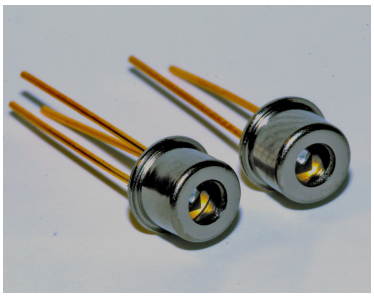
Marktech Optoelectronics

800nm Avalanche Photodiode

Product No: **MTAPD-06-021/022**

Peak Sensitivity Wavelength: 800nm

The MTAPD-06-021 & 022 are circular (Φ500um) 0.20mm² active area Silicon Avalanche Photodiodes with optimized sensitivity between 800-900nm & housed in a 3 pin hermetic TO-46 metal can package. They are well suited for applications requiring High Speed & Low Noise in visible-near IR applications.



FEATURES

>Fast Rise Time
>Low Noise
>High Gain
>Optimum Gain M=50

>Breakdown Voltage Range: 160V - 200V

>Optical rangefinders
>High speed optical communications
>Medical Equipment
>Bar Code Readers

Absolute Maximum Ratings

ITEMS	SYMBOL	RATINGS	UNIT
Storage Temperature	Tstg	-55 ~ +125	ºC
Operating Temperature	Topr	-20 ~ +85	ºC
Power Dissipation	Pd	1	mW
Operating Voltage	Vop	0.95 x Vbr	V
Lead Soldering Temperature *1	Tls	260	ºC

*1: Time 10 Sec max

Electrical & Optical Characteristics (Ta=23ºC)

ITEMS	SYMBOL	CONDITIONS	MIN.	TYP	MAX.	UNIT
Spectral Response	λ			400 - 1100		nm
Active Area		--		Diameter 500		um
Responsivity	Re	λ=800nm, oe=1uW, M=100	40	50	--	A/W
Rise Time (10%-90	t_R	f=1MHz, RL=50Ω, λ=800nm	--	0.3	--	ns
Dark Current	I_D	M=100		0.2	1.0	nA
Capacitance	Cj	M=100, f=1MHz		2.2		pF
Optimal Gain	M	--		50		
Breakdown Voltage	Vbr	IR=2uA	160	--	200	V
Temperature Coefficient	Tc	-40ºC - 85ºC		0.6		V/ºC

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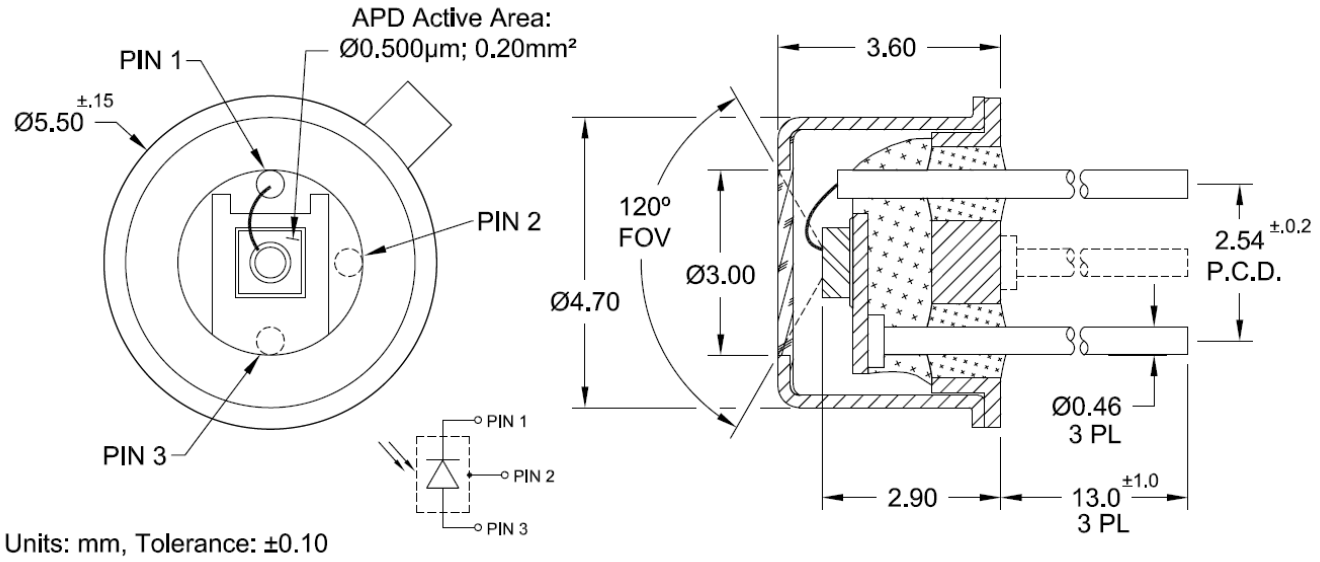
MTAPD-06-021



Units: mm, Tolerance: ±0.10

MTAPD-06-022

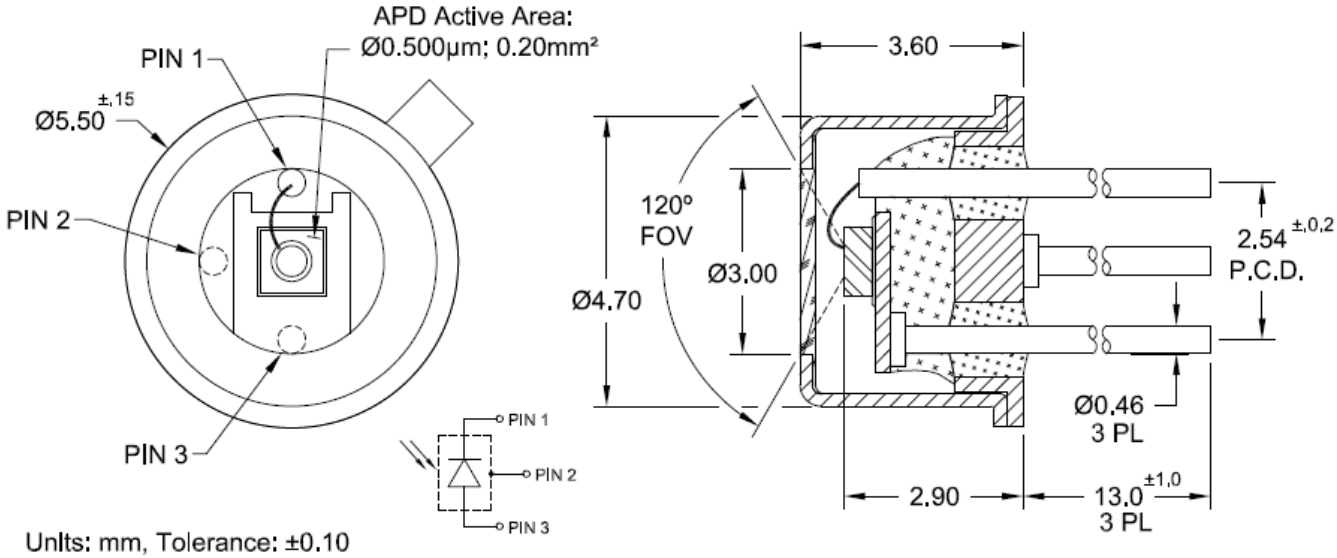


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Fig 1 Responsivity, Vr=0V

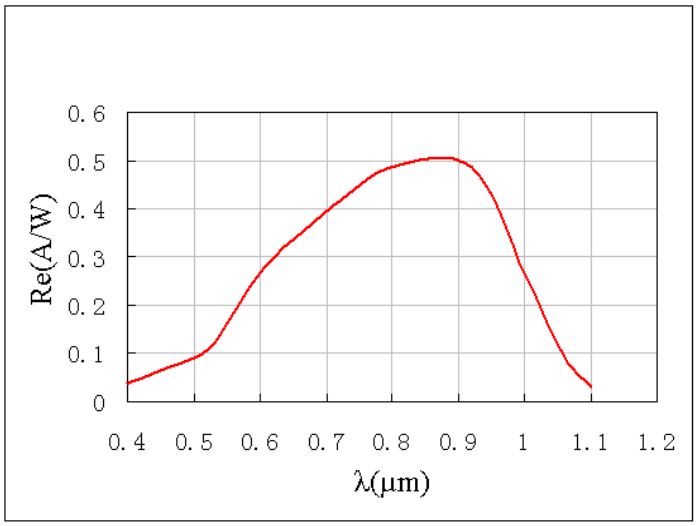


Fig 2 Dark Current

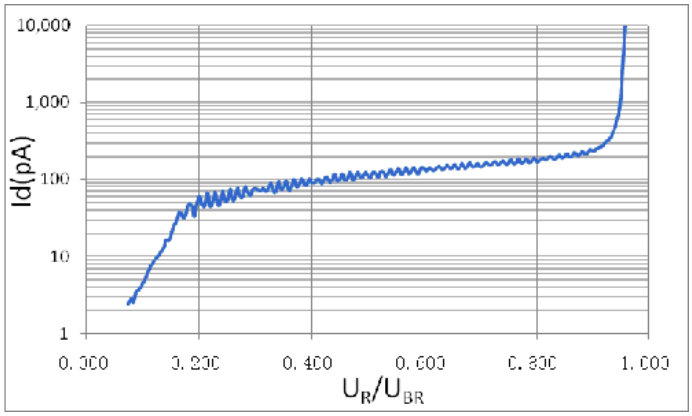


Fig 3 Multiplication

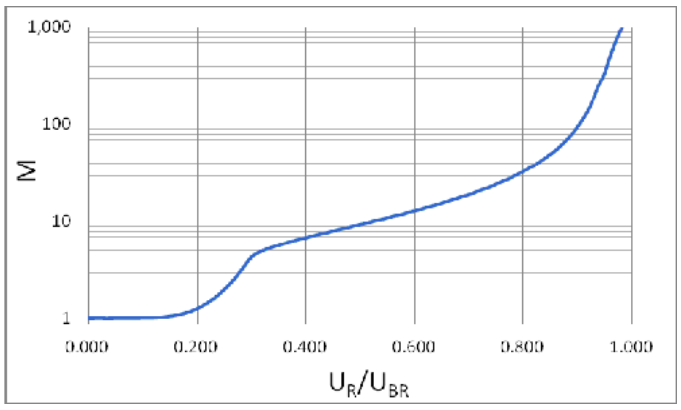
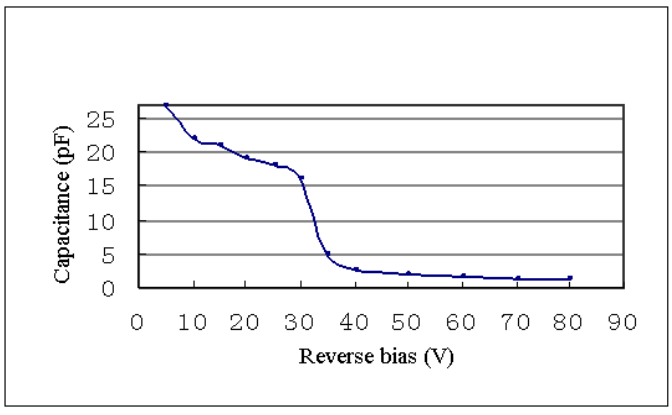


Fig 4 Capacitance



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