

## ALLNET ISP Bridge Modem GPON in Mini-GBIC SFP Form "ALL4785-GPON"

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### EAN CODE



### Highlight:

- passend für ITU-T G.984.2/984.5 GPON
- LC/APC 8°
- Wellenlänge: TX 1310 nm, RX 1490 nm (mit Filter)
- passend für rogue detection
- Sendeleistung: 0.5 bis 5 dBm
- Empfangsleistungsbereich: -3 bis -28 dBm
- Reichweite: 20 km
- Unterstützung von SFF-8472
- Laser Klasse 1
- Passend zu AVM Fritz Art. 2000 2942

### Technical Details:

## GPON SFP ONU Optical Module

ALL4785-GPON

## Product Features

- Support ITU-T 984.2/984.5 GPON Networks application
- Single fiber bi-directional data links with asymmetric 1.244Gbps Tx and 2.488Gbps Rx
- 1310nm burst-mode transmitter with DFB laser
- 1490nm continuous-mode receiver
- 2-wire interface for integrated digital diagnostic Monitoring
- Transmitter Burst On
- Receiver state indication (optional RX\_SD or Rx\_LOS)
- SFP package with LC/APC
- Single +3.3V power supply
- Operation case temperature -40~85°C for industrial and -10~70°C for commercial
- SFF-8472-Compliance
- RoHS6 compliance

## Operating Condition

Parameter	Unit	Min.	Typical	Max.
Storage Temperature	°C	-40		85
Operating Case Temp for C-temp	°C	0		70
Operating Case Temp for I-temp	°C	-40		85
Power Supply Voltage	V	3.15	3.3	3.45
Supply Current	mA		200	400
Bit Rate for Tx	Gbps	1.244		
Bit Rate for Rx	Gbps	2.488		

## Characteristics

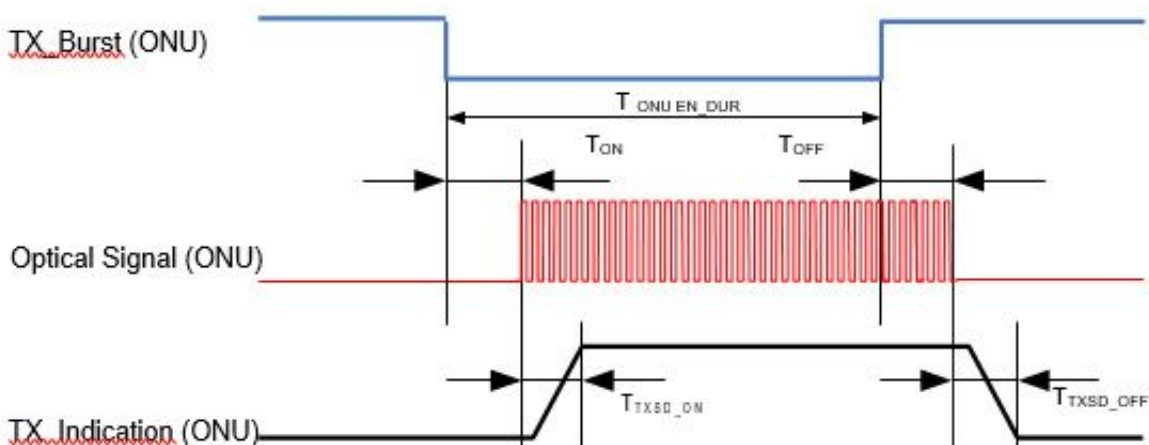
All performance is specified at whole working temperature and conditions

Parameter	Unit	Min.	Typical	Max.
<b>Transmitter</b>				
TX Central Wavelength	nm	1290	1310	1330
Spectral Width (-20dB)	nm			1
Side Mode Suppression Ratio	dB	30		

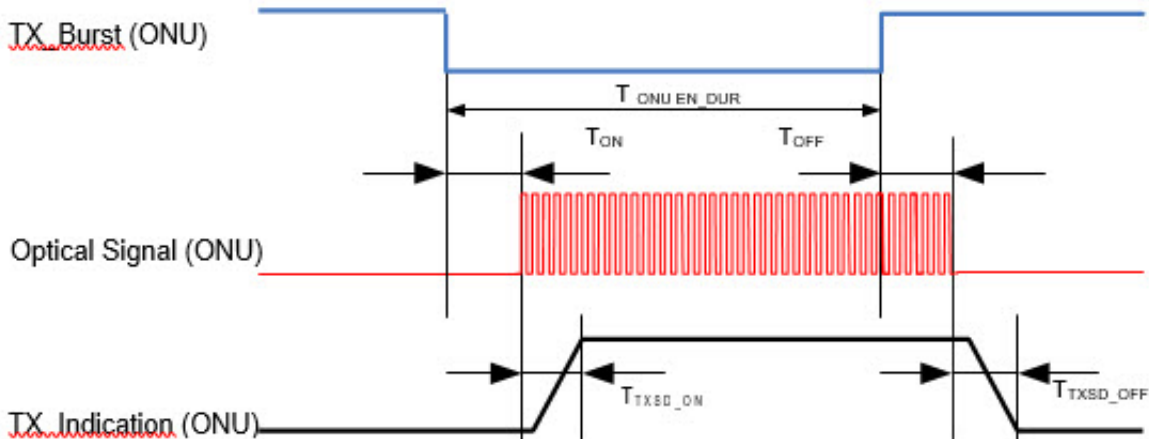
(SMSR)				
Mean Launched Power	dBm	0.5	2.5	5
Mean Launched Power (TX Off)	dBm			-40
Extinction Ratio	dB	10		
Oical Return Loss Tolerance	dB	-15		
Transmitter and dispersion Penalty	dB			1
Transmitter Mask (PRBS223-1 @ 1.244 G)	Compliant With ITU-T G984.2			
<b>Receiver</b>				
Receive Wavelength	nm	1480	1490	1500
Sensitivity <a href="#">(PRBS223-1 @ 2.488 G, ER=8.2, BER&lt;10-10)</a>	dBm			-28
Overload <a href="#">(PRBS223-1 @ 2.488 G, ER=8.2, BER&lt;10-10)</a>	dBm	-3		
Loss of signal De-assert Level	dBm			-35
Loss of signal assert Level	dBm	-39		
LOS Hysteresis	dB	0.5		6
WDM Filter isolation to 1441 nm ~1450 nm, 1530 nm ~1539 nm	dB	25		
WDM Filter isolation to 1250 nm ~1441 nm, 1539 nm~ 1625 nm	dB	36		
<b>Electrical Interface Characteristics</b>				
Data Input Swing	mV	200	-	2000

Differential/TX				
Data Output Swing Differential/RX	mV	400		1600
Date Differential Impedance	?	90	100	110
LVTTL Output High	V	2.4		Vcc
LVTTL Output Low	V	0		0.4
LVTTL Input High	V	2.0		Vcc+0.3
LVTTL Input Low	V	0		0.8
<b>Timing Characteristics</b>				
Turn On Time at Burst mode (TON)	ns			12.8
Turn Off Time at Burst mode (TOFF)	ns			12.8
TX-SD De-assert Time (TTXSD_OFF)	ns			100
LOS Assert Time (TLOSA)	us			100
LOS De-assert Time (TLOSD)	us			100

### Burst Mode Transmitter Timing



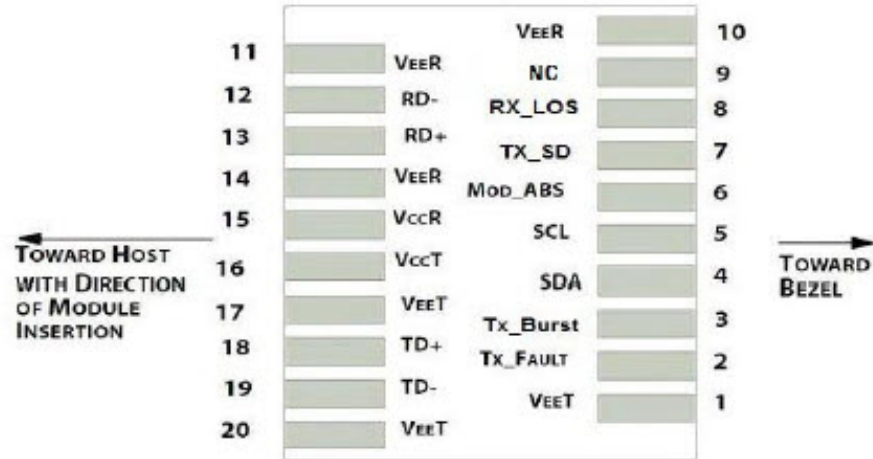
## Burst Mode Transmitter Timing



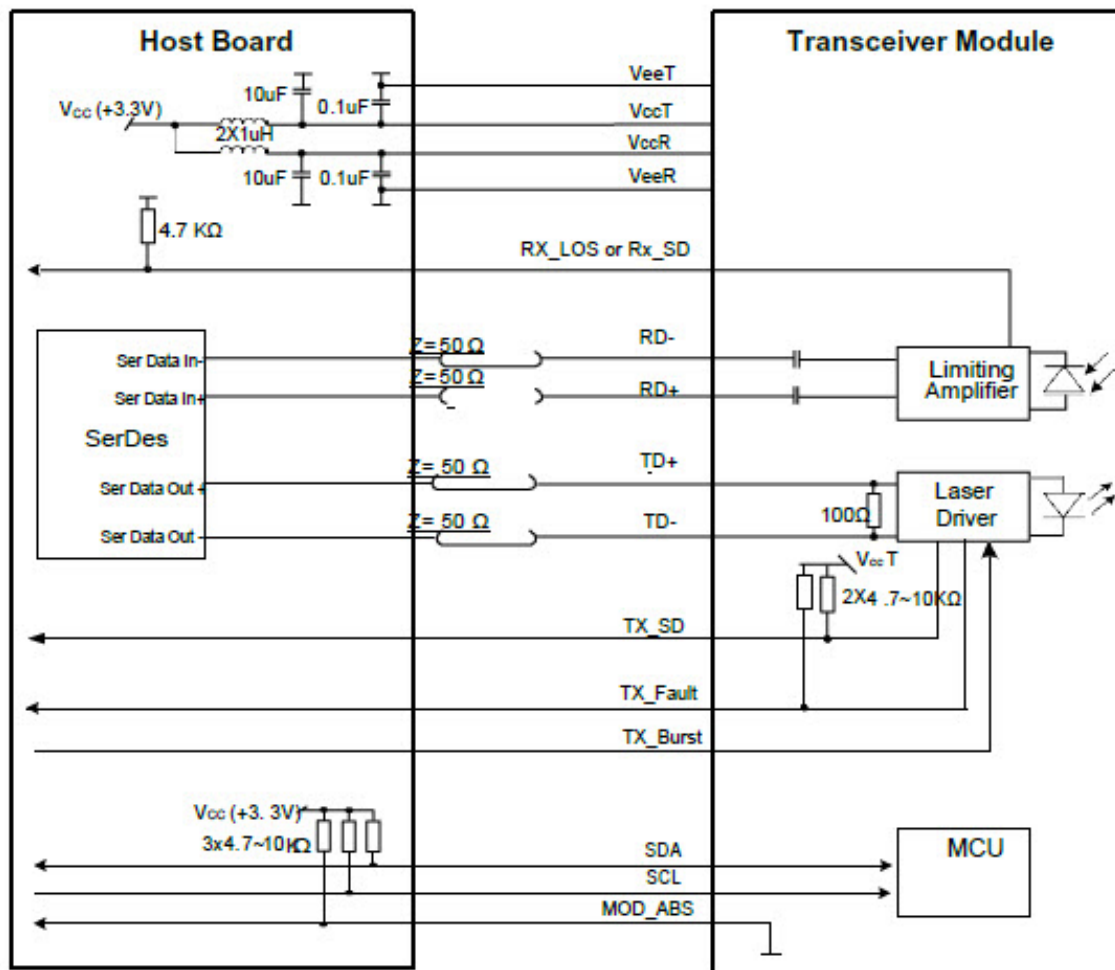
## PIN Definition

Pin No.	Symbol	Level / Logic	Descriion
1	VeeT		Module Transmitter Ground
2	Tx_Fault	LVTTL-O	Module Transmitter Fault
3	Tx_Burst	LVTTL-I	TX_Disable - low --> transmitter on
4	SDA	LVTTL-I	2-Wire Serial Interface Data Line
5	SCL	LVTTL-I/ O	2-Wire Serial Interface Clock
6	MOD_ABS	LVTTL-O	Module Absent, connected to ground in the module
7	TX_SD	LVTTL-O	Tx Signal Detect, active high when transmitter on
8	Rx_LOS or RX_SD	LVTTL-O	LoS - low --> normal operation, high --> loss of signal"
9	NC		
10	VeeR		Module Receiver Ground
11	VeeR		Module Receiver Ground

12	RD-	CML-O	Receiver Inverted Data Output, AC-coupled
13	RD+	CML-O	Receiver Non-Inverted Data Output, AC-coupled
14	VeeR		Module Receiver Ground
15	VccR		Module Receiver 3.3V Supply
16	VccT		Module Transmitter 3.3V Supply
17	VeeT		Module Transmitter Ground
18	TD+	LVPECL- I	Transmitter Non-Inverted Data Input, DC-coupled
19	TD-	LVPECL- I	Transmitter Inverted Data Input, DC-coupled
20	VeeT		Module Transmitter Ground



## Typical Interface Circuit

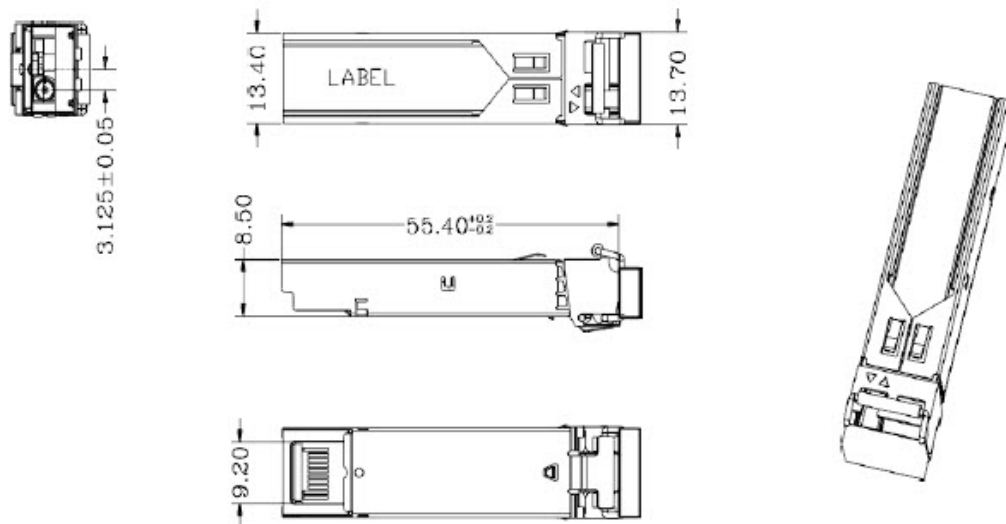




Art.-Nr.: 217023  
Herst.-Nr.: ALL4785-GPON

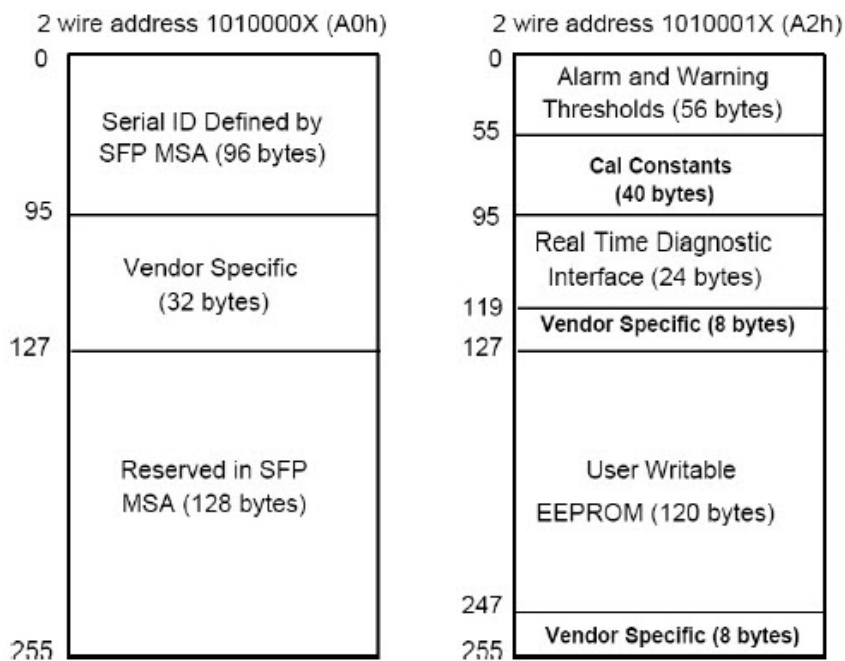


## Mechanical Diagram

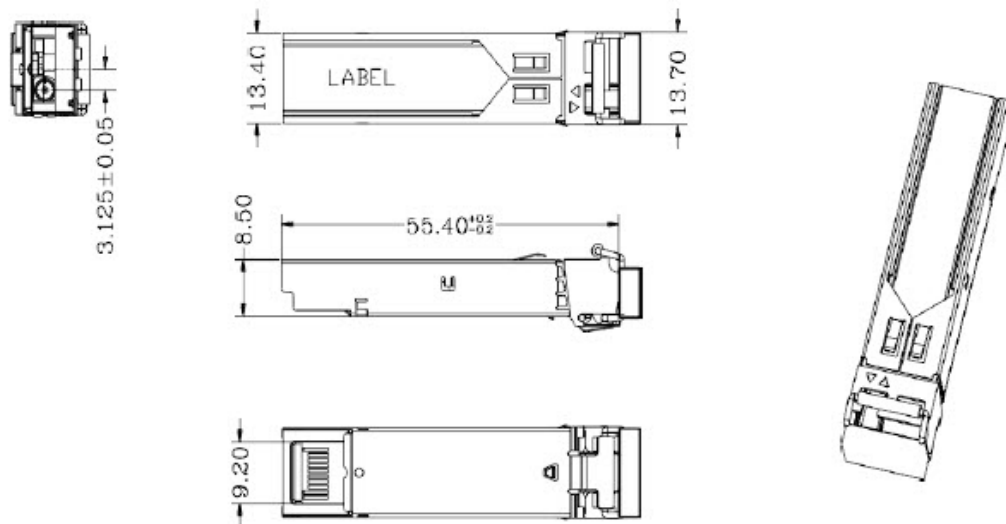


Units in mm  
Tolerance without indication is ±0.1mm

## EEPROM Memory Map

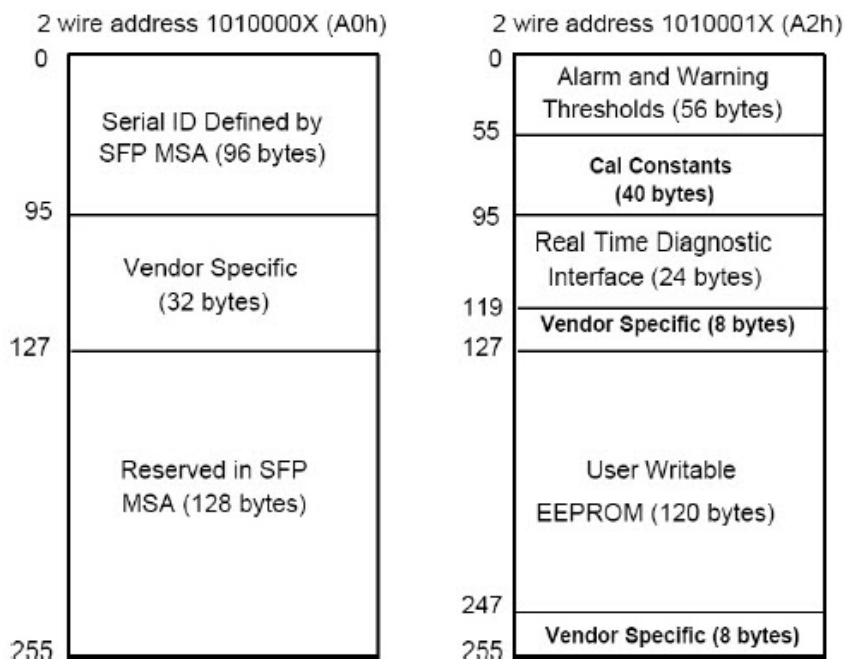


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