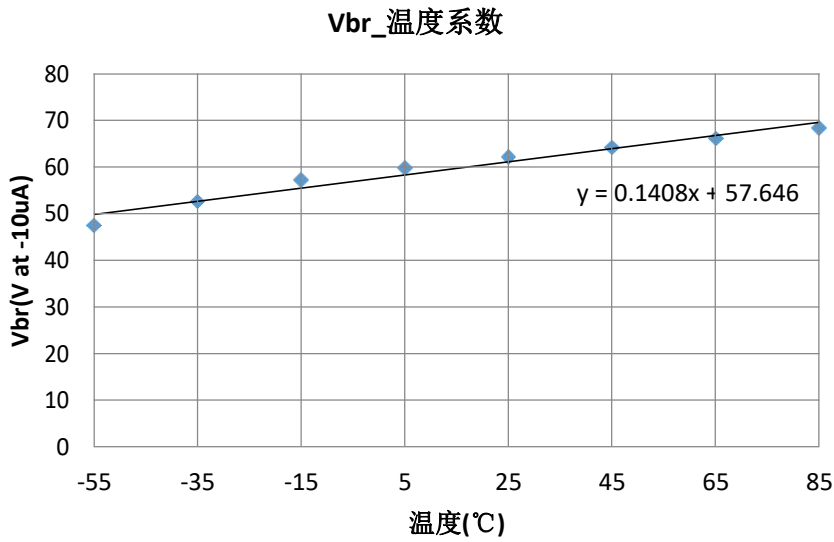
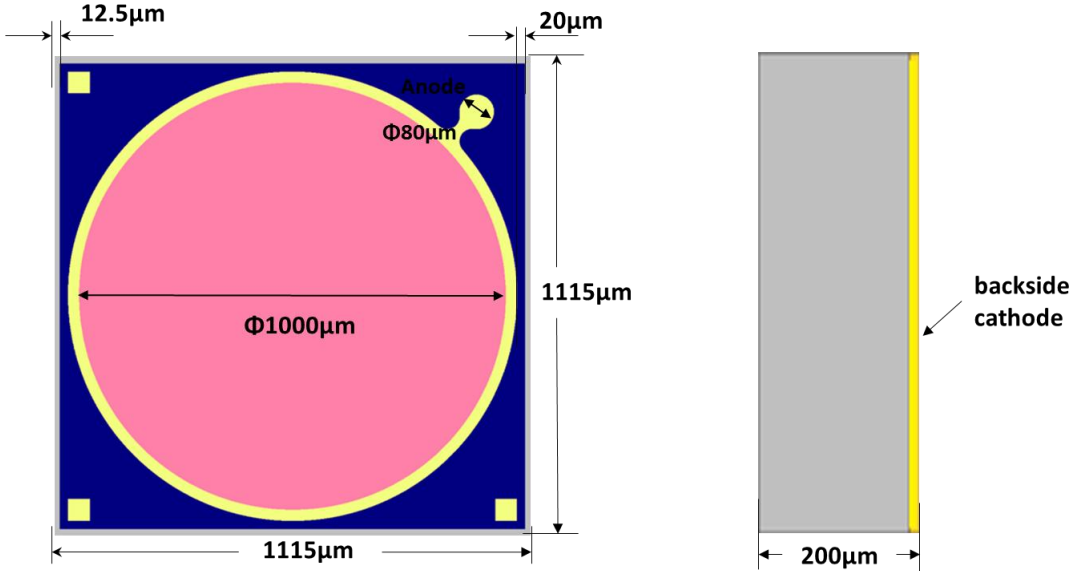


图 2 击穿电压温度系数

Figure 2 Breakdown Voltage vs. Temperature

# InGaAs $\Phi$ 1000 $\mu$ m APD Chip

芯片结构图及尺寸 Outline Diagram & Die Dimensions



特性参数 Parameter	最小 Min.	典型 Typ.	最大 Max.	单位 Unit	Notes
芯片宽度 Die Width	1105	1115	1125	$\mu$ m	
芯片长度 Die Length	1105	1115	1125	$\mu$ m	
芯片厚度 Thickness	190	200	210	$\mu$ m	
光敏面直径 Detection Window	—	1000	—	$\mu$ m	
P 极焊盘直径 Bonding Pad Diameter	—	80	—	$\mu$ m	Au metal

Attention: Handle with care, InP is a brittle material. The device can be permanently damaged when exposed to ESD.

Specifications are subject to change without notice.

Version 1.2