

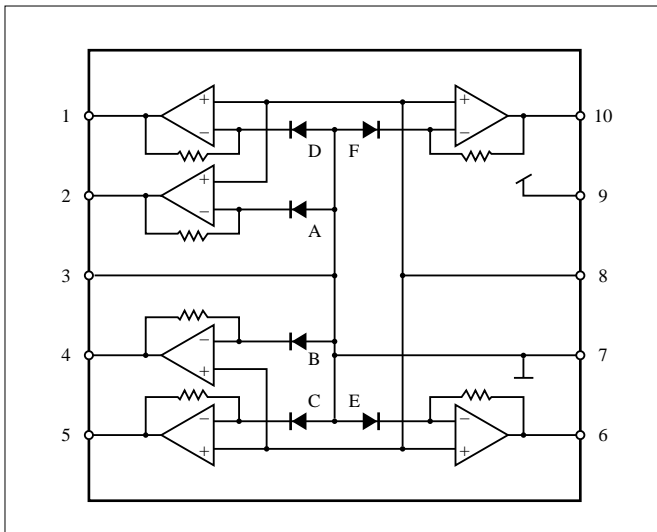
# PNA4211F

## Bipolar Integrated Circuit with Photodetection Function

### ■ Features

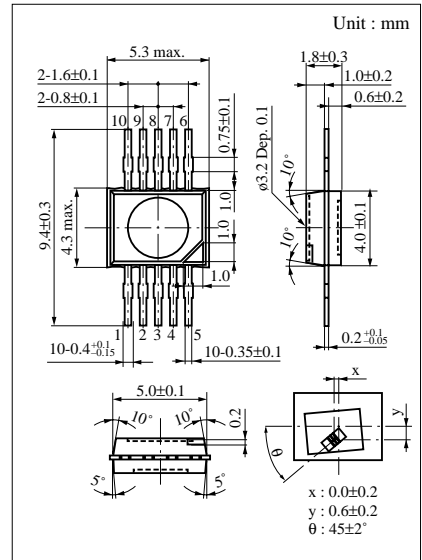
- Built-in amplifier circuit
- Supports CD and 4-speed CD-ROM

### ■ Block Diagram

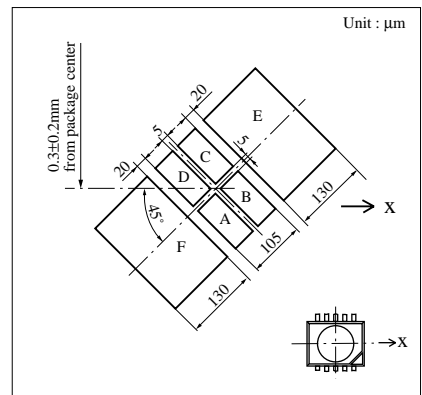


### ■ Pin Description

Pin No.	Function	Pin No.	Function
1	D Out	6	E Out
2	A Out	7	COMMON GND
3	COMMON GND	8	V <sub>c</sub>
4	B Out	9	V <sub>cc</sub>
5	C Out	10	F Out



### ■ Dimensions of detection area



### ■ Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Ratings	Unit
Power supply voltage	$V_{CC}$	+6	V
Power dissipation	$P_D$	115	mW
Operating ambient temperature	$T_{opr}$	-20 to +70	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-30 to +95	$^\circ\text{C}$

### ■ Electro-Optical Characteristics ( $V_{CC} = 2.5\text{V}$ , $V_{ref} = 0\text{V}$ , $V_{EE} = -2.5\text{V}$ , $R_L = 10\text{k}\Omega$ , $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Current of all circuits	$I_{CC}$			2.2	4.0	mA
Output voltage	$V_O$	$P_1 = 10\mu\text{W}$ , $\lambda = 780\text{nm}$ , A to D		300		mV
		$P_1 = 10\mu\text{W}$ , $\lambda = 780\text{nm}$ , E, F		660		
Output offset voltage	$V_{O(\text{offset})}$		-20	0	+20	mV
Output offset voltage difference	$\Delta V_{O(\text{offset})}$	$(A + C) - (B + D)$	-20	0	+20	mV
		$E - F$	-20	0	+20	
Frequency characteristics	$f_c$	$\lambda = 780\text{nm}$ , -3dB, A to D		8		MHz

Note 1) The reference voltage for the output voltage and output offset voltage is  $V_{ref}$  (8-pin voltage).

Note 2) The output voltage does not include the output offset voltage.