

2.5 Gbps Sonet / SDH PIN-Transimpedance Optical Receiver Module

Features

– Electro-optical

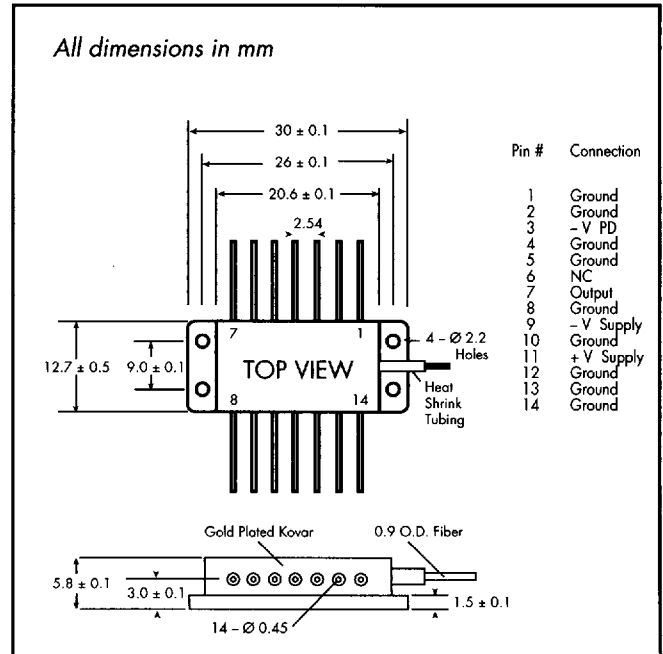
- InGaAs PIN photodiode with GaAs FET Transimpedance Amplifier
- Operates between 1000 and 1600 nm
- 1.9 GHz typical bandwidth
- ± 0.75 dB typical flatness
- Suitable for microstrip interface
- Requires ± 5 V supplies
- No temperature compensation required

– Packaging

- Hermetic, 14 pin butterfly package
- 9/125 μ m singlemode, 900 μ m jacketed fiber pigtail

Applications

- Short haul Sonet OC-48, SDH STM-16 optical receivers
 - 1300 nm
 - 1550 nm
- Digital fiber optic receivers to 2.5 Gbps
- Analog receivers to 1.7 GHz



Preliminary Specifications

AC/Optical Characteristics

($V_s = \pm 5.0$ V, $V_{PD} = -5.0$ V, $T_A = 25^\circ\text{C}$, $R_L = 50 \Omega$)

Model ERM507FJ-S

Parameter	Min.	Typ.	Max.	Units
Gain	550	600		V / W
Bandwidth	1.7	1.9		GHz
Sensitivity ¹	-27.0	-28.0		dBm
Overload	-3.0	-2.0		dBm
Output Impedance	45	50	55	Ω
Optical Back Reflection		-40	-30	dB
PD Dark Current		0.5	2.0	nA

DC Electrical Characteristics

Model ERM507FJ-S

Parameter	Min.	Typ.	Max.	Units
Supply Voltage (-)	-4.75	-5.00	-5.25	VDC
Supply Voltage (+)	4.75	5.00	5.25	VDC
PD Supply Voltage	-4.75	-5.00	-25.00	VDC
Supply Current (-)		20		mA
Supply Current (+)		35		mA
Output Offset Voltage		-1.30		VDC

Maximum Ratings

Model ERM507FJ-S

Parameter		Units
Supply Voltage (-)	-6.0	VDC
Supply Voltage (+)	6.0	VDC
PD Supply Voltage	-25.0	VDC
Optical Input Power	5.0	mW
Operating Temp.	-40 / +85	$^\circ\text{C}$
Storage Temp.	-40 / +85	$^\circ\text{C}$

Notes:

1. 2.5 Gb/s, 1E-10 BER, 1.7 GHz noise bandwidth.

Figure 1

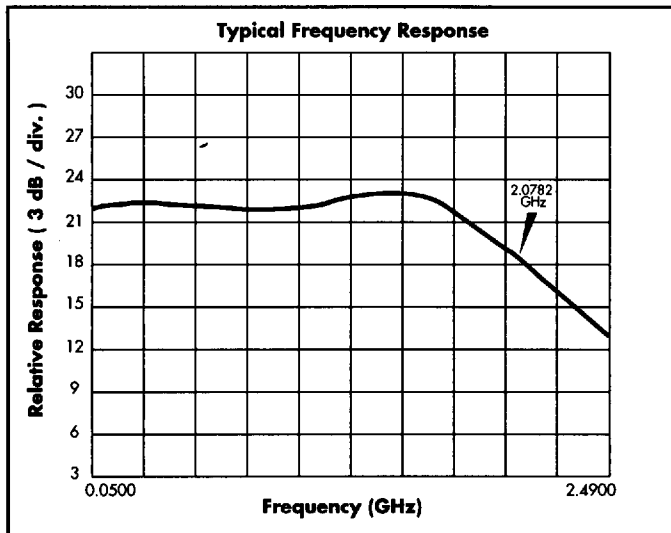
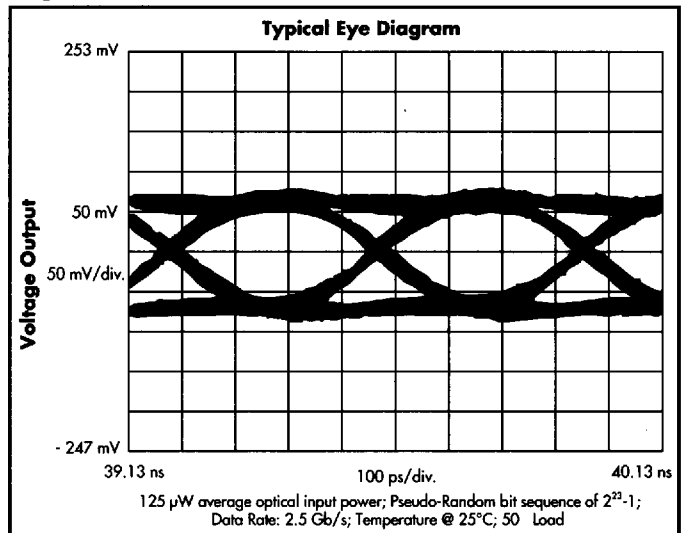


Figure 2



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