

Compact Sonet OC-24 PIN-Transimpedance Amplifier Optical Receiver Modules

Features

- InGaAs PIN Photodiode and GaAs Transimpedance Amplifier
- Meets Sonet sensitivity and overload requirements
- Automatic gain control
- Integrated 4-pin package
- Connector receptacle and fiber pigtailed versions

Applications

- Sonet receivers
Add/Drop Multiplexers
Digital Crossconnects
Test Equipment
- Fiber Channel receivers
- Digital video
- Fiber optic receivers from 10 Mbps to 1.5 Gbps

Preliminary Performance Specifications AC/Optical Electrical Characteristics

($V_{DD} = 5.0V$, $T_A = 25^\circ C$, $R_L = 50\Omega$)

Package	FJS			RST, RFC, RSC			Units
	Min.	Typ.	Max.	Min.	Typ.	Max.	
Parameter							
Gain ¹	0.75	1.2		0.7	1.0		V/mW
Bandwidth	850	1000		850	1000		MHz
Sensitivity ²	-28.0	-29.5		-27.5	-29.0		dBm
Overload	-3	0		-3	0		dBm
AGC Threshold Power		100			100		μW
AGC Time Constant		5.6			5.6		us
Output Impedance		50			50		Ω

Maximum Ratings

Parameter	Rating	Units
Supply Voltage V_{dd}	7.0	V
Detector Voltage V_{pd}	-25.0	V
Optical Input Power ³	2.0	mW
Operating Temp. T_A	-40 / +85	$^\circ C$
Storage Temp.	-40 / +85	$^\circ C$

DC / Electrical Characteristics

Parameter	Min.	Typ.	Max.	Units
Supply Voltage V_{dd}	4.5	5.0	6.0	V
Detector Voltage V_{pd}	0	-5.0	-25.0	V
Output Offset Voltage V_{os}	1.3	1.8	2.2	V
Supply Current I_{dd}		35		mA

Notes:

¹ When input optical power is below AGC threshold level.

² Bit error rate of 1E-10. Noise bandwidth of 415 MHz

³ Damage may occur if maximum power rating is exceeded

