

Silicon avalanched photodiode

APD500-9TF



Description

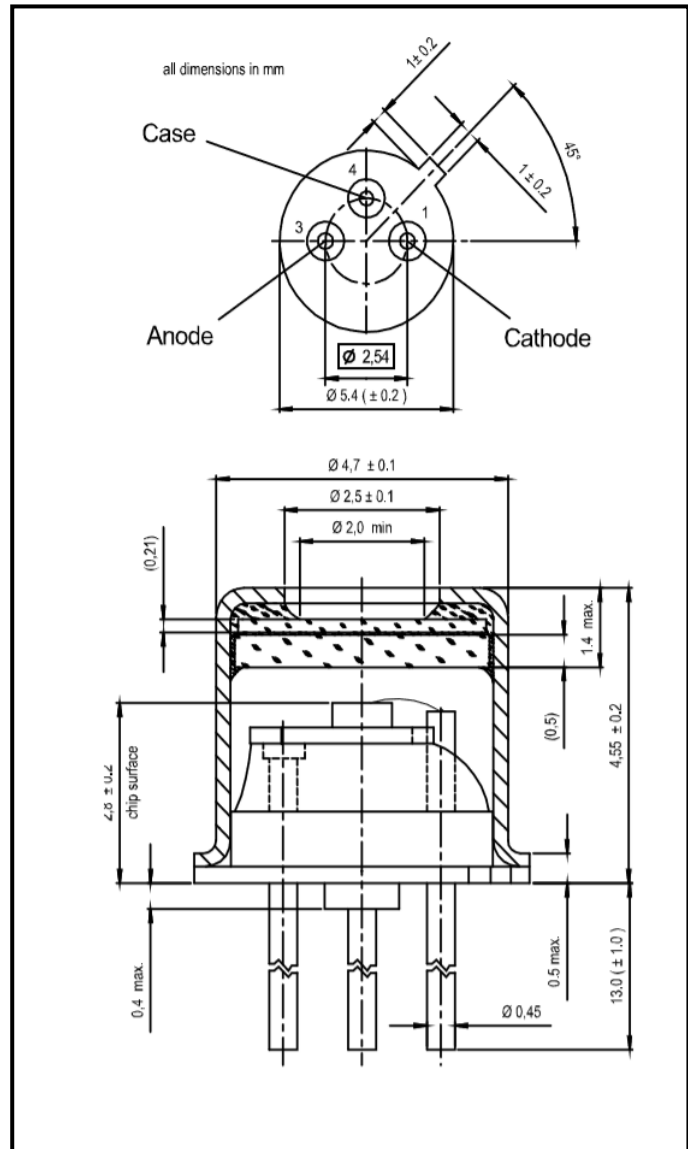
APD500-9TF is circular (Φ 500 μ m).2mm² active area Avalanche Photodiode array with optimized sensitivity At 905nm. It is well suited for applications requiring high Speed and low noise in Visible-near IR applications.

Features

- * Top illumination planar APD
- * Φ 500 μ m active area
- * High gain at low bias voltage
- * Operating temperature is from -40 to +80°C
- * Storage temperature is from -50 to +120°C
- * soldering temperature is 260°C @Max.5 seconds at the

Applications

- * Laser range finder
- *High speed optical communications



Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength range	λ		400-1100			nm
Active diameter	ϕ		500			μm
Gap/ Separation			1200			μm
Pitch			200			μm
Dark current	I_D	M=100	0.1	0.4	1.0	nA
Junction Capacitance	C	M=100		1.2		PF
Reverse breakdown voltage	V_{BR}	$I_D=2\mu\text{A}$	80		200	V
Operating voltage temperature coefficient	δ	$T_C=-40\sim+85^\circ\text{C}$	0.9			$\text{V}/^\circ\text{C}$
Rise time	t_R	F=1MHz, $\lambda=905\text{nm}$, 50 Ω	0.5	0.65	1.5	ns
Maximum multiplication gain	M_{max}	$\lambda=905\text{nm}$, $\phi_e=1\mu\text{W}$	200			
Responsivity	Re	$\lambda=905\text{nm}$, $\phi_e=1\mu\text{W}$, M=100	50	55		A/W

Absolute Values

Operating voltage	$0.95 \times V_{BR}$
Forward current	1mA
Power dissipation	1mW

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OTRON ELECTRONIC TECHNOLOGY CO.LTD

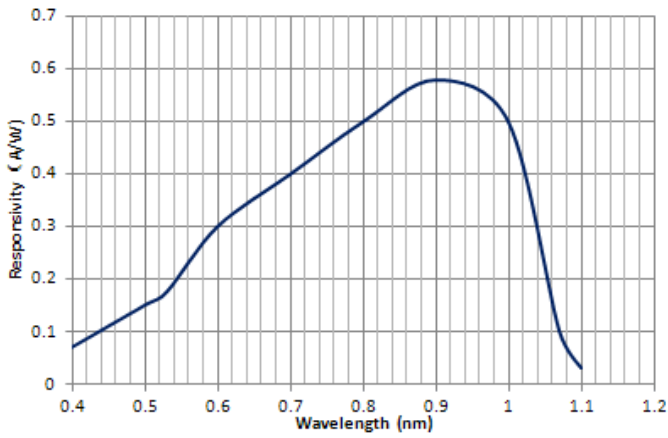
TEL:+86-21-54971821

FAX:+86-21-54971823

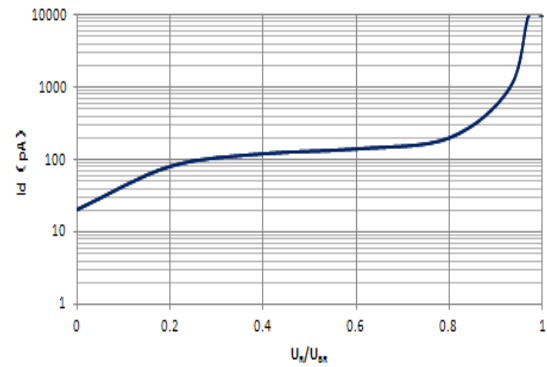
EMAL: frank.shuai@e-otron.com

<http://www.e-otron.com>

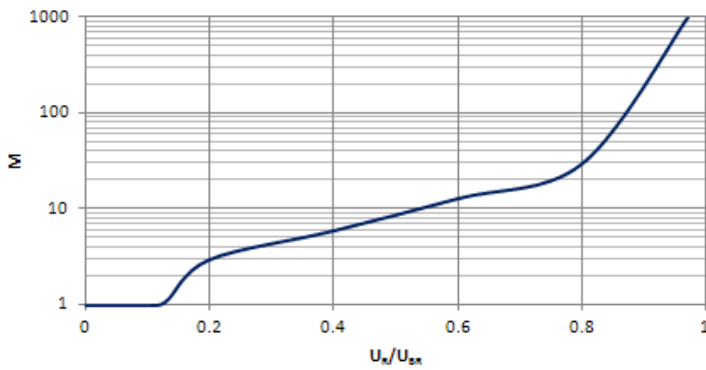
■ Responsivity vs. Wavelength at



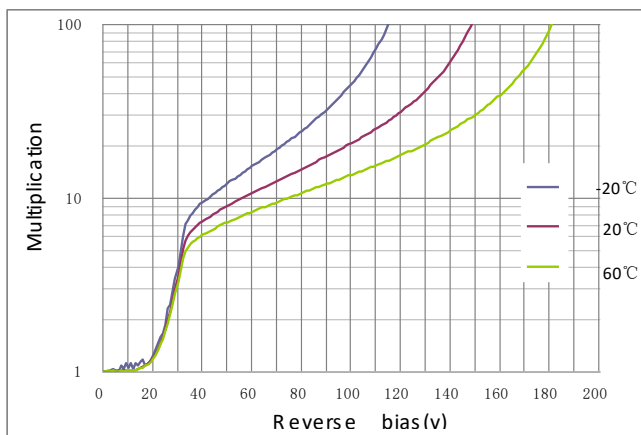
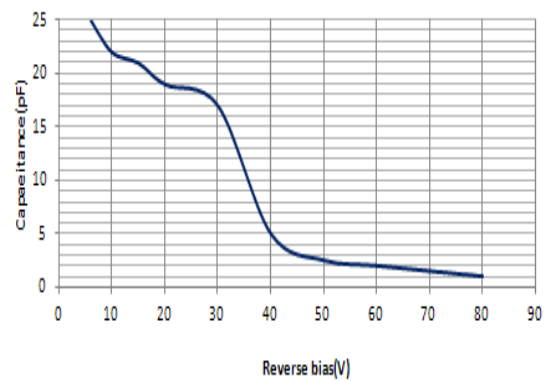
■ Dark current VS. U_R/U_{BR}



■ Gain vs. U_R/U_{BR}



■ Capacitance vs. Operating voltage



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