

PF03, PFO4 40-860 MHz. Ultra-linear Opto Receiver Amplifier

Features

Ultra High Linearity with Low Noise

Independent DC Supply pin for Optical diode (PFO4 Model)

Available connectors & applicable dash #'s

FC/APC - FCAPC SC/APC - SCAPC

FC/PC - FCPC ST - ST

Unit without a connector has no dash number

tyco
Electronics

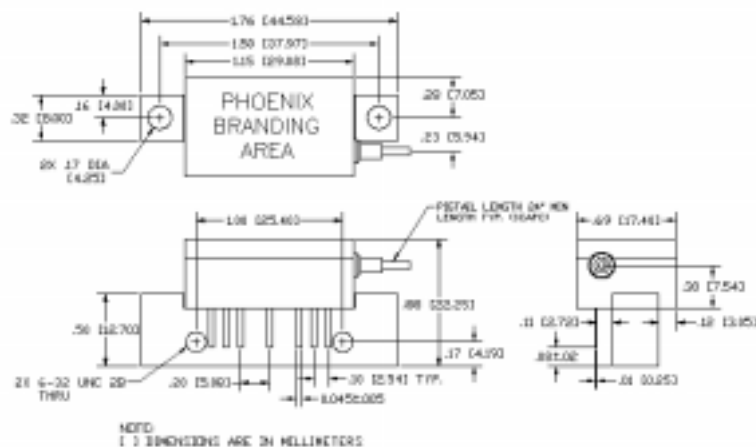
M/A-COM



Electrical Specifications @ Tcase = 30°C (Referenced to 75 ohms)

Parameter	Typical Conditions	Min. Value	Max. Value	Units
Frequency Range		40	860	MHz.
Responsivity (R_λ)	$\lambda = 1300\text{nm.}$	800		V/W
Optical Wavelength (λ)		1290	1600	nm.
Spectral Density	$\lambda = 1310 \pm 20\text{nm.}$	0.85		A/W
	$\lambda = 1550 \pm 20\text{nm.}$	0.90		A/W
Gain Flatness (peak to valley)	f=40MHz To 860MHz. @ $\lambda = 1300$		1.0	dB.
Optical Input Return Loss	with SC/APC and FC/APC Connectors	40		dB.
Output Return Loss Referenced to 75 ohms	f= 40 To 860MHz.	16		dB.
3 rd Order Intermods (IMD_3) (Two laser test) Pin #1=1.0v	$f_1 = 326.25\text{MHz}, f_2 = 333.25\text{MHz}, f_3 = 335.25\text{MHz}.$ $P_{1,2,3} = 0.33\text{mw. } f_4 = f_1 + f_2 - f_3 = 324.25\text{MHz} = \text{meas. freq.}$	80		dBc.
2 nd Order Intermods (IMD_2) (Two laser test) Pin #1= 1.0v	$f_1 = 135\text{MHz}, f_2 = 189.25\text{MHz}, P_{1,2} = 0.50\text{mw.}$ $f_3 = f_1 + f_2 = 324.25\text{MHz} = \text{meas. frequency}$	70		dBc.
Optical Power Monitor Voltage @ Pin #1)	Pin #1 internally connected to a $10\text{K}\Omega$ series R to measure photo diode current across a $1\text{K}\Omega$ to ground	0.8		V/mW.
Equivalent Input Noise (E_{in})	$f_1 = 40\text{MHz.}$		7.0	pA/ $\sqrt{\text{Hz.}}$
Total Current (I_{TOT})	@ Voltage of +24v		240	mA.

Outline Drawings



Maximum Ratings

Storage Temperature -40°C to +85°C
 DC Voltage +28 volts
 Optical Input Power +10 dBm.
 Operating Base Temperature -20 to +85°C
 Fiber Bending Radius 1.3" min.
 Fiber Pull Strength 0.5kgrams

Pin Configuration

Pin #	Description
1	monitor current
2,3,7,8	Ground
4 (PFO4 only)	Optical diode detector +V
5	RF Amplifier +V
6	not used
9	Output