OKI electronic components

OD125

InGaAs PIN Photodiode for Optical Communications

GENERAL DESCRIPTION

The OD125 is designed as a receiver AMP for 30-Mbit digital signals. It features a PIN photodiode and AMP built into a TO-18 metal package.

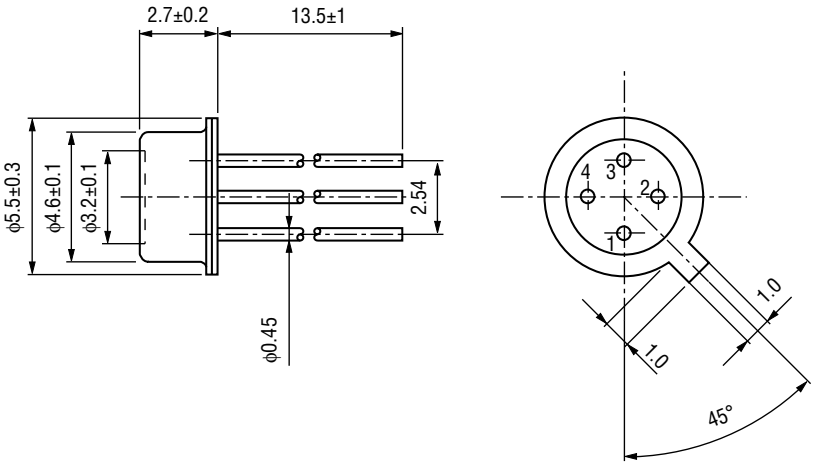
FEATURES

- Light input: –27 through –15 dBm
- Frequency characteristics: 30 MHz (Min.)
- Trans impedance: 90 dB (Typ.)
- Peak-sensitivity wavelength : 1300 nm

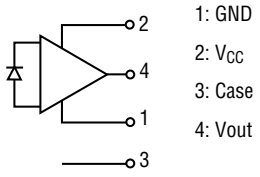
APPLICATIONS

- For optical transmission module (for digital signal reception)

PIN CONFIGURATION (Unit: mm)



• Pin Connection Diagram



1: GND
2: V_{CC}
3: Case
4: Vout

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Test Condition	Rating	Unit
Supply Voltage	V_{CC}	Ta=25°C	8	V
Operating Temperature	T_{opr}	—	–30 to +80	°C
Storage Temperature	T_{stg}	—	–40 to +100	°C

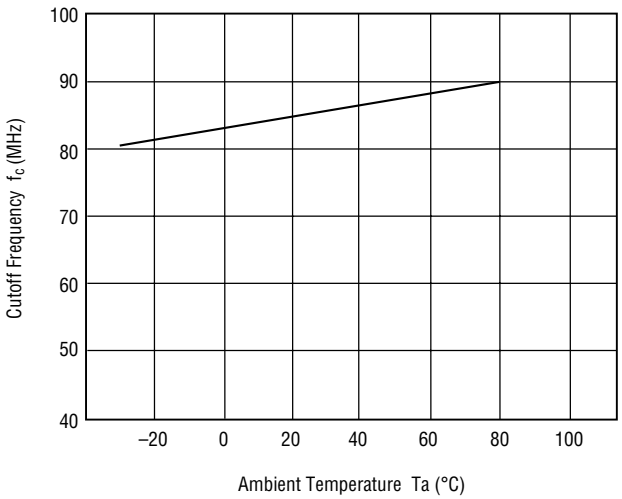
ELECTRICAL AND OPTICAL CHARACTERISTICS

(Ambient Temperature Ta=25°C)

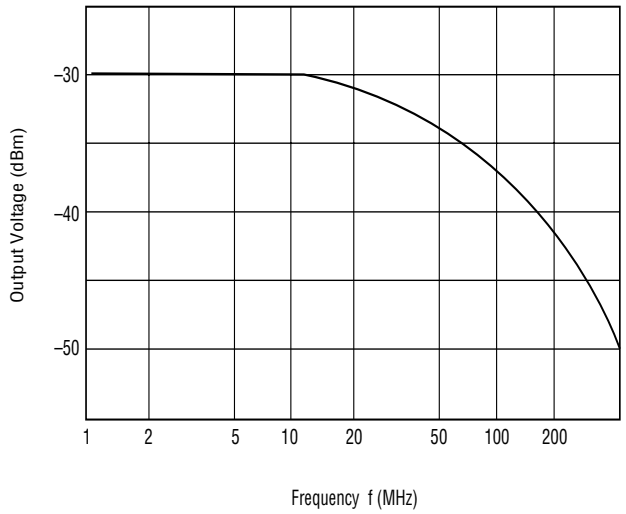
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Bias Voltage	V_B	V_{CC}=5 V, Pin=0	1.45	1.65	1.85	V
Photosensitivity	R	λ=1.3 μm, Pin=–20 dBm	25	—	—	kV/W
Cutoff Frequency	f_C	V_{CC}=5 V, –3 dB from peak value	35	—	—	MHz
Output Noise Level	—	f=32 MHz, Band width 3.1 kHz	—	—	–85	dBm
Supply Current	I_{CC}	V_{CC}=5 V, Pin=0	—	9	—	mA

TYPICAL CHARACTERISTICS

- **Cutoff Frequency vs. Ambient Temperature**



- **Output Voltage vs. Frequency (Ta=25°C)**



- **Dark Voltage vs. Ambient Temperature**

