



DWDM Supervisory Channel Receiver Module

RXMM946 Series

Features

- *With high sensitivity and wide dynamic range*
- *RXMM946 with 3R function and Indication of input optical power*
- *RXMM946-A with 2R function*
- *With LOS alarming function*
- *DIP 24 pin metal package*
- *+5V single power supply*
- *TTL signal output*

Application

- *DWDM supervisory channel*

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Ambient Operating Temperature Range	Top	°C	-5	+75
Storage Temperature Range	Ts	°C	-20	+85
Relative Humidity	RH	%	-	85
Power Supply Voltage	Vcc	V	0	+6
Lead Solder Temperature	-	°C	-	260
Lead Solder Duration	-	S	-	10
Fiber Yield Strength	-	kgf	-	1
Fiber Bend Radius	-	mm	30	-

Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	Tc	°C	0	25	+70
Power Supply Voltage	VCC	V	+4.75	+5.0	+5.25

Specifications ($T=25^{\circ}\text{C}$, BOL ,unless otherwise noted)

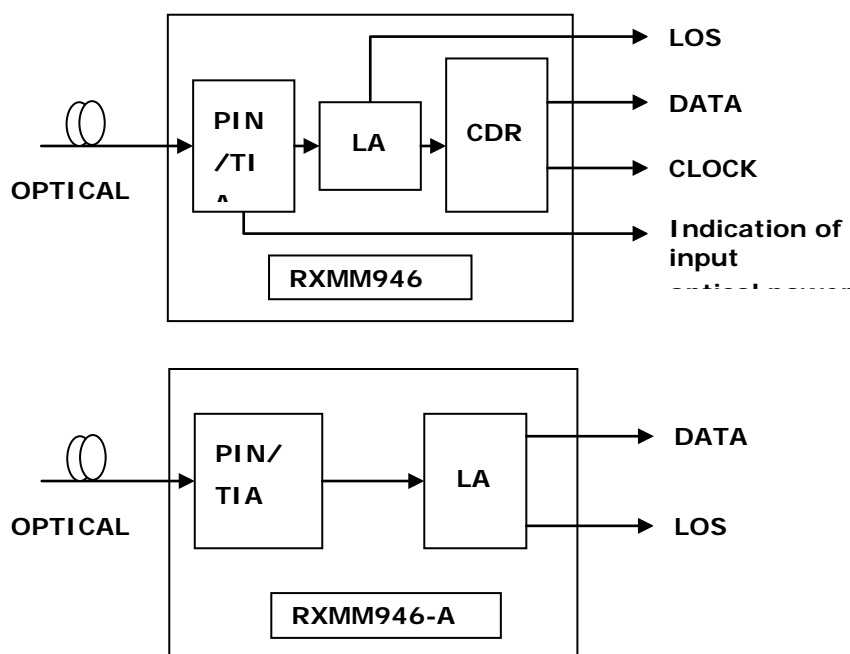
Parameter		Symbol	Unit	Min	Typ	Max	Test condition
Electrical Characteristics							
Operating Voltage		Vop	V	+4.75	+5.0	+5.25	
Supply Current		Icc	mA	-	-	200	
Signal Level(TTL)	High	-	V	2.5	-	-	
	Low	-	V	-	-	0.5	
Optical receive Characteristics							
Data Rate	RXMM946	-	Mbps	-	4.096	-	
	RXMM946-A	-	Mbps	-	25.344	-	
Receiver Sensitivity	RXMM946	S	dBm	-	-	-50	
	RXMM946-A	S	dBm	-	-	-45	
Overload Input Optical Power	RXMM946	Pin	dBm	-10	-	-	
	RXMM946-A	Pin	dBm	-3	-	-	
LOS alarm Output level		LOS	-		TTL high		
LOS Hysteresis		-	dB	-	-	2	

Pin Description

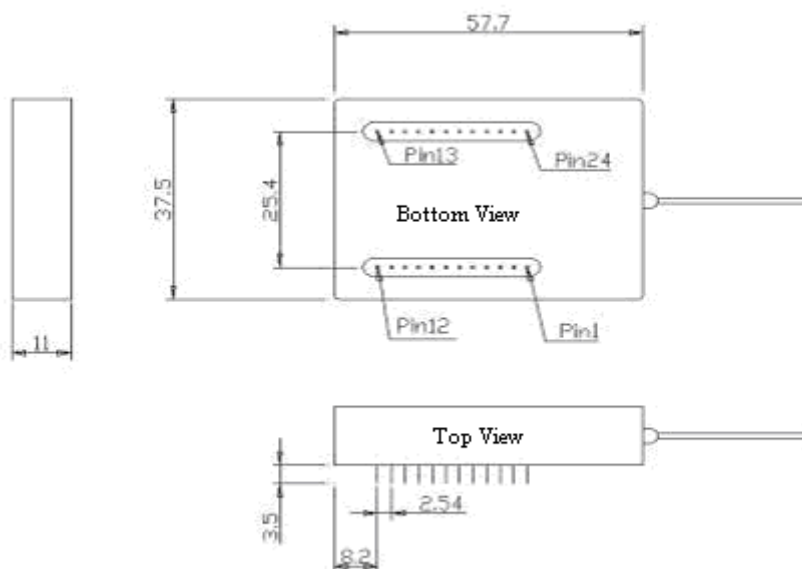
Pin	RXMM946	RXMM946-A	RXMM946	RXMM946-A
1	NC	NC	13	NC
2	NC	NC	14	Ground

3	LOS	LOS	15	Ground	Ground
4	Ground	Ground	16	Ground	Ground
5	NC	NC	17	Ground	Ground
6	Clock	NC	18	Ground	Ground
7	Ground	Ground	19	Ground	Ground
8	+5V Power	NC	20	Ground	Ground
9	Ground	Ground	21	NC	NC
10	Data	Data	22	+5V Power	+5V Power
11	NC	NC	23	Indication of input optical power	NC
12	Ground	Ground	24	NC	NC

Block diagram



Package Outline (unit:mm)



Qualification tests

Test	Condition		Reference standard
Performance Characteristics	External Visual	Visual	MIL-SLD-883-2009
	Internal Visual	Visual	MIL-SLD-883-2014
	Electrical/Optical Performance	Over supply voltage range, temperature range, and other test condition	specification
Mechanical Integrity	Absolute Maximum Ratings	Maximum rated voltage, maximum rated temperature	specification
	Mechanical Shock	1500g, 0.5ms, 5times/axis	MIL-SLD-883-2002
Endurance	Vibration	20g, 20-2000Hz, 4min/cycles, 4cycles/axis	MIL-SLD-883-2007
	High Temperature with Bias	70 oC, 5kh(initial Extrapolation after 2kh	Bellcore TR-NWT-000468
	Temperature Cycle	-20 oC ~ +85 oC, 100x pass/fail, 500x for information	Bellcore TR-NWT-000468
	Damp heat	45 oC, 95%RH, rated bias, 56days	Bellcore TR-NWT-000468
	Low-temperature Storage	-20 oC, 2000hrs	Bellcore TR-NWT-000983
Special Test	Power Cycling	30min. On/off, 1500x	MIL-STD-1006

Ordering information

Part No	Specification					Application
	Package	Datarate	Detector	Sensitivity	Temp	
RXMM946	DIP 24Pin	4.096Mb	PIN	-50dBm (Max)	0~70°C	DWDM Supervisory
RXMM946-A	DIP 24Pin	25.344Mb	PIN	-45dBm (Max)	0~70°C	DWDM Supervisory

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