



5V DIP 24pin 2.5Gbps Receiver with Multi Rate FEC CDR

RXMM957

Features

- *Multi Rate FEC APD Receiver*
- *2.488G×15/14 , 1.250G×15/14, 622M×15/14, 155M×15/14*
- *APD detector, Sensitivity better than -31.5dBm*
- *Differential data and clock outputs*
- *Analog Optical Input Level Monitor Output*
- *TTL Loss of Optical Power Alarm*
- *+5V Single Power Supply, internal APD Bias Supply*
- *24 pin DIP Metal Package*

Application

- *SDH / DWDM Transmission System RXOTU*
- *High-Speed Data Communications*

Standards

- 2.5G MSA
- ITU-T G.825 & G957

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	Ts	°C	-20	85
Relative Humidity	RH	%	-	85
Power Supply Voltage	Vcc	-	0	+6.0
Lead solder temperature	-	°C	-	260
Lead solder duration	-	S	-	10
Fiber yield strength	-	Kgf	-	1
Fiber bend radius	-	Mm	10	-

Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	Tc	°C	0	-	70
Power Supply Voltage	Vcc	-	0	-	+6.0
Relative Humidity	RH	%	-	-	85

Specifications (tested under recommended operating conditions ,unless otherwise noted)

Parameter	Symbol	Unit	Min	Typ	Max	Test condition	
Electrical Characteristics							
Operating Voltage	Vop	V	+4.75	+5	+5.25		
Supply current	Icc	mA		300	400		
CML Output	Data	-	mV	700	800	1000	Differential Output Voltage Swing Internal AC Coupled load impedance 50Ω
	Clock	-	mV	600	700	1000	
	Impedance	-	Ω	-	100	-	
	Data-Clock difference	phase	-	ps	-75	-	
Los	TTL (Active High)						
Rate Select	LVTTL(Active High)						
Optical receive Characteristics							
Data rate		Mbps	-	2488	-		
Receiver	2.488G×15/14	S	dBm	-	-32	-31	BER=1×10 ⁻¹²
Sensitivity	1.250G×15/14			-	-33	-	PRBS=223-1

	622M×15/14	-	-34	-			
	155M×15/14	-	-33	-			
Overload	input optical Power	-	dBm -9	-			
LOS(TTL)		-	dBm -	-38 -			
Jitter Performance							
Jitter Generation	2.488G	-	UIp-p	-	0.104	-	5K-20MHZ
				-	0.056	-	1M-20MHZ
	622M			-	0.056	-	1K-5MHZ
				-	0.019	-	250K-5MHZ
	155M			-	0.049	-	500HZ-1.3MHZ
				-	0.028	-	65KHZ-1.3MHZ
Jitter Transfer Function		Compliant with ITU-T G.825					
Jitter Tolerance							

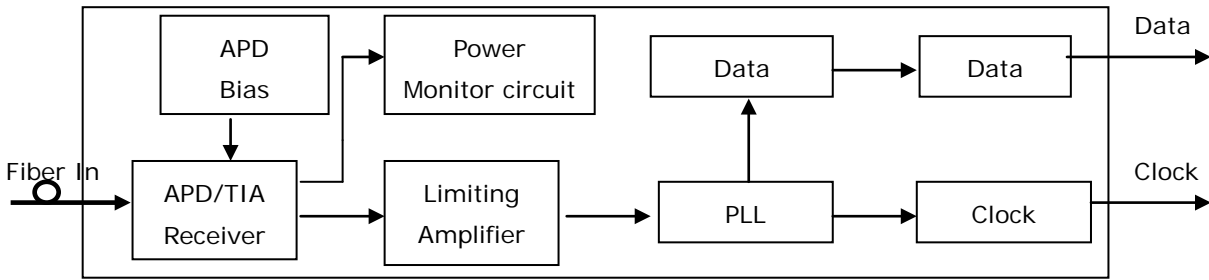
Pin Description

Pin	Name	Description	Pin	Name	Description
1	SEL1	Rate Select	24	NC	No Connection
2	SEL2	Rate Select	23	OIL	Optical Power Monitor
3	LOS	LOS	22	VCC	Positive Power Supply
4	GND	Ground	21	NC	No Connection
5	CKO	Negative Clock Output	20	GND	Ground
6	CKO	Positive Clock Output	19	GND	Ground
7	GND	Ground	18	NC	No Connection
8	VCC	Positive Power Supply	17	GND	Ground
9	GND	Ground	16	GND	Ground
10	DO	Positive Data Output	15	GND	Ground
11	DO	Negative Data Output	14	GND	Ground
12	GND	Ground	13	NC	No Connection

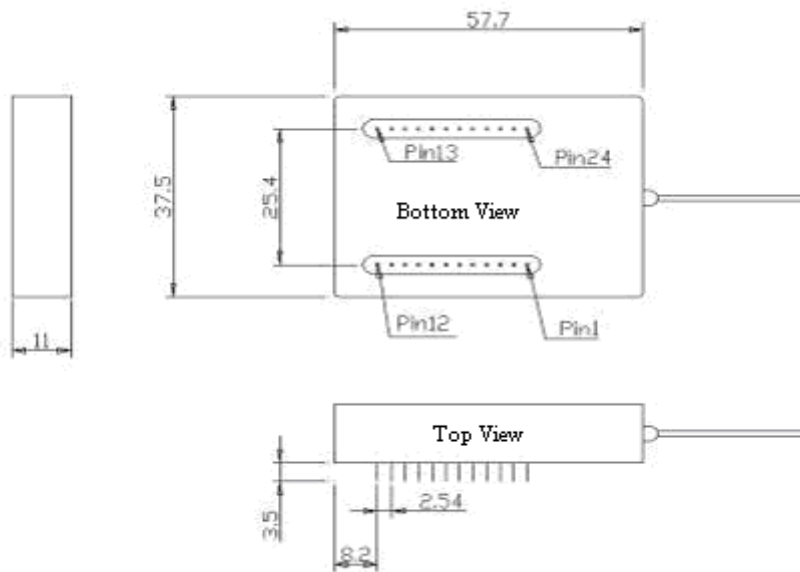
Data Rate Select *(LVTTTL: Active High)*

SEL1	SEL2	Operating Rate
0	0	2.488Gb/s×15/14
1	0	1.250Gb/s×15/14
0	1	622Mb/s×15/14
1	1	155Mb/s×15/14

Block Diagram



Package Outline



Ordering Information

Part No	Specification						Application	Others
	Package	Datarate	Detector	Sensitivity	Temp	Reach		
RXMM957	24pin DIP	2.5G multi-rate	APD	-31dBm (max)	0~70°C	-	SDH/SONET	Data is sampled on the rising edge of CLOCK; FEC
RXMM957-N	24pin DIP	2.5G multi-rate	APD	-31dBm (max)	0~70°C	-	SDH/SONET	Data is sampled on the falling edge of CLOCK; FEC

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