

Single-Mode 40GBASE-ER4 CFP Transceiver



Особенности:

- 41.25Gbps aggregate bit rates
- CWDM DFB laser and APD receiver
- Up to 40km transmission on SMF
- Single 3.3V Power Supply and Power dissipation <16W
- Hot-Pluggable CFP Footprint Duplex LC Connector Interface
- Operating Case Temperature Standard: 0°C~+70°C
- Compliant with CFP MSA Specification
- MDIO interface with integrated Digital Diagnostic Monitoring
- XLAUI electrical interface

Области применения:

- 40GBASE-ER4 Ethernet

Part No.	Data Rate	Fiber	Distance ^{*(note1)}	Interface	Temp.	DDMI
CFP-ER4-40G	40Gbps	SMF	40km	LC	Standard	Yes

Note1: Over SMF

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	T _s	-40	+85	°C
Supply Voltage	V _{cc}	-0.5	3.6	V
Operating Relative Humidity	RH	5	85	%

*Exceeding any one of these values may destroy the device immediately.

Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Case Temperature	T _A CFP-ER4-40G	0		+70	°C
Power Supply Voltage	V _{cc}	3.135	3.3	3.465	V
Power Supply Current	I _{cc}		2300		mA
Aggregate Bit Rate	BR _{AVE}		41.25		Gbps
Lane Bit Rate	BR _{LANE}		10.3125		Gbps

Optical and Electrical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit
9µm Core Diameter SMF	L			40	km
Aggregate Bit Rate	BR _{AVE}		41.25		Gbps
Lane Bit Rate	BR _{LANE}		10.3125		Gbps
Transmitter					
Lane_0 Center Wavelength	λ_{C0}	1264.5	1271	1277.5	nm
Lane_1 Center Wavelength	λ_{C1}	1284.5	1291	1297.5	nm
Lane_2 Center Wavelength	λ_{C2}	1304.5	1311	1317.5	nm
Lane_3 Center Wavelength	λ_{C3}	1324.5	1331	1337.5	nm
Side Mode Suppression Ratio	SMSR	35			dB
Total Average Output Power*(note3)	P _o	6		10	dBm
Transmit OMA per Lane	TX_OM A	-1		4	dBm
Average Launch Power per Lane	P _{each}	0		4	dBm
Extinction Ratio*(note4)	ER	4.5			dB
Optical Return Loss Tolerance				20	dB
Output Optical Eye*(note4)		IEEE 802.3ba-2010 Compliant			
TX Disable Assert Time	t _{off}			100	us
Receiver					
Lane_0 Center Wavelength	λ_{C0}	1264.5	1271	1277.5	nm
Lane_1 Center Wavelength	λ_{C1}	1284.5	1291	1297.5	nm
Lane_2 Center Wavelength	λ_{C2}	1304.5	1311	1317.5	nm
Lane_3 Center Wavelength	λ_{C3}	1324.5	1331	1337.5	nm
Average Receive Power per Lane	R _{pow}	-21		-6	dBm
Stress Receive Sensitivity in OMA per Lane*(note6)	SRS			-19	dBm
Receive Sensitivity in OMA per Lane*(note6)	P _{min}			-21	dBm
Receiver Overload	P _{max}	-6			dBm
LOS Assert	LOSA	-25			dBm
LOS De-Assert	LOSD			-24	dBm
LOS Hysteresis*(note7)		0.5			dB

Note3: Output is coupled into a 9/125µm single-mode fiber.

Note4: Filtered, measured with a PRBS 2³¹-1 test pattern @10.3125Gbps

Note5: High speed I/O, internally AC coupled.

Note6: Minimum average optical power measured at BER less than 1E-12, with a 2³¹-1 PRBS.

Note7: LOS Hysteresis