High Linearity 860 MHz AM CATV Optical Receiver Module

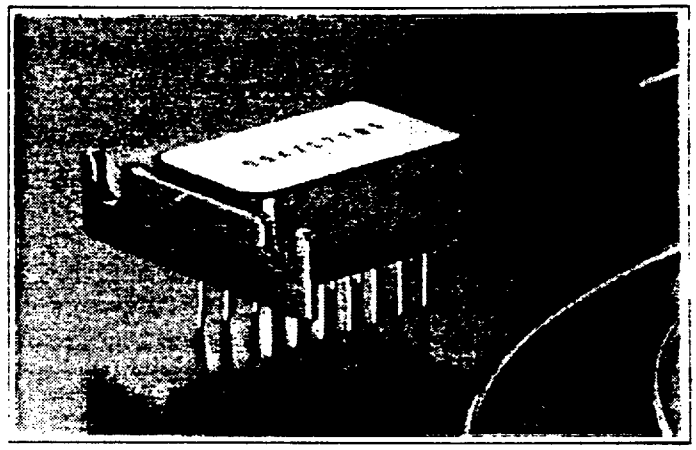
Preliminary Information

Features

- High linearity InGaAs PIN photodiode
- Low distortion, low noise GaAs IC amplifier
- -65 dBc CSO, -70 CTB at +3 dBm
- 7 pW/$\sqrt{Hz}$ 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



Maximum Ratings

InGaAs PIN Photodiode - All models

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

Notes:
[A] Under reverse bias, current at which device may be damaged.
[B] Under forward bias, current at which device may be damaged.

Optical Receiver Module - All models

Parameter	Rating	Units
Operating Temperature	-40 / +85	°C
Storage Temperature	-40 / +85	°C

Preliminary Specifications

Optical Electrical Characteristics

(V_{DD} = +12 V, V_{PD} = +12 V, T_A = +25°C, λ = 1300 nm, Z_o = 75 Ω, f = 40 MHz to 860 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/√Hz
Flatness			±0.5	dB
Output electrical return loss		11	9	dB
Optical return loss			45	dB

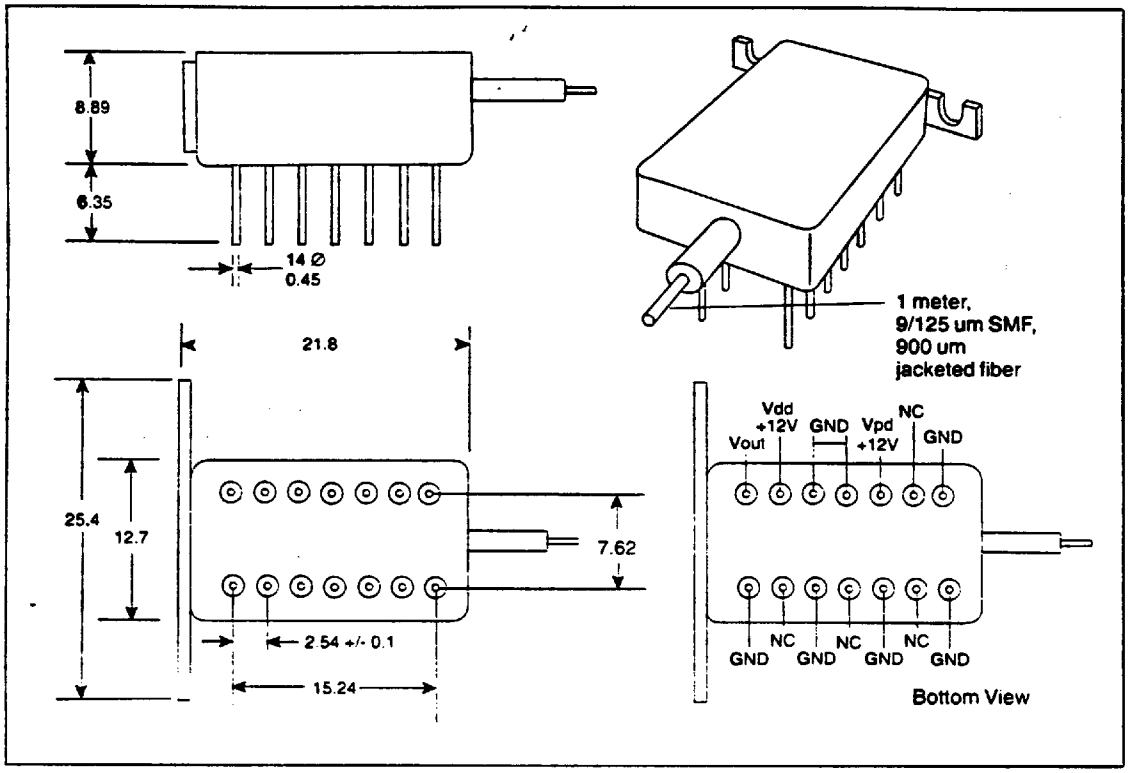
Notes
[1] 80 channels, 2 mW average power, 4% modulation index.

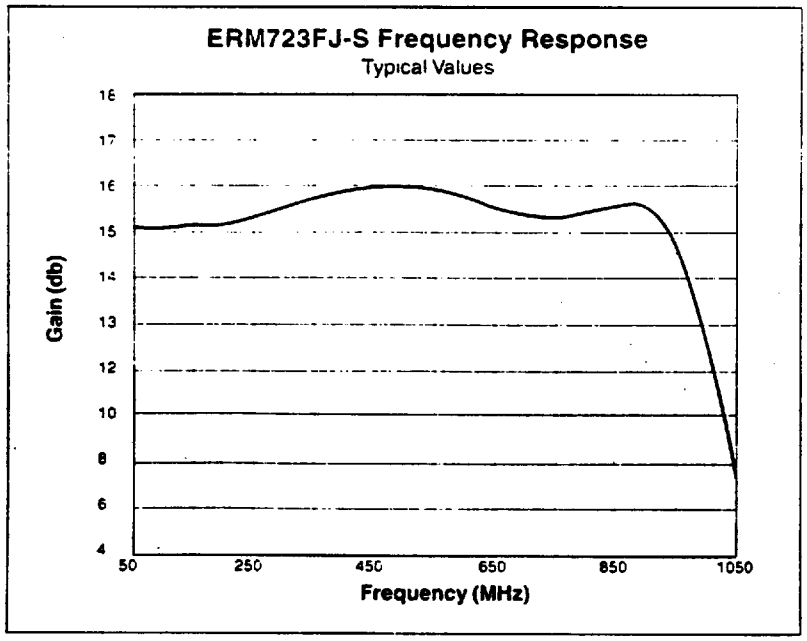
DC Electrical Specs

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

Mechanical Dimensions

All dimensions in mm





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