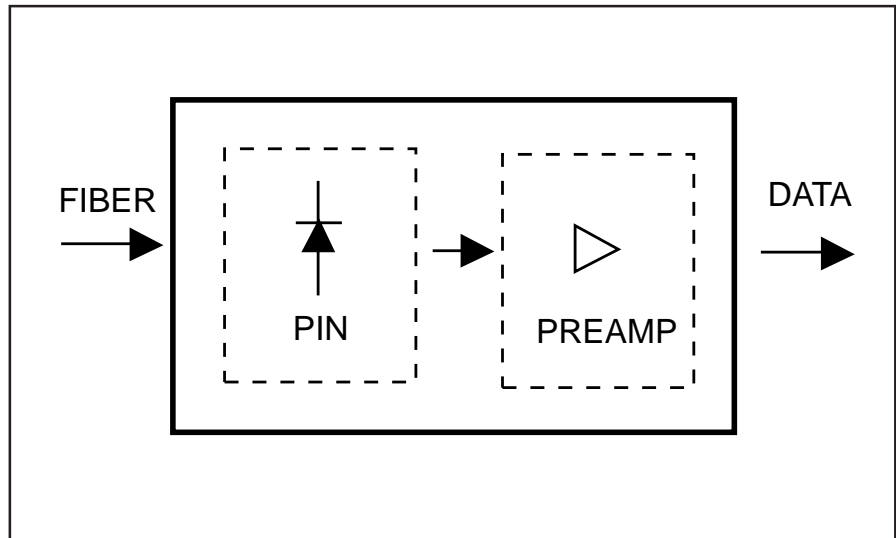


PGR 203 01

Optical Receiver Submodule for 2.5 Gbps

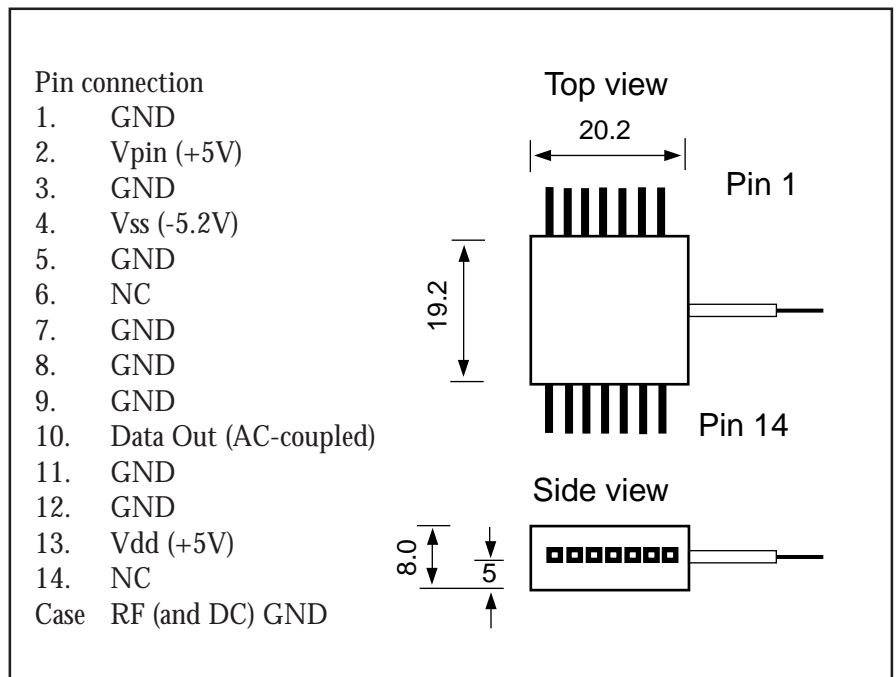


Key Features

- Hermetic, 14 pin butterfly package with multisourced footprint
- Single-mode fiber pigtail
- FC/PC, SC or ST connector
- InGaAs PIN photo diode with low noise GaAs MMIC preamplifier
- AC-coupled output
- Light "ON" = logic "LOW"
- Operates in the 1.3 μm and 1.55 μm optical window
- 1.7 GHz typical bandwidth
- -25 dBm typical sensitivity
- +0.5 dBm typical overload

Applications

- SDH STM-16 SH
- SONET OC-48 IR
- Digital receivers to 2.5 Gbps
- Analog receivers to 1.7 GHz



Electrical Characteristics

Ta=25C

Item	Symbol	Min	Nom	Max	Unit
DC Power Supply Voltage Range	Vdd	4.7	5.0	5.3	V
	Vss	-5.5	-5.2	-4.9	V
PIN Bias	Vpin		5		V

Ta=25C, nominal power supplies

Item	Symbol	Min	Nom	Max	Unit	
DC Power Supply Current Range	Idd		90		mA	
	Iss		70		mA	
Power Consumption	Pcon		0.8		W	
Operating Case Temperature	Tc	0		70	°C	
Output Signal Swing; $R_L = 50\Omega$, $\lambda = 1.3\mu\text{m}$	Vout					
		Pf = -20 dBm	10	15		mV _{P-P}
		Pf = -3 dBm		700	1000	mV _{P-P}
Logic Sense: Light "ON" =Logic "LOW"						
AC Transimpedance; $R_L = 50\Omega$; TZ = dVout/I _{ph} , ave	Tz		1.8		kΩ	

Optical Characteristics

Ta=25C, nominal power supplies

Item	Symbol	Min	Nom	Max	Unit
Optical Wavelength	λ	1.25		1.6	μm
Sensitivity P _f @ BER=1e-10 (2.5 Gbps NRZ, PRBS 2 ²³ -1, $\lambda=1.55\mu\text{m}$)	Pr		-25	-22	dBm
Optical Overload P _f @ BER=1e-10 (2.5 Gbps NRZ, PRBS 2 ²³ -1, $\lambda=1.55\mu\text{m}$)	Pol	0	+0.5		dBm
Opto/Electrical Transfer Function:					
Cut-off Frequency	fc(-3dB)	1.4	1.8	2.3	GHz
Gain Peaking	∂_{peak}		0	1	dB

Quality Assurance

Ericsson Components commitment to quality has been proved through a decade of semiconductor device production and has been confirmed to ISO 9001. These products are qualified according to the intention of applicable Bellcore standards and Ericsson internal quality specifications, and supplied with final test data.

Connector Options

FC/PC

SC

ST

(Other connectors available on request)

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