

10Gbps bottom-illuminated InGaAs APD chip with submount (Preliminary)

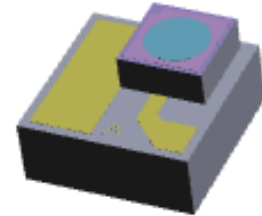
AK5A-7035-F

Part Number: AK5A-7035-F

Applications: 10Gbps

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 to 85
Storage Temperature	T_{stg}	°C	-40 to +100



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

Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
Aperture	D	μm		35		
Responsivity	R	A/W	0.7	0.85		$\lambda = 1550$ nm
Dark Current	I_D	nA		10	150	$V_R = 0.9 V_B$
Breakdown Voltage	V_B	V		28		$I_R = 10$ μA
VB Temperature Coefficient	Γ	V/°C		0.03		
Capacitance	C	pF		0.15	0.25	$V_R = V_B - 3$ V $f = 1$ MHz
Cut-off Frequency	f_C	GHz	7	8		M = 9 $R_L = 50\Omega$

Chip configuration:

1. Contact: P-contact on right side; N-contact on left side
2. Dimension:
APD chip: 300 μm (width) x 300 μm (length) x 130 μm (thickness), Tolerance: +/-15μm
Submount: 600 μm (width) x 600 μm (length) x 230 μm (thickness)