Alpha Bridge ASF28-T-01-PEL Datasheet

Features

- Compliant with SFF-8402 and SFF-8432.
- Up to 25.78125 Gbps data rate per channel
- Up to 5m transmission
- Single 3.3V power supply
- Lowest total system EMI solution
- Optimized design for signal integrity
- Operating temperature: -5~70℃
- RoHS compliant

Application

- 25G Ethernet

General Product Characteristics

SFP28 Copper Specifications	
Number of Lanes	Tx & Rx
Channel Data Rate	25.78125 Gbps/channel
Operating Case Temperature	-5 to +70°C
Storage Temperature	-40 to +85°C
Supply Voltage	3.3V nominal
Electrical Interface	20 pin edge connector
Management Interface	Management Interface

High Speed Characteristics

Parameter	*Symbol*	*Min.*	*Max.*	*Units*	*Note*
Differential Impedance	*RIN,P-P*	90	110	Ώ	
Insertion loss	*SDD21*		22.48	dB	At 12.8906 GHz
Differential Return Loss	*SDD11* *SDD22*		See 1 See 2	dB dB	At 0.05 to 4.1 GHz At 4.1 to 19 GHz
Common-mode to common- mode output return loss	*SCC11* *S2CC2*	2		dB	At 0.2 to 19 GHz
Differential to common-mode return loss	*SCD11* *SCD22*		See 3 See 4		At 0.01 to 12.89 GHz At 12.89 to 19 GHz
Differential to common Mode Conversion Loss	*SCD21*		10		At 0.01 to 12.89 GHz
			See 5	dB	At 12.89 to 15.7 GHz
			6.3		At 15.7 to 19 GHz

Channel Operating Margin	*COM*	3		dB	

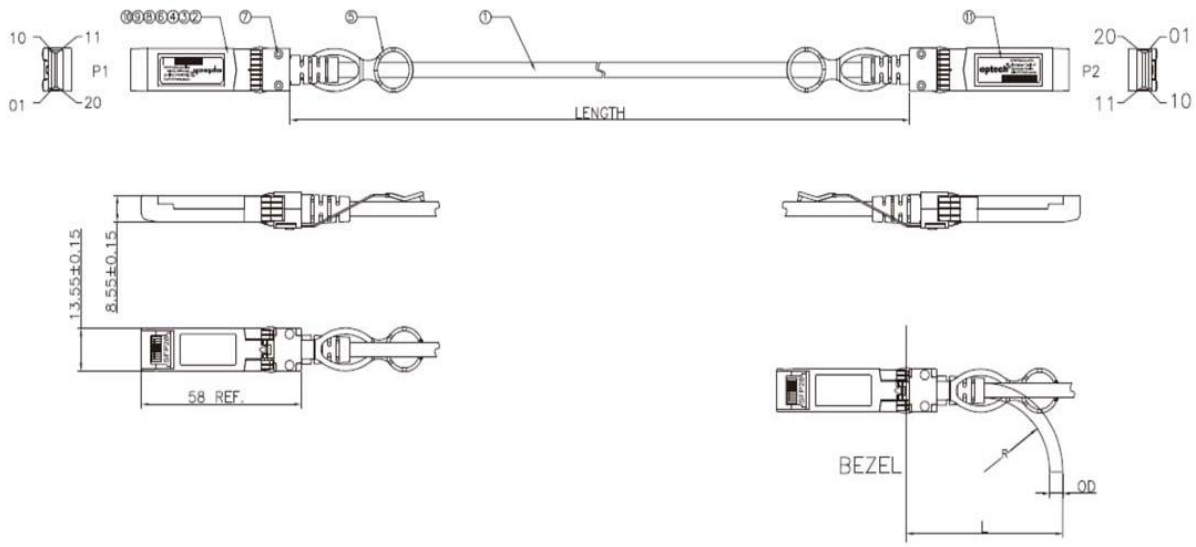
Note:

1. Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT(f), with f in GHz
2. Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz
3. Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78)*f, with f in GHz
4. Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78)*f, with f in GHz
5. Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22)*f, with f in GHz

Pin Description

Pin	Logic	Symbol	Description
1		VeeT	Module Transmitter Ground
2	LVTTL-O	Tx_Fault	Module Transmitter Fault
3	LVTTL-I	Tx_Disable	Transmitter disable; Turns off transmitter laser output
4	LVTTL-I/O	SDA	2-wire Serial Interface Data Line (Same as MOD-DEF2 in INF-8074i)
5	LVTTL-I/O	SCL	2-wire Serial Interface Clock (Same as MOD-DEF1 in INF-8074i)
6		Mod_ABS	Module Absent, connected to VeeT or VeeR in the module
7	LVTTL-I	RS0	Rate Select 0, optionally controls SFP28 module receiver
8	LVTTL-O	Rx_LOS	Receiver Loss of Signal Indication (In FC designated as Rx_LOS and in Ethernet designated as Signal Detect)
9	LVTTL-I	RS1	Rate Select 1, optionally controls SFP28 module transmitter
10		VeeR	Module Receiver Ground
11		VeeR	Module Receiver Ground
12	CML-O	RD-	Receiver Inverted Data Output
13	CML-O	RD+	Receiver Non-Inverted Data Output
14		VeeR	Module Receiver Ground
15		VccR	Module Receiver 3.3 V Supply
16		VccT	Module Transmitter 3.3 V Supply
17		VeeT	Module Transmitter Ground
18	CML-I	TD+	Transmitter Non-Inverted Data Input
19	CML-I	TD-	Transmitter Inverted Data Input
20		VeeT	Module Transmitter Ground

Dimensions



Ordering Information

Part Number	*Length (M)*	*AWG*	*Voltage*	*Temperature*
ASF28-T-01-PEL	1	30	3.3V	0°C to 70 °C

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