Alpha Bridge ASFPP-F-10-AK Datasheet

Features

- Full-duplex active optical cable
- Up to 10.3125Gb/s per channel
- Hot-pluggable SFP+ MSA-compliant connectors
- 1W maximum power dissipation per end
- Built-in digital diagnostic functions
- Commercial operating case temperature range: 0 to 70°C
- RoHS-6 compliant (lead free)

Application

- High performance computing interconnect
- 10G Ethernet interconnect

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Units	Note
Supply Voltage	*Vcc*	-0.3	3.6	V	
Storage Temperature	*TS*	-40	85	°C	
Case Operating Temperature	*Tc*	0	70	°C	
Relative Humidity	*RH*	5	85	%	1

Note:

1. Non-condensing.

Transmitter Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Note
Supply Voltage	Vcc	3.13	3.3	3.47	V	
Supply Current	Icc		230		mA	
Input differential impedance	Zin	90	100	110	Ω	1
Differential Data Input Swing	Vin, pp	40		100	mV	
Transmit Disable Voltage	V_D	2.0		Vcc	V	
Transmit Enable Voltage	V_{EN}	0		0.8	V	

Note:

1. Connected directly to TX data input pins. AC coupling from pins into laser driver IC.

Receiver Characteristics

Parameter	Symbol	Min	Typ.	Max	Units	Notes
Differential Data Output Swing	Vout, pp	300		850	mV	
LOS Fault	$V_{LOS\ fault}$	2		Vcc	V	2
LOS Normal	$V_{LOS\ norm}$	0		0.8	V	2

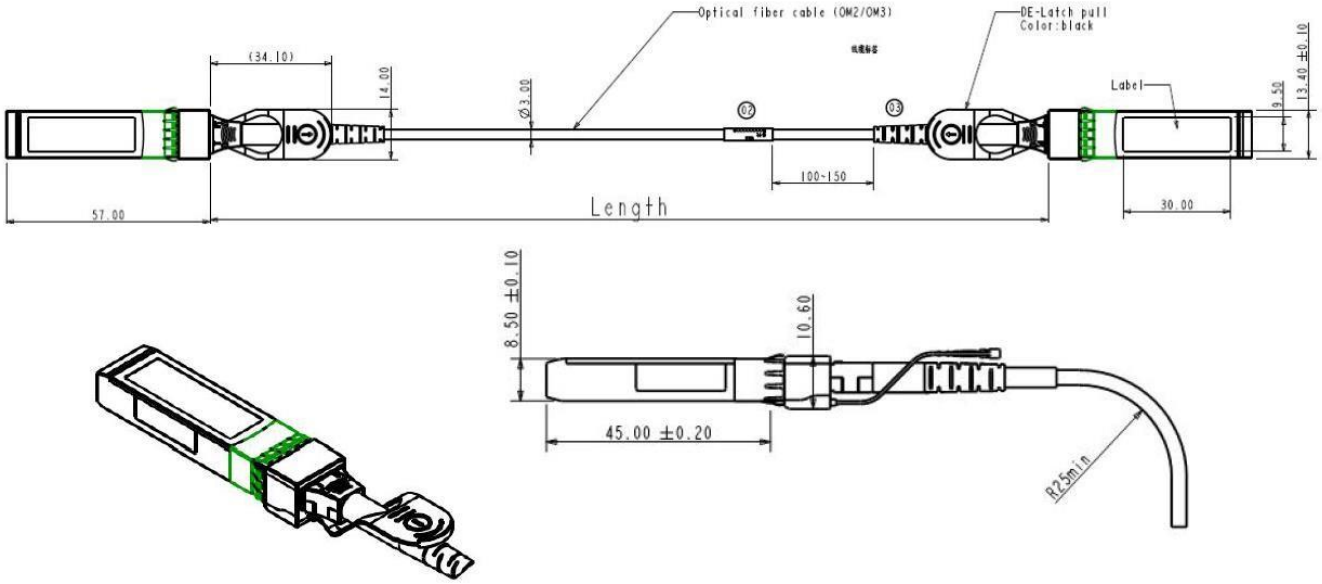
Note:

1. LOS is an open collector output. Should be pulled up with 4.7k to 10k on the host board.

SFP+ AOC Specifications

Parameter	Description
Module Form Factor	SFP+ (As defined by SFP+ MSA, "SFF-8431 Rev 4.1", "SFF-8432 Rev 5.1")
Maximum Data Rate	10.3125Gb/s
Cable Lengths	Up to 300m using OM3 MMF and 400m using OM4 MMF
Protocols Supported	10G Ethernet
Electrical Interface and Pin-out	20-pin edge connector
Cable Type	Multimode round fiber cable, plenum-rated
Maximum Power Consumption per End	1W
Management Interface	Serial, I2C-based (As defined by "SFF-8472 Rev 11.0".)

Dimensions



Ordering Information

Part Number	Model Number	Length (M)	Voltage	Temperature
ASFPP-F-10-AK	Active Optical Cable	10	3.3V	0°C to 70 °C

Note: All information contained in this document is subject to change without notice.