Módulo Óptico BIDI SFP+ 10G 40km E-temp

BS3711E-EN-(A-B)

Módulo óptico (gbics) SFP+ são módulos econômicos e de alto desempenho que suportam taxas de dados de 10 Gbps e seu alcance máximo de enlace é de 40km.

Observações

Somente remova a tampa quando for realizar a conexão do cordão/cabo, evitando assim sujeiras indesejadas no conector. Nunca olhe diretamente no interior do módulo óptico. A radiação óptica pode ser prejudicial aos olhos.

10 Gb/s SFP+ BIDI 1270/1330nm&1330/1270nm 40km Transceivers

FEATURES

- Supports up to 11.3Gbps bit rates
- Hot-pluggable SFP+ footprint
- 1270nm DFB laser and PIN receiver for BS7311E-CN
- 1330nm DFB laser and PIN receiver for BS3711E-CN
- Up to 40km for SMF transmission
- Compliant with SFP+ MSA and SFF-8472 with single LCreceptacle
- Compatible with RoHS
- Single +3.3V power supply
- Power dissipation<1.0W
- 2-wire interface with integrated Digital Diagnostic monitoring
- EEPROM with Serial ID Functionality
- Operating case temperature:
  - Standard: 0 to +70°C

APPLICATIONS

- 10GBASE-BX & 10GBASE-ER/EW
- 10G SONET/SDH, OTU2/2e

ORDERING INFORMATION

Part Number	Form Factor	Data Rate	Media	Distance (km)	Wavelength (nm)	Temperature (℃)
BS7311E-CN BS3711E-CN	SFP+	10G	SMF	40	1270/1330 1330/1270	0~70

1. ABSOLUTE MAXIMUM PARAMETERS

Parameter	Symbol	Min.	Max.	Unit.
Supply Voltage	Vcc	0	4	V
Storage Temperature	Ts	-40	85	°C
Operating Humidity	-	5	95	%
Signal Input Voltage		Vcc-0.3	Vcc+0.3	V

2. RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Min.	Typ.	Max.	Unit.
Operating Case Temperature (Commercial)	Tc	0		70	℃
Power Supply Voltage	Vcc	3.135	3.3	3.465	V

Supply Current	Icc			300	mA
Data Rate		10	10.3	11.3	Gbps
Fiber Length 9/125μm core SMF		-	40	-	km

3. Optical and Electrical Characteristics

(Condition: Tc= 0 to 70℃)

Parameter		Symbol	Min.	Typ.	Max.	Unit.	Notes.
transmitter							
Center Wavelength		λc	1260	1270	1280	nm	
			1320	1330	1340	nm	
Spectral Width		Δλ			1	nm	
Side-Mode Suppression Ratio		SMSR	30	-		dB	
Average Output Power		P_{out}	0		5	dBm	1
Extinction Ratio		ER	3.5			dB	
Data Input Swing Differential		V_{IN}	180		700	mV	2
Input Differential Impedance		Z_{IN}	85	100	115	Ω	
TX Disable	Disable		2.4		Vcc	V	
	Enable		-0.3		0.8	V	
TX Fault	Fault		2.0		Vcc	V	
	Normal		-0.3		0.8	V	
Receiver							
Wavelength Range		λc	1320	1330	1340	nm	
			1260	1270	1280	nm	
Receiver Sensitivity					-15	dBm	3
Receiver Overload			0.5			dBm	3
LOS De-Assert		LOSD			-17	dBm	
LOS Assert		LOSA	-30			dBm	
LOS Hysteresis			0.5		5	dB	

Data Output Swing Differential	V_{out}	300		850	mV	4
LOS	Fault	Vcc-1.3		VccHost	V	
	Norm	Vee		Vee+0.8	V	

Notes:

1. The optical power is launched into SMF.
2. PECL input, internally AC-coupled and terminated.
3. Measured with a PRBS 2^{31}-1 test pattern @10312Mbps, BER ≤1×10^{-12}.
4. Internally AC-coupled.

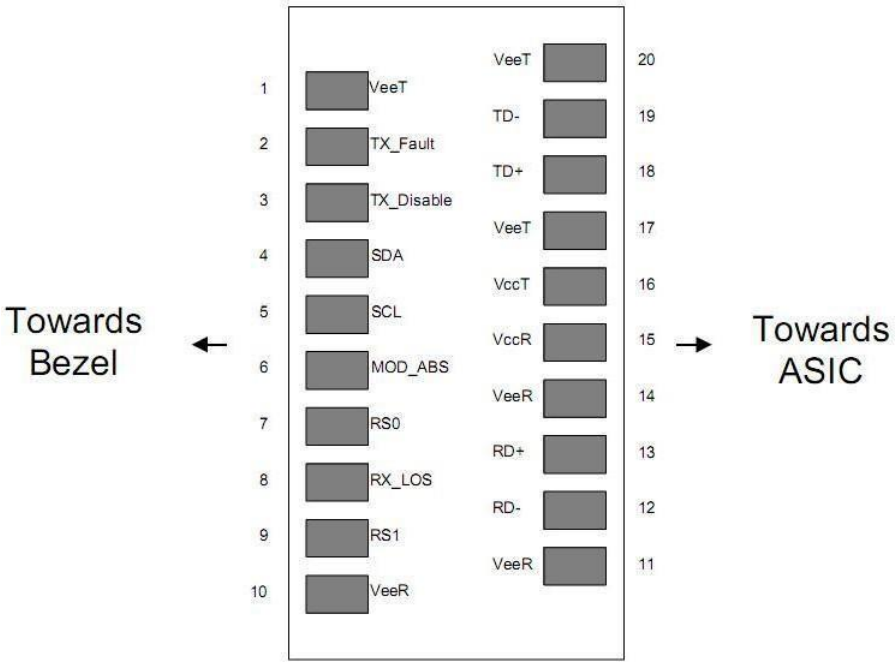
4. PIN DESCRIPTIONS

Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground	
2	TX FAULT	Transmitter Fault Indication	Note 1
3	TX DISABLE	Transmitter Disable	Note 2
4	SDA	SDA Serial Data Signal	
5	SCL	SCL Serial Clock Signal	
6	MOD_ABS	Module Absent. Grounded within the module	
7	RS0	Not Connected	
8	LOS	Loss of Signal	Note 3
9	RS1	Not Connected	
10	VeeR	Receiver ground	
11	VeeR	Receiver ground	
12	RD-	Inv. Received Data Out	Note 4
13	RD+	Received Data Out	Note 4
14	VeeR	Receiver ground	
15	VccR	Receiver Power Supply	
16	VccT	Transmitter Power Supply	
17	VeeT	Transmitter Ground	
18	TD+	Transmit Data In	Note 5
19	TD-	Inv. Transmit Data In	Note 5
20	VeeT	Transmitter Ground	

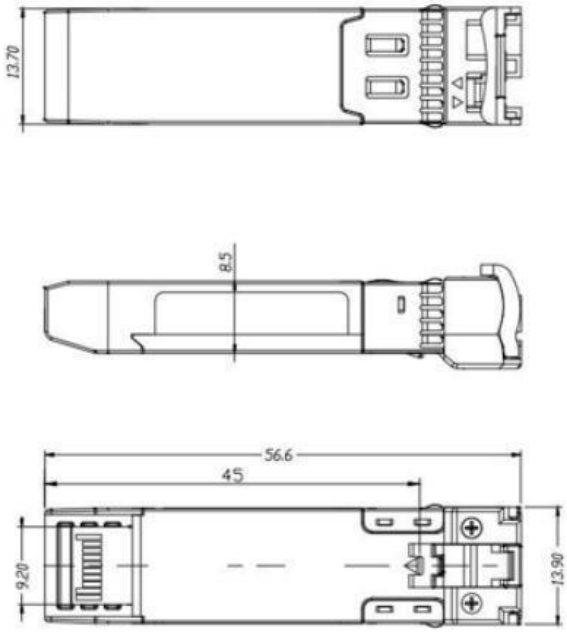
Notes:

1) TX Fault is an open collector output, which should be pulled up with a 4.7k~10kΩ resistor on the host board to a voltage between 2.0V and Vcc+0.3V. Logic 0 indicates normal operation; Logic 1 indicates a laser fault of some kind. In the low state, the output will be pulled to less than 0.8V.
2) Laser output disabled on TDIS >2.0V or open, enabled on TDIS <0.8V.
3) LOS is open collector output Should be pulled up with 4.7k~10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.
4) RD-/+: These are the differential receiver outputs. They are internally AC-coupled 100 differential lines which should be terminated with 100Ω (differential) at the user SERDES. 5) TD-/+: These are the differential transmitter inputs. They are internally AC-coupled, differential lines with 100Ω differential termination inside the module.

5. PIN DIAGRAM



6. Mechanical Design Diagram



All dimensions are
±0.2mm unless otherwise
specified.
Unit: mm

fiber LIGHT

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