

High Linearity 860 MHz AM CATV Optical Receiver Module

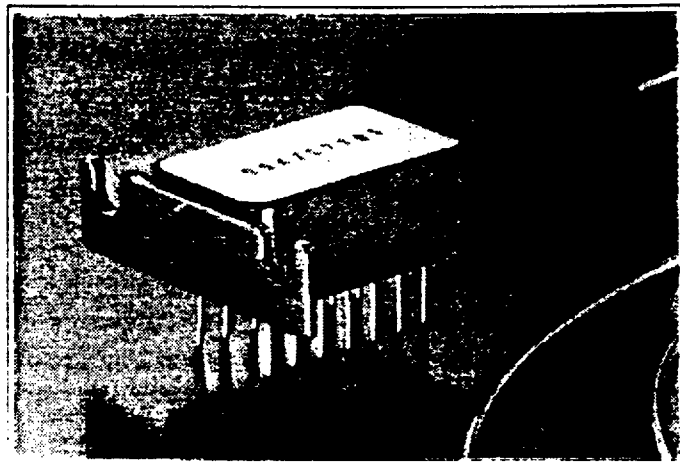
Preliminary Information

Features

- High linearity InGaAs PIN photodiode
- Low distortion, low noise GaAs IC amplifier
- -65 dBc CSO, -70 CTB at +3 dBm
- 7 pW/ $\sqrt{\text{Hz}}$ noise equivalent power
- 14 dB gain min.
- 1 dB max. ripple from 40 to 860 MHz
- Consumes 2 W from 12 V supply

Applications

- Fiberoptic 860 MHz AM CATV receivers
 - Optical input signals from -5 to +3 dBm
- 1300 or 1550 nm (custom) analog receivers
- Available with any standard fiber optic connector



Preliminary Specifications

Optical Electrical Characteristics

($V_{DD} = +12\text{ V}$, $V_{FC} = +12\text{ V}$, $T_A = +25^\circ\text{C}$, $\lambda = 1300\text{ nm}$, $Z_c = 75\ \Omega$, $f = 40\text{ MHz to } 860\text{ MHz}$)

All models

Parameter	Min.	Typ.	Max.	Units
Gain	14	15.5		dB
Responsivity, just photodiode	0.85	0.9		A/W
Composite second order		-70	-65	dBc
Composite triple beat		-75	-70	dBc
Noise equivalent power		5	7	pW/ $\sqrt{\text{Hz}}$
Flatness			± 0.5	dB
Output electrical return loss		11	9	dB
Optical return loss			45	dB

Notes

¹80 channels, 2 mW average power, 4-: modulation index.

Maximum Ratings

InGaAs PIN Photodiode - All models

Parameter	Rating	Units
Reverse voltage [†]	25	V
Reverse current [†]	10	mA
Forward Current [‡]	10	mA
Power Dissipation	100	mA

Notes:

- [†] Under reverse bias, current at which device may be damaged.
- [‡] Under forward bias, current at which device may be damaged.

Optical Receiver Module - All models

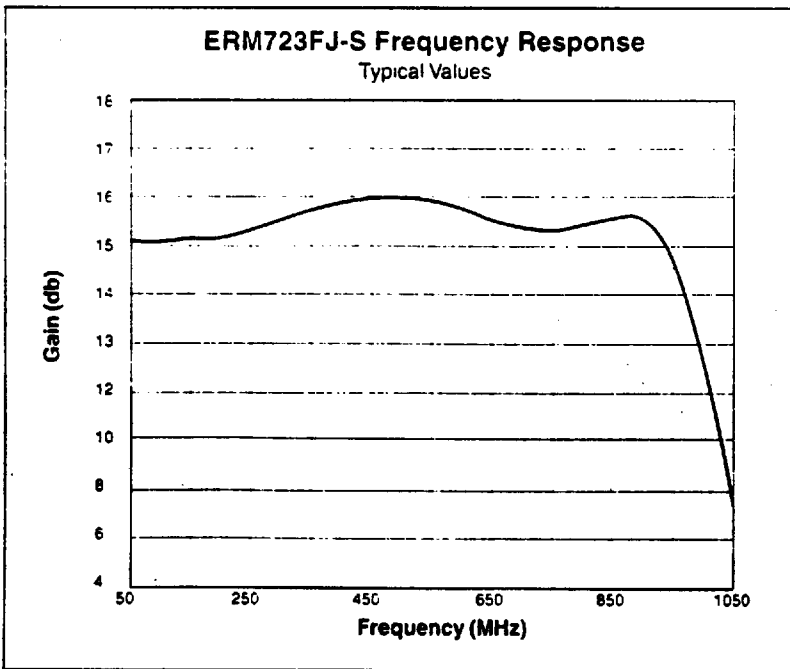
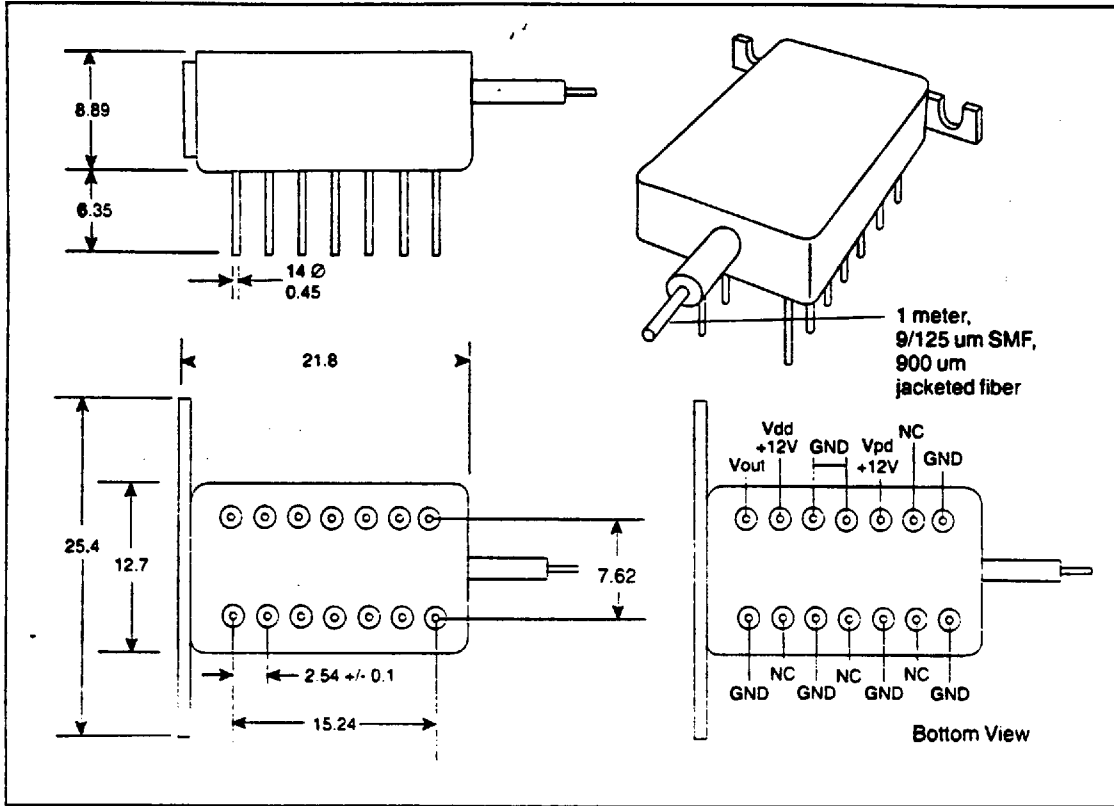
Parameter	Rating	Units
Operating Temperature	-40 / +85	$^\circ\text{C}$
Storage Temperature	-40 / +85	$^\circ\text{C}$

DC Electrical Specs

Parameter	Min.	Typ.	Max.	Units
V_{DD} supply voltage	11.5	12.0	12.5	V
I_{DD} supply current		150		mA
V_{FC} PD supply voltage	10.0	12.0	15.0	V

Mechanical Dimensions

All dimensions in mm



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