
Connectorized PIN-PREAMP

Technical Data

PPA0515-052/155/622

Features

- **Integrated InGaAs PIN and GaAs Preamplifier**
- **FC or SC Receptacle**
- **Compact Package**
- **High Reliability Planar InGaAs PIN Photodiode**
- **High Responsivity**

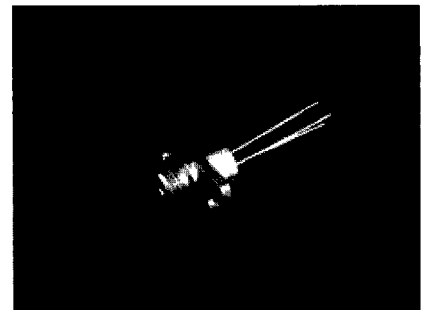
Applications

- **SONET/SDH**
- **Instrumentation**
- **O-E Convertors**
- **Single and Multimode Fiber Communications Systems**
- **Data Communication Receivers**
- **FDDI**

Description

The PPA0515 is a compact connectorized InGaAs photodiode with preamplifier designed for wide operating temperature range, low cost applications such as SONET/SDH and Fiber in the Loop. The planar InGaAs photodiodes are manufactured using MOVPE growth technology which gives low leakage and high responsivity performance with excellent reliability. The wide dynamic range GaAs IC preamplifier ensures compliance with SONET/SDH standards.

The construction of the devices includes a hermetically sealed photodiode and amplifier in an actively aligned receptacle housing and is designed to be compliant with Bellcore TA-TSY-000983.



Specifications

Absolute Limiting Ratings

Absolute (limiting) ratings mean that no catastrophic damage will occur if the product is subjected to these ratings for short periods, provided each limiting parameter is in isolation and all other parameters have values within the performance specification. It should not be assumed that limiting values of more than one parameter can be applied to the product at the same time.

Parameter	Symbol	Minimum	Maximum	Units
Positive voltage	Vdd	-	+7	V
Photodiode Voltage (Negative)	V pin	-	-7	V
Power Dissipation	-	-	350	mW
Operating Temperature	Tc	-40	85	°C
Storage Temperature	Ts	-40	85	°C
Soldering - 10 secs.	-	-	260	°C

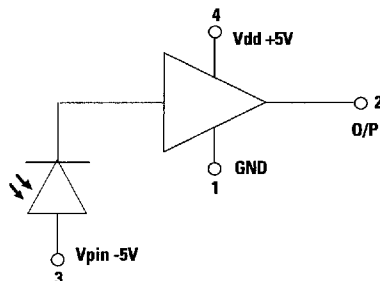
Performance Specifications (Note 1)

Parameter	Data Rate	Minimum	Maximum	Units
Sensitivity [Note 2]	52 Mbit/s	-39	-	dBm
	155 Mbit/s	-36	-	dBm
	622 Mbit/s	-30	-	dBm
Overload [Notes 2,3]	52 Mbit/s	-7	-	dBm
	155 Mbit/s	-7	-	dBm
	622 Mbit/s	-7	-	dBm
Bandwidth -3dB	52 Mbit/s	35	-	MHz
	155 Mbit/s	90	-	MHz
	622 Mbit/s	400	-	MHz
Output Impedance	-	25	65	Ohms
Photodiode Responsivity	-	0.80	-	A/W
Vdd Supply Voltage	-	4.75	5.25	V
Vdd Supply Current	-	-	50	mA
Photodiode Supply	-	-7.0	-4.5	V

Notes:

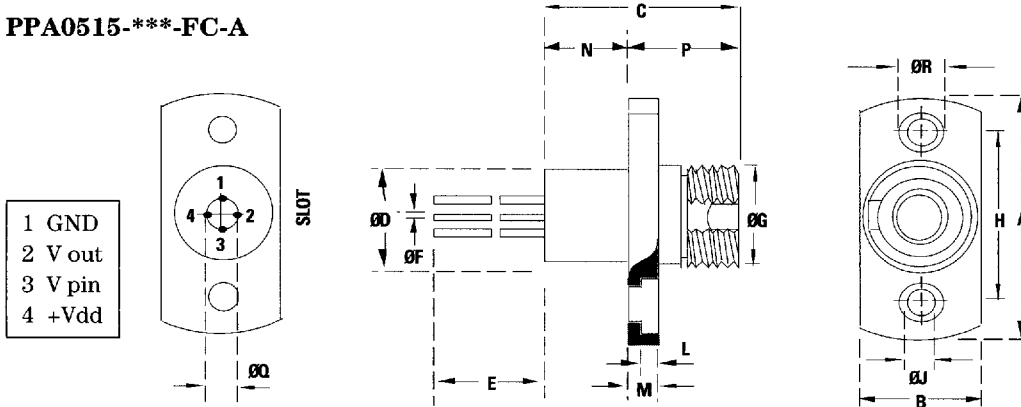
1. Measured over the operating temperature range and power supply tolerance.
2. Measured at the data rate specified for 1×10^{-9} BER using an infinite extinction ratio laser source modulated with a $2^{23}-1$ PRBS pattern.
3. Higher overload performance available. Contact your local Hewlett-Packard Components representative for details.

Schematic Diagram



Drawing Dimensions

PPA0515-***-FC-A

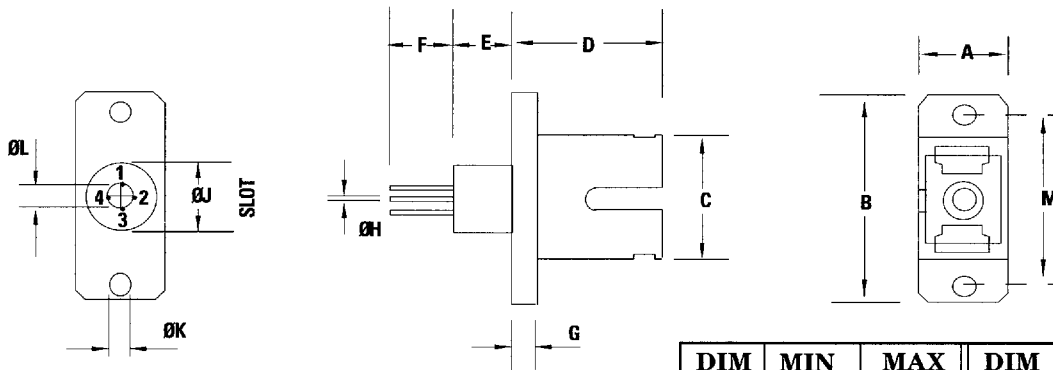


- 1 GND
- 2 V out
- 3 V pin
- 4 +Vdd

DIM	MIN	MAX	DIM	MIN	MAX
A	-	19.5	ØJ	2.08	2.32
B	-	9.5	L	-	1.65
C	-	15.0	M	-	2.2
ØD	-	9.1	N	-	6.8
E	12.0	-	P	-	8.2
ØF	0.27	0.33	ØQ	2.54 NOM	
ØG	M8 X 0.75		ØR	-	4.2
H	13.35	13.55			

All dimensions in mm

PPA0515-***-SC-A



DIM	MIN	MAX	DIM	MIN	MAX
A	-	9.5	G	2.0	3.0
B	-	23.0	ØH	0.27	0.33
C	-	13.5	ØJ	-	7.5
D	-	15.5	ØK	2.08	2.5
E	-	8.0	ØL	2.54 NOM	
F	12.0	-	M	17.8	18.2

All dimensions in mm

Ordering Information

PPA0515-XXX-XX-A

Allowable Part Numbers
PPA0515-052-FC-A
PPA0515-155-FC-A
PPA0515-622-FC-A
PPA0515-052-SC-A
PPA0515-155-SC-A
PPA0515-622-SC-A

Receptacle Type:
FC = FC
SC = SC

Speed:
052 = 51.84 Mbit/s
155 = 155.52 Mbit/s
622 = 622.08 Mbit/s

For more information:

*United States:

*Europe:

Far East/Australasia: (65) 290-6305

Canada: (416) 206-4725

Japan: (81) 3 3331 6111

*Call your local HP sales office listed in
your telephone directory and ask for a
Components representative.

Data subject to change
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Printed in USA 5963-5065E (1/95)