

Свойства

4 full-duplex канала

до 25,78Gb/s на канал

QSFP28 – QSFP28 соединитель на пассивном медном кабеле витая пара (TP)



Применение

100G Ethernet

Part Number	Product Description	Wiregauge AWG
OTQSFP28-DAC-1M	Соединитель, QSFP28-QSFP28, 100G, DAC, 1m	30
OTQSFP28-DAC-2M	Соединитель, QSFP28-QSFP28, 100G, DAC, 2m	30
OTQSFP28-DAC-3M	Соединитель, QSFP28-QSFP28, 100G, DAC, 3m	26

● Максимальные параметры

Parameter	Symbol	Min.	Typical	Max.	Unit
Storage Temperature	T _s	-40		+85	°C
Supply Voltage	V _{CC}	-0.5		3.6	V
Relative Humidity	RH	0		85	%

● Рекомендованные параметры

Parameter	Symbol	Min	Typical	Max	Units
Operating Case Temperature	T _{OP}	0		70	degC

Power Supply Voltage	V _{CC}	3.14	3.3	3.47	V
Data Rate, each Lane				25.78	Gb/s

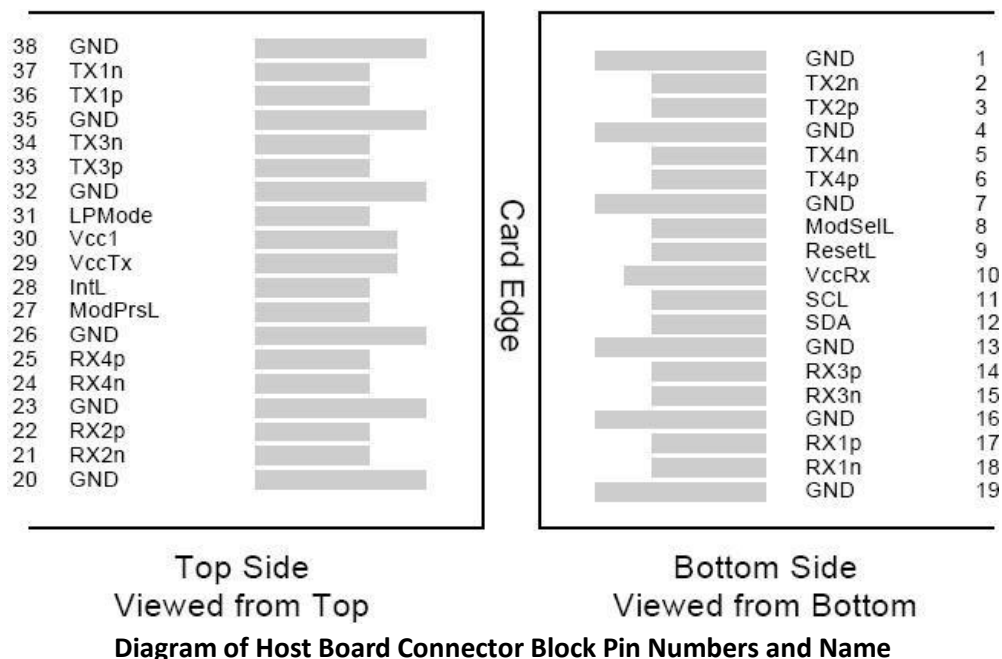
● High Speed Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Note
Differential Impedance	$R_{IN,P}$	9	100	110	Ω	
Insertion loss	$SDD2$	8		22.48	dB	At 12.8906
Differential Return Loss	$SDD11$	12.45		See 1	dB	At 0.05 to
	$SDD22$	3.12		See 2	dB	At 4.1 to 19
Common-mode to common-mode output return loss	$SCC11$ $SCC22$	2			dB	At 0.2 to 19 GHz
Differential to common-mode return loss	$SCD11$	12		See 3	dB	At 0.01 to
	$SCD22$	10.58		See 4		At 12.89 to
Differential to common Mode Conversion Loss	$SCD21-IL$	10		See 5	dB	At 0.01 to
						At 12.89 to
		6.3				At 15.7 to
Channel Operating Margin	COM	3			dB	

Notes:

1. Reflection Coefficient given by equation $SDD11(dB) < 16.5 - 2 \times \sqrt{f}$, with f inGHz
2. Reflection Coefficient given by equation $SDD11(dB) < 10.66 - 14 \times \log_{10}(f/5.5)$, with f inGHz
3. Reflection Coefficient given by equation $SCD11(dB) < 22 - (20/25.78) \times f$, with f inGHz
4. Reflection Coefficient given by equation $SCD11(dB) < 15 - (6/25.78) \times f$, with f inGHz
5. Reflection Coefficient given by equation $SCD21(dB) < 27 - (29/22) \times f$, with f inGHz

● Назначение контактов



● Описание контактов

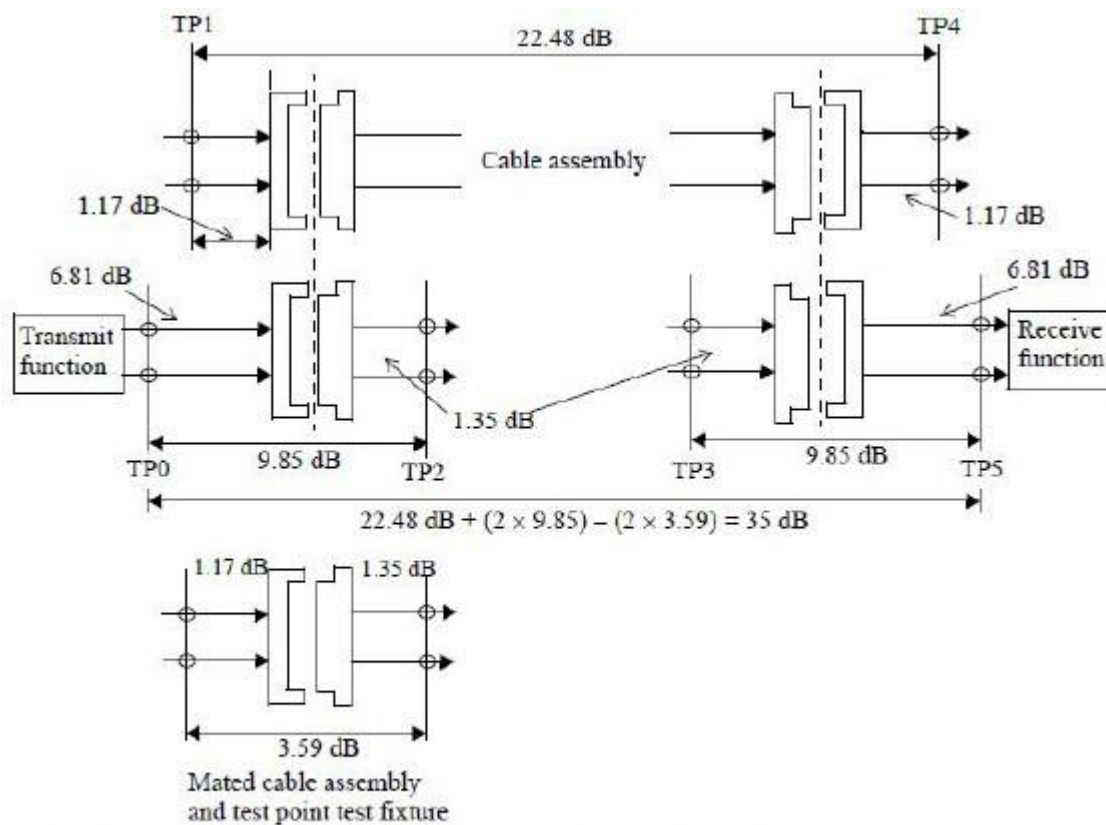
PIN	Logic	Symbol	Name/Description	Notes
1		GND	Ground	1
2	CML-I	Tx2n	Transmitter Inverted Data Input	
3	CML-I	Tx2p	Transmitter Non-Inverted Data output	
4		GND	Ground	1
5	CML-I	Tx4n	Transmitter Inverted Data Input	
6	CML-I	Tx4p	Transmitter Non-Inverted Data output	
7		GND	Ground	1
8	LVTLL-I	ModSelL	Module Select	
9	LVTLL-I	ResetL	Module Reset	
10		VccRx	+3.3V Power Supply Receiver	2
11	LVC MOS-I/O	SCL	2-Wire Serial Interface Clock	
12	LVC MOS-I/O	SDA	2-Wire Serial Interface Data	
13		GND	Ground	
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	
15	CML-O	Rx3n	Receiver Inverted Data Output	
16		GND	Ground	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	
18	CML-O	Rx1n	Receiver Inverted Data Output	
19		GND	Ground	1
20		GND	Ground	1
21	CML-O	Rx2n	Receiver Inverted Data Output	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	

23		GND	Ground	1
24	CML-O	Rx4n	Receiver Inverted Data Output	1
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	
26		GND	Ground	1
27	LVTTL-O	ModPrsL	Module Present	
28	LVTTL-O	IntL	Interrupt	
29		VccTx	+3.3 V Power Supply transmitter	2
30		Vcc1	+3.3 V Power Supply	2
31	LVTTL-I	LPMode	Low Power Mode	
32		GND	Ground	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	
34	CML-I	Tx3n	Transmitter Inverted Data Output	
35		GND	Ground	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	
37	CML-I	Tx1n	Transmitter Inverted Data Output	
38		GND	Ground	1

Notes:

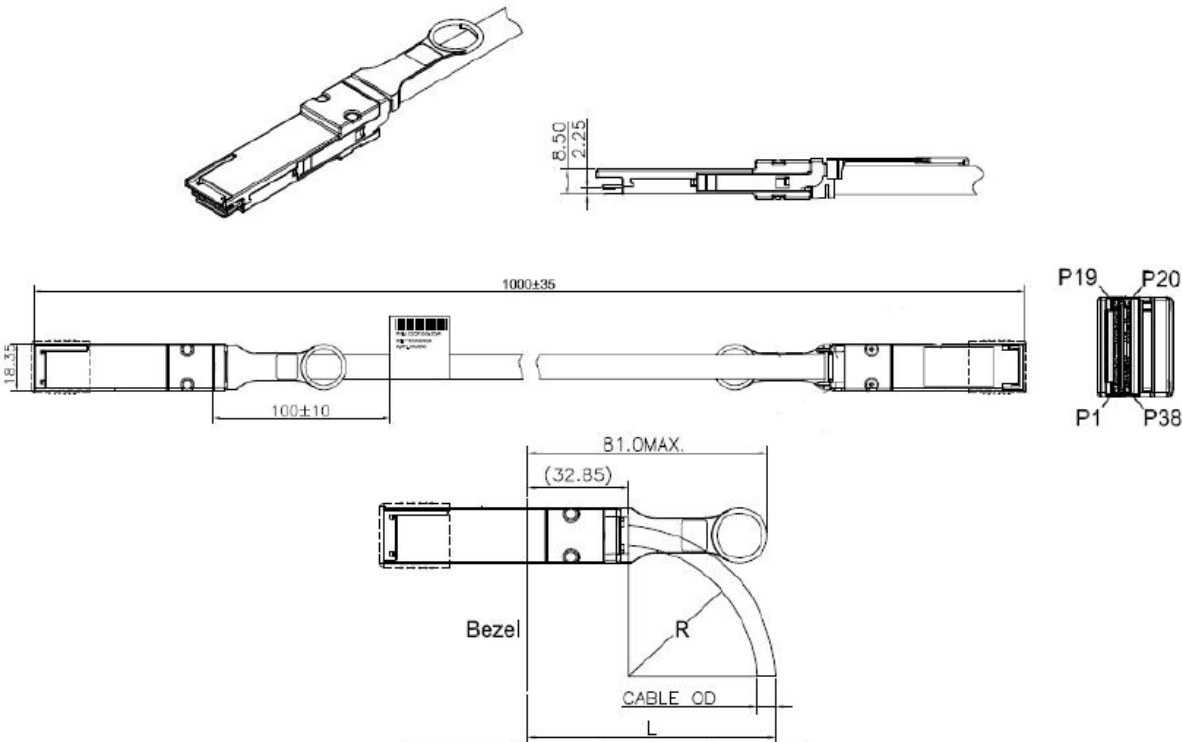
1. GND is the symbol for signal and supply (power) common for QSFP28 modules. All are common within the QSFP28 module and all module voltages are referenced to this potential unless otherwise noted. Connect these directly to the host board signal common ground plane.
2. VccRx, Vcc1 and VccTx are the receiver and transmitter power suppliers and shall be applied concurrently. Recommended host board power supply filtering is shown in Figure 4 below. Vcc Rx, Vcc1 and Vcc Tx may be internally connected within the QSFP28 transceiver module in any combination. The connector pins are each rated for a maximum current of 1000mA.

● Channel insertion loss budget



NOTE—The connector insertion loss is 1.07 dB for the mated test fixture. The host connector is allocated 0.62 dB of additional margin.

● Размеры



Cable Guage	Cable“OD”	Min, bend Radius“R”	Min bend Space“L”
30 AWG	6.6mm	33mm	72.45MM
28 AWG	7.4mm	37mm	77.25MM
26/25 AWG	8.4mm	42mm	83.25MM
24 AWG	9.8mm	49mm	91.65MM