

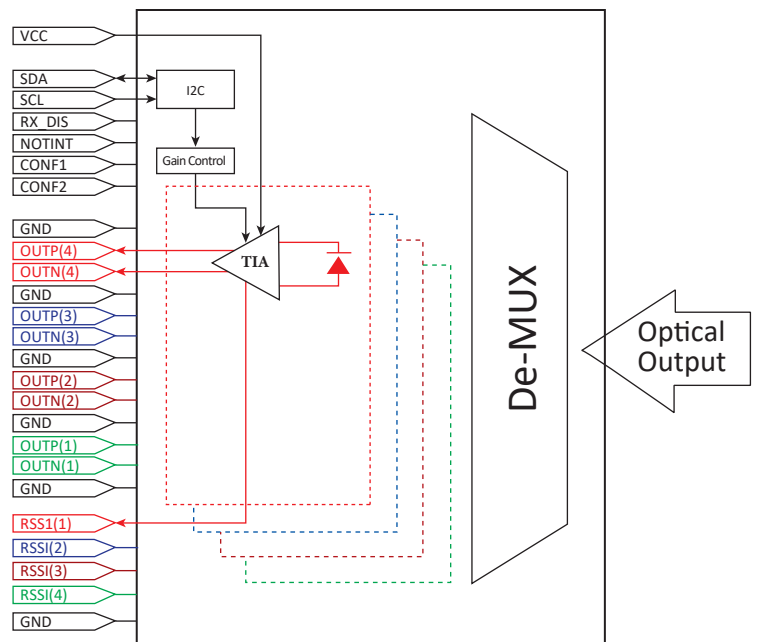
Key Features

- Up to 26.56 GbD/s (PAM4)
- PIN Photodiode (PIN-PD) Base Quad ROSA for 200G FR4
- Integrated TIA
- Programmable Output Swing, Squelch and De-Emphasis
- 2 Wire Communication (Up to 400 kHz)
- CWDM Optical De-MUX Integrated
- Pigtail with LC Connector

Applications

- 200G FR4 SMF Transceiver
- On Board Optics

Modular Block Diagram



Transceiver

200G FR4 ROSA

Optical and Electrical Characteristics

T_c = 0°C to 80°C, (unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Units
General / Environment					
Operating Ambient Temperature	T _a	0	25	80	degC
Storage Temperature		-40		85	degC
Data Rate		23.7	26.56	28.1	GBd/s
Input Voltage Supply	V _{cc}	3.14	3.3	3.47	V
Lane wavelength range		1264.5		1277.5	nm
		1284.5		1297.5	
		1304.5		1317.5	
		1324.5		1337.5	
Damage threshold, each lane				5.7	dBm
Receiver reflectance				-26	dB

Differential Data Outputs

Differential Output Amplitude	V _{IN_DE}	150		500	mVppd
Maximum Supply Noise Density (pp)	V _{SND}			100	mV/Hz
Low Frequency Cut-off			50	150	kHz
Receiver sensitivity (OMA-outer)				-6	dBm
Average receive power, Each lane		-8.2		4.7	dBm
Receive power (OMA-outer), each lane				4.5	dBm
Difference in receive power between Any two lane (OMA-outer)				4.1	dB

CMOS IO

CMOS Input Voltage (Low)	V _{CMOSIL}	V _{EE}		0.8	V
CMOS Input Voltage (High)	V _{CMOSIH}	2		V _{cc}	V
CMOS Output Low Voltage	V _{CMOSOL}	V _{EE}		0.4	V
CMOS Output High Voltage	V _{CMOSOH}	2.4		V _{cc}	V

Absolute Maximum Ratings

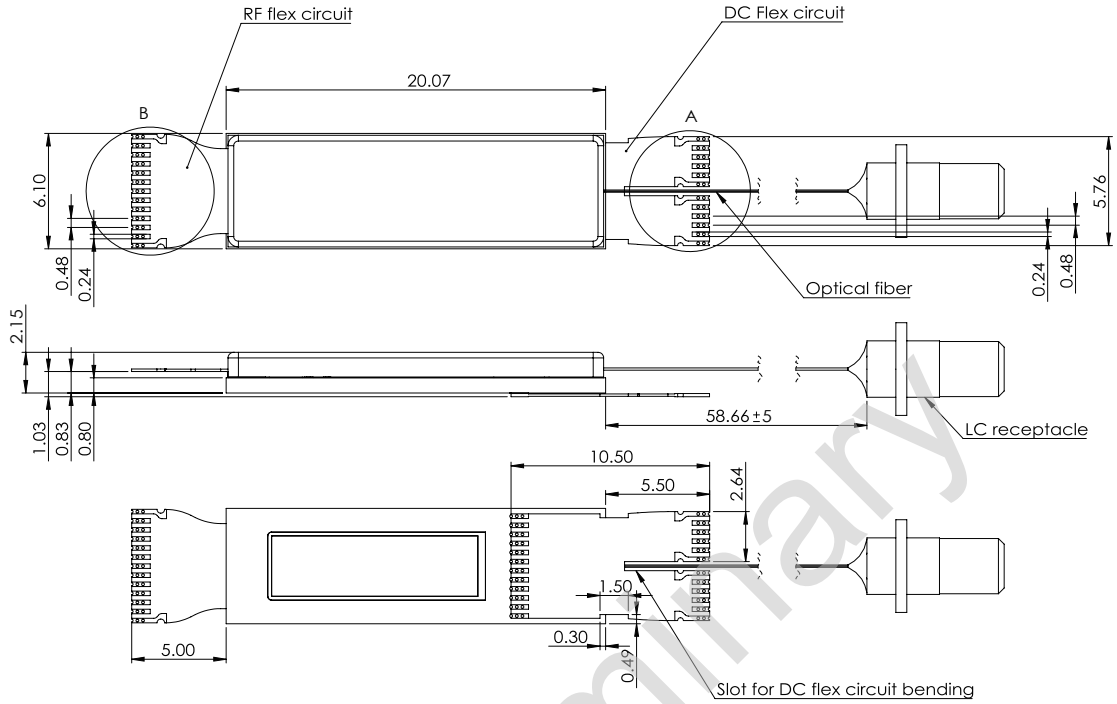
T_c = 25°C, (unless otherwise specified)

Parameter	Symbol	Condition	Min.	Max.
Maximum Optical Input Power	P _{IN}	Each lane, CW	5.7 dBm	
TIA Power Supply Voltage (3.3V)	V _{cc33}		-0.5 V	4 V
Maximum Data Output Voltage	V _{out}		V _{EE} -0.5V	V _{cc} +0.5V
Storage Temperature	T _{stg}		-40 degC	85 degC
Electrical Discharge Voltage(HBM)	VESD, HBM			TBD

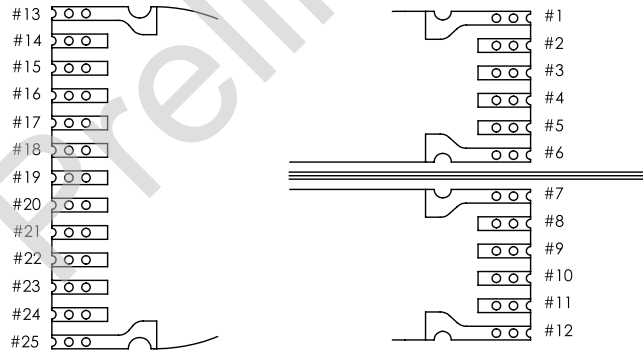
Transceiver

200G FR4 ROSA

Dimensions



Unit: mm



Pin Configuration

Pin#	Symbol	Pin#	Symbol	Pin#	Symbol	Pin#	Symbol
1	VCC	8	SDA	15	OUTN(4)	22	GND
2	RSSI4	9	SCL	16	GND	23	OUTPUT(1)
3	RSSI3	10	RSSI2	17	OUTPUT(3)	24	OUTPUT(1)
4	RX_DIS	11	RSSI1	18	OUTN(3)	25	GND
5	NOTINT	12	GND	19	GND		
6	CONF2	13	GND	20	OUTPUT(2)		
7	CONF1	14	OUTPUT(4)	21	OUTN(2)		