

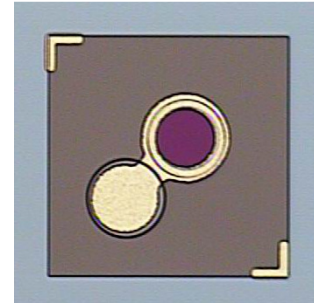
2.5 Gbps 1310/1550 nm APD

AK2A-705L

Part Number: AK2A-705L
Applications: 1.25 / 2.5 Gbps

Absolute Maximum Ratings (T = 25°C):

Parameter	Symbol	Unit	Value
Forward Current	I_F	mA	10
Reverse Voltage	V_R	V	V_B V
Reverse Current	I_R	mA	2
Operating Temperature	T_{op}	°C	-40 - 90
Storage Temperature	T_{stg}	°C	-40 - 100



Electro-optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
Aperture	D	μm		50		
Responsivity	R	A/W	0.8 0.9	0.9 1.0		$\lambda = 1310$ nm, M=1 $\lambda = 1550$ nm, M=1
Dark Current	I_D	nA		20	150	$V_R = 0.9V_B$
Breakdown Voltage	V_B	V	35	45	55	$I_R = 10$ μA
V_B Temperature Coefficient	Γ	V/°C	0.07	---	0.12	
Capacitance	C	pF		0.37	0.5	$V_R = 0.9V_B$ f = 1 MHz
Cut-off Frequency	f_C	GHz	2.0	3.0		M=9, $R_L = 50\Omega$

Chip configuration:

1. Top contact: Anode; Bottom contact: Cathode.
2. Anode bond-pad diameter: 55 μm
3. Die size: 250 μm (width) x 250 μm (length) x 130 μm (thickness)
Tolerance: +/-12.5 μm