

Sonet OC-1 & OC-3 Compact PIN-Transimpedance Amplifier Optical Receiver Modules

Features

Electro-Optical

- InGaAs PIN Photodiode with GaAs Transimpedance Amplifier
- Exceeds Sonet / SDH sensitivity and overload requirements
- High V/W gain
- Single +5 V operation
- -40 to +85 °C operating range

Packaging

- Integrated 4-pin coaxial package
- Connector receptacle and fiber pigtailed versions
- Smaller mechanical footprint than ERM501/504 series

Applications

- Sonet receivers
 - Add/Drop Multiplexers
 - Digital Loop Carriers
 - Digital Crossconnects
 - Optical Network Units
- Fiber optic receivers from 10 to 300 Mbps

Preliminary Performance Specifications

AC/Optical Electrical Characteristics

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

Model	ERM531			ERM534			
Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Gain ¹	12	18		4	5		kV/W
Bandwidth	50	60		150	200		MHz
Sensitivity ²	41.5	-43.0		-36.0	-37.5		dBm
Overload	-3	0		-3	0		dBm
AGC Threshold Power		5			20		uW
AGC Time Constant		0.7			0.7		mSec
Output Impedance	35	50	65	35	50	65	Ω
Output Voltage ³		1.0	1.5		1.0	1.5	V_{PP}

DC / Electrical Characteristics

Parameter	Min.	Typ.	Max.	Units
Supply Voltage V_{DD}	4.5	5.0	6.0	V
Output Offset Voltage V_{OS}	1.1	1.8	2.2	V
Supply Current	15	35	50	mA

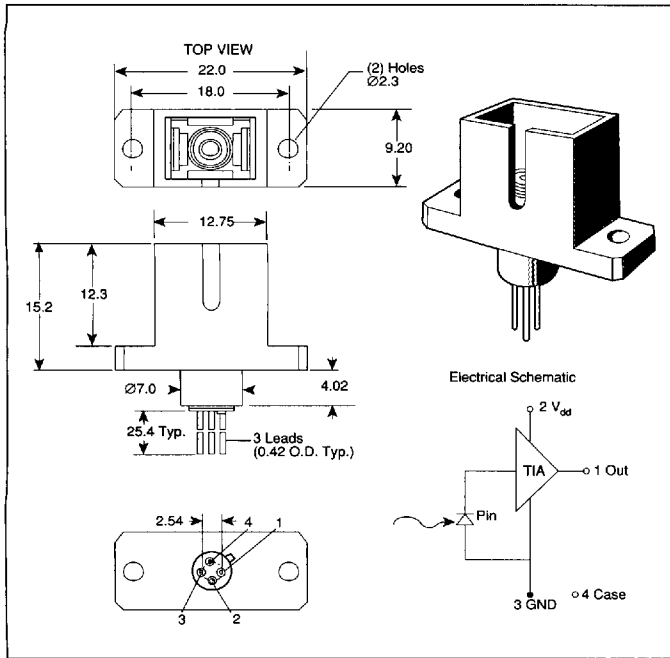
Maximum Ratings

Parameter	Rating	Units
Supply Voltage V_{DD}	7.0	V
Optical Input Power	2	mW
Operating Temp. T_A	-40 / +85	°C
Storage Temp.	-40 / +85	°C

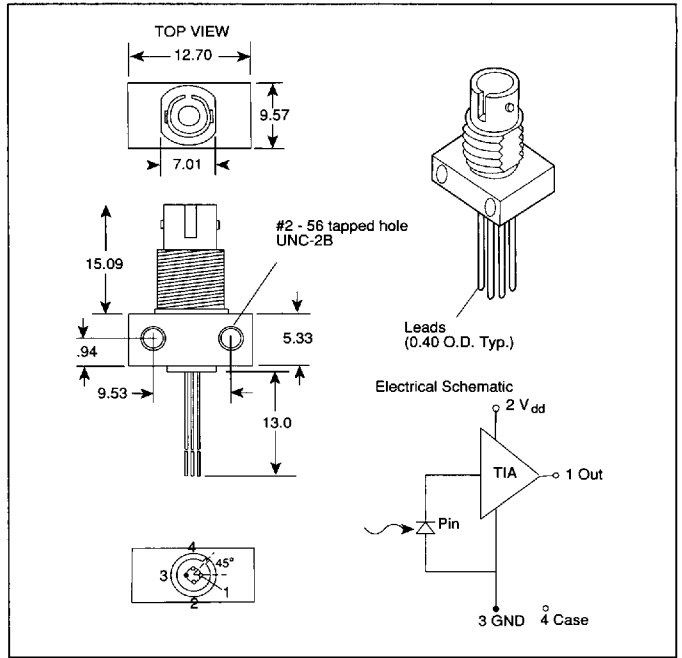
Mechanical Dimensions

All dimensions in mm

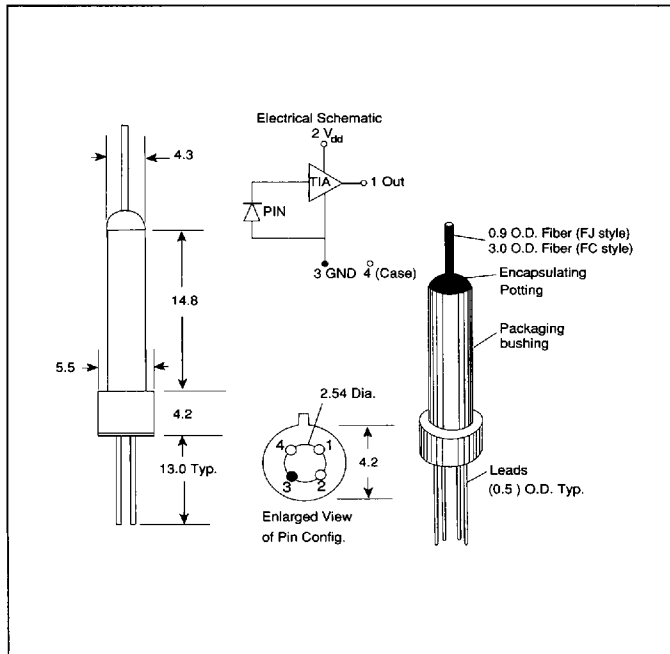
ERM531/ERM534RFC



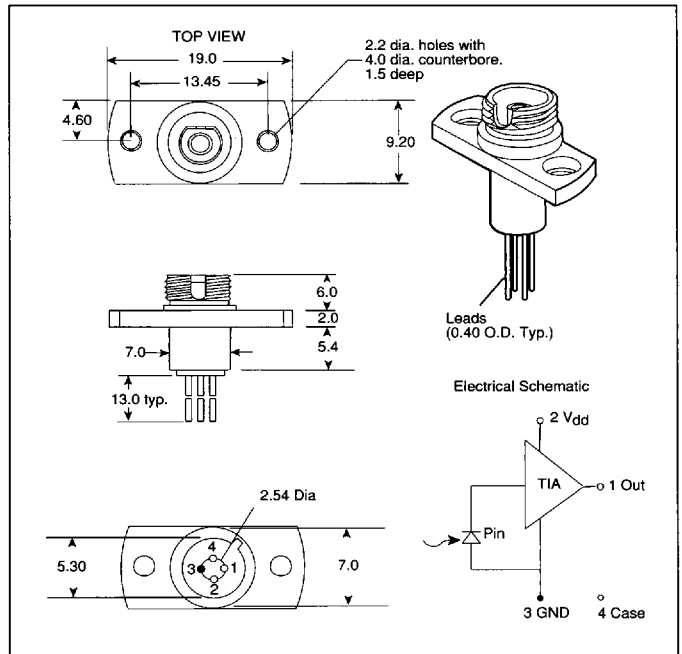
ERM531/ERM534RST



ERM531/ERM534FJ/FC



ERM531/ERM534RFC2



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