



Wide Dynamic Range PIN-FET Receiver

PFWM92 Series

Features

- *InGaAs Planar PIN detector*
- *Integrated GaAs transimpedance amplifier with AGC*
- *Wide dynamic range*
- *Response wavelength range 1100~1650nm*
- *14pin DIP with multi-mode or single-mode pigtail package*

Application

- *Fiber optical transmission systems or access networks from 50Mb/s to 2.5Gb/s*

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	Ts	°C	-40	85
Relative Humidity	RH	%	-	85
Positive Power Supply Voltage	Vcc/Vee	V	-	7
Negative Power Supply voltage	Vcc/Vee	V		-7
Reverse Detector Bias Voltage	-	V	-	-15
Forward Current	If	mA	-	2
Reverse photoCurrent	Ir	mA	-	5
Fiber coupled power	Pin	mW		5
Lead Solder Temperature	-	°C	-	260
Lead Soldering Time	-	s	-	10

Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	Tc	°C	-20	-	70
Operating Voltage	VOP		-	±5	-

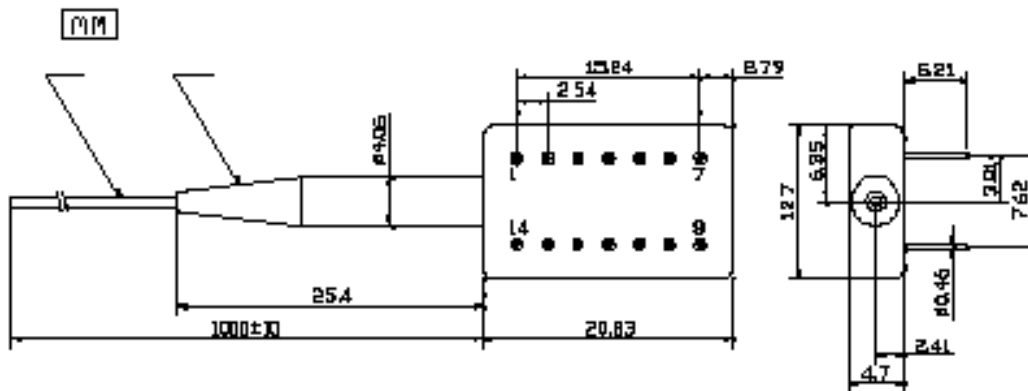
Specifications (T=25°C, unless otherwise noted)

Parameter	Symbol	Unit	Min	Typ	Max	Test condition
Electrical Characteristics						
Rate	-	Mb/s	50	-	2488	
Transimpedance	-	KΩ	3		50	
Detector Dark Current	Id	nA	-	-	5	
Output impedance	Ro	Ω	-	50	-	
-3dB Bandwidth	BW	MHz	50	-	1700	
Output Voltage	Vout	mVp-p	-	-	1500	RL=50Ω
Optical Characteristics						
Sensitivity	S	dBm	-42	-	-23	NRZ BER=10 ⁻⁹
Sensitivity vs temperature	-	dB	-	1	1.5	20°C~65°C
Overload	Pin-max	dBm	-3	-	-	
Responsivity	R	A/W	0.8	-	-	λ=1310nm, VR= -5V
Wavelength range	λ	nm	1100	-	1650	

Pin Description

Pin	Description	Pin	Description	Pin connection
1	Detector bias (Typ, -5V)	7	Output	See "Package Outline"
3	GND	8	GND	
4	-5V power supply	10	+5V power supply	
5	GND	others	NC	

Package Outline



Ordering Information

Part No.	Specification						
	Package	Datarate	Bandwidth	Detector	Sensitivity	Temp	Transimpedance
PFWM921	14pin DIP	70Mb/s	50MHz	PIN+FET	-43 (Typ)	-20~+70°C	50 KΩ
PFWM922	14pin DIP	168Mb/s	120 MHz	PIN+FET	-38 (Typ)	-20~+70°C	17 KΩ
PFWM923	14pin DIP	622Mb/s	450 MHz	PIN+FET	-32 (Typ)	-20~+70°C	5 KΩ
PFWM924	14pin DIP	1.25Gb/s	900 MHz	PIN+FET	-20 (Typ)	-20~+70°C	3 KΩ
PFWM925	14pin DIP	2.5Gmb/s	1700 MHz	PIN+FET	-23 (Typ)	-20~+70°C	-

*The sensitivity is calculated by using the PINFET transimpedance, the noise voltage (which is RMS of no light input) and the PIN responsivity. And it is at the conditions of room temperature and NRZ code Bit Error Rate better than 10⁻⁹.

WTD reserves the right to make changes to the product(s) or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.

Edition 2009-12-01

Published by Wuhan Telecommunication Devices Co.,Ltd.

Copyright © WTD

All Rights Reserved.