



AC6801 Analog Photodiode Modules

Description

The AC6801 series analog photodiode is an InGaAs PIN diode sensitive to both 1310 nm and 1550 nm. It features high bandwidth (over 1 GHz), high linearity, and low noise. This broadband photodiode is offered in a small, environmentally rugged coaxial package.

Applications

- Forward-path and return-path broadband video transport
- FTTH Triplexer
- FTTx receiver
- EDFA/network monitor

Features

- High linearity, typical CSO at -75 dBc and CTB at -85 dBc
- Low capacitance, ≤ 0.6 pF
- 1 GHz flat response, ± 0.5 dB
- High responsivity (at 1310 nm and 1550 nm)
- Designed for Telcordia GR-468 qualification

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Operation Temperature Range	T_{OP}	0	85	$^{\circ}C$
Storage Temperature Range	T_{stg}	-40	100	$^{\circ}C$
Input Power Saturation	P_{IN}	-	3	dBm
Reverse Voltage	V_R	-	30	V
Forward Current	I_F	-	10	mA
Power Dissipation	P_{DISS}	-	100	mW

Electrical/Optical Characteristics (measured at 25 °C, -15 V)

Parameter	Symbol	Min.	Typ.	Max	Unit
Optical Wavelength Range	λ	1100	-	1600	nm
Responsivity	Resp.	-	0.85 at 1310 nm 0.90 at 1550 nm	-	mA/mW mA/mW
Frequency Range	F	1	-	1000	MHz
Frequency Response Flatness	-	-	± 0.5	-	dB
Distortion Products: *					
Composite Second Order	CSO	-	≤ -75	-70	dBc
Composite Triple Beat	CTB	-	≤ -85	-80	dBc
Back Reflection	R_L	-	-45	-	dB
Dark Current	I_D	-	-	5	nA
Capacitance	-	-	0.6	-	pF
Bandwidth	BW	-	1.0	-	GHz

* Two laser test at 1310 nm. Each laser has 40% modulation index. Total received power is 0 dBm. Distortion products measured at 49 MHz, 199 MHz, 499 MHz and 850 MHz.

Ordering Information**AC6801-YZ-O-*****

Where: YZ = P0; Fiber pigtail with no connector

= P1; Fiber pigtail with FC/ APC connector

= P2; Fiber pigtail with FC/ UPC connector

= P3; Fiber pigtail with SC/ APC connector

= P4; Fiber pigtail with SC/ UPC connector

= F2; FC/ APC Receptacle

= F3; FC/ UPC Receptacle

O=M; Photodiode module with type-M mounting bracket

O=N; Photodiode module with type-N mounting bracket

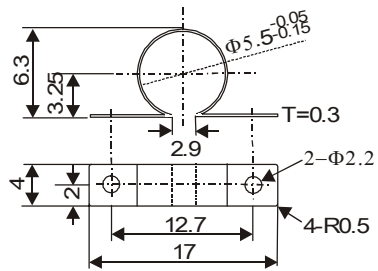
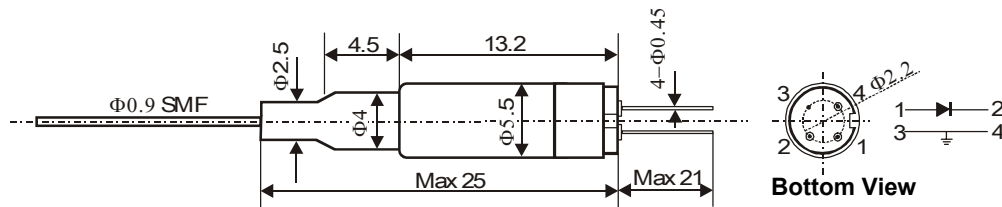
O=0; Photodiode module without mounting bracket

***: Customer information

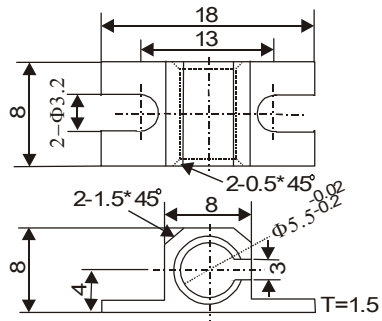
Outline Drawings

(Customer package designs are available)
 (Dimensions in mm)

AC6801-PZ-O-***



Type-M Bracket



Type-N Bracket (Plastic)

AC6801-FZ

