

NXOC-P281M

SFP28 25GBASE-AOC 1m AOC

Features

- SFP28 Form Factor
- 25 Gb/s bitrate
- Up to 1 m over AOC
- Up to 1W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring



Applications

- 25Gbase-SR Ethernet

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	-40/85	°C
Operating case temperature	0/70	°C
Power supply voltage	3.3	V
Power consumption	1	W

General Specifications

Parameter	Symbol	Min	Typ.	Max.	Unit
Storage Temperature		-40		85	°C
Operating Case Temperature	T _c	0		70	°C
Power Supply Voltage	V _{cc}	3.13	3.3	3.47	V
Supply Voltage	V _{cc}	0		3.6	V
Storage Temperature	T _{stg}	-40		85	°C
Operating Humidity		5		85	%

Optical Characteristics

Parameter		Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter							
Data Rate		BR		25.78		Gbps	
Centre Wavelength		λ _c	840	850	860	nm	
Spectral Width (-20dB)		σ			0.6	nm	
Average Output Power		P _{avg}	-8.4		2.4	dBm	
Optical Power OMA		P _{OMA}	-6.4		3	dBm	
Extinction Ratio		ER	2			dB	
Differential data input swing		V _{IN,PP}	40		1000	mV	
Input Differential Impedance		Z _{IN}	90	100	110	Ω	
TX Disable	Disable		2.0		V _{cc}	V	
	Enable		0		0.8	V	
TX Fault	Fault		2.0		V _{cc}	V	
	Normal		0		0.8	V	
Receiver							
Data Rate		BR		25.78		Gbps	
Centre Wavelength		λ _c	840	850	860	nm	
Receiver Sensitivity (OMA)		P _{sens}			-10	dBm	
Stressed Sensitivity (OMA)					-5.2	dBm	
Receiver Power (OMA)					3	dBm	
LOS De-Assert		LOS _D			-13	dBm	
LOS Assert		LOS _A	-30			dBm	
LOS Hysteresis			0.5			dB	
Differential data output swing		V _{out,PP}	500		1130	mV	
LOS	High		2.0		V _{cc}	V	
	Low				0.8	V	

Pin Descriptions

Pin	Logic	Symbol	Name/Description	Notes
1		VeeT	Transmitter Ground.	
2	LV-TTL-O	TX_Fault	N/A	1
3	LV-TTL-I	TX_DIS	Transmitter Disable.	
4	LV-TTL-I/O	SDA	2-Wire Serial Data.	
5	LV-TTL-I	SCL	2-Wire Serial Clock.	
6		MOD_DEF0	Module present, connect to VeeT.	
7	LV-TTL-I	RS0	N/A	1
8	LV-TTL-O	LOS	LOS of Signal.	
9	LV-TTL-I	RS1	N/A	1
10		VeeR	Receiver Ground.	
11		VeeR	Receiver Ground.	
12	CML-O	RD-	Receiver Data Inverted.	
13	CML-O	RD+	Receiver Data Non-inverted.	
14		VeeR	Receiver Ground.	
15		VccR	Receiver Supply +3.3V.	
16		VccT	Transmitter Supply +3.3V.	
17		VeeT	Transmitter Ground.	
18	CML-I	TD+	Transmitter Data Non-Inverted.	
19	CML_I	TD-	Transmitter Data Inverted.	
20		VeeT	Transmitter Ground.	

Note:

1. Signals not supported in SFP28 Copper pulled-down to VeeT with 30kΩ resistor.

Host Board



Mechanical Specification

