



## **SDTV/HDTV 3Gbps PIN/TIA Receiver**

### ***PTCM965-404***

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### **Features**

- *Data rates up to 3.125Gb/s*
- *High performance InGaAs PIN Photodiode with Transimpedance Amplifier (TIA)*
- *Operating wavelength range:*
  - 1250~1620nm*
- *Single +3.3V power supply*
- *Wide dynamic range*
- *SC/LC pigtail package*
- *RoHS compliant*

### **Application**

- *SMPTE 292M Video 1485Mb/s*
- *SMPTE 259M Video 270 Mb/s*
- *SMPTE 305M Video 270 Mb/s*
- *SMPTE 310M Video 19.39 Mb/s*
- *Passes Pathological Data*
- *Other applications*

## Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	Ts	°C	-40	85
Relative Humidity	RH	%	5	85
Power Supply Voltage	Vcc	V	-0.4	5
Lead Solder Temperature	-	°C	-	260
Lead Solder Duration	-	S	-	10
Input Optical Power	Pin	dBm	-	5

## Recommended Operating Conditions

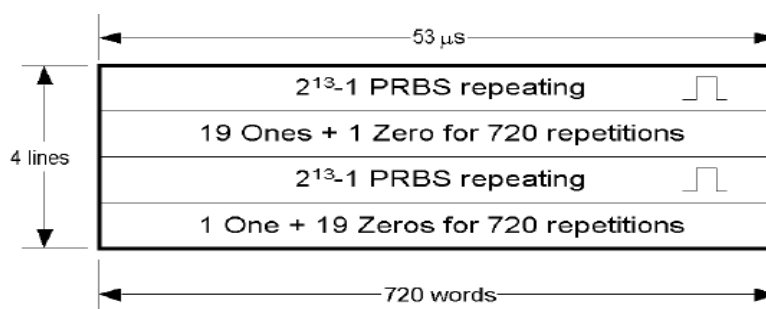
Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	Tc	°C	-40	25	85
Power Supply Voltage	Vcc	V	3	3.3	3.6
Relative Humidity	RH	%	5	-	85

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

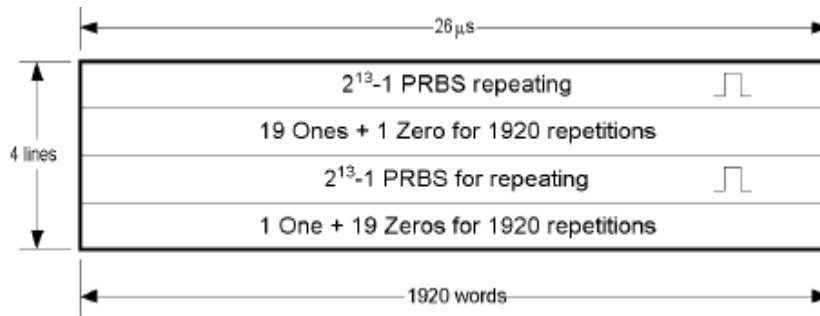
Parameter	Symbol	Unit	Min	Typ	Max	Test condition
Electrical Characteristics						
Operating Current	Icc	mA	-	20	34	No loads
Output Impedance	Ro	Ω	-	50	-	Single ended
-3dB Bandwidth	BW	GHz	-	2	-	
Low Frequency Cutoff	LFC	kHz	-	1	-	
Differential Output Voltage	Vout	mVp-p	-	260	375	Pin=2mW
Optical Characteristics						
Wavelength Range	λ	nm	1250	-	1620	
Optical return loss	ORL	dB	27	-	-	
Sensitivity	S	dBm	-	-	-21	BER < 1E-10 with the 3 test patterns
Overload	Pin-max	dBm	2	-	-	

**Note:** Test Patterns

a) 270Mb/s test pattern



b) 1.485Gb/s test pattern



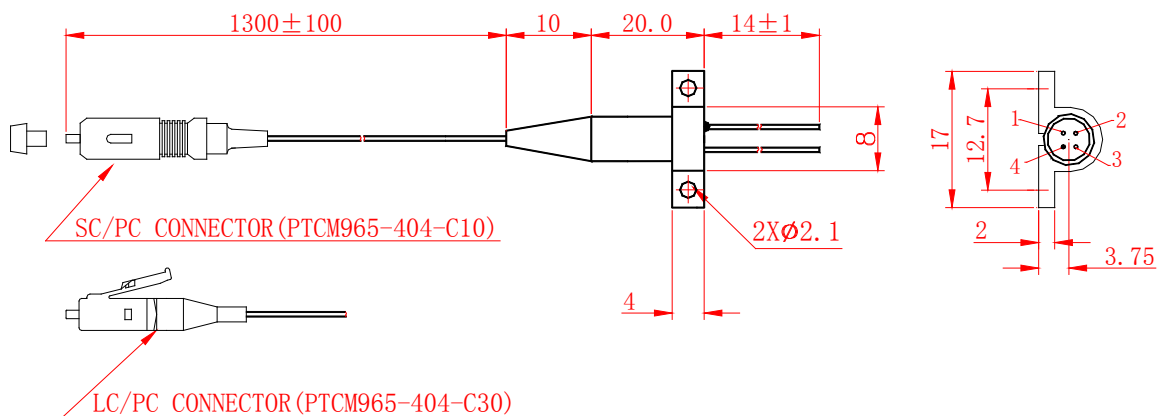
c) 3.125Gb/s PRBS 2<sup>23</sup>-1 test pattern

## Pin Description

Pin	Description	Bottom View
1	Vcc	
2	OUT-	
3	OUT+	
4	GND	

## Package Outline

9/125um single mode fiber and 900um tight buffer and loose fixture between receiver body and the Omega flange.



## Ordering Information

Part No	Specification					
	Package	Datarate	Detector	Sensitivity	Temp	Others
PTCM965-404-C10	4pin pigtail	3.125G	PIN+TIA	< -21dBm	-40~85°C	SC connector
PTCM965-404-C30	4pin pigtail	3.125G	PIN+TIA	< -21dBm	-40~85°C	LC connector

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