WTS10L2B23 (32)-K20C(I)

10G SFP+ Transceiver T12/R13(T13/R12) SMF 20km LC

Part Number WTS10L2B23-K20C	**Data Rate 10.3125**	**Wavelength 1270**
Reach 20	**Temperature 0℃~70℃**	



1. Product Overview

Features

- Up to 10.3125Gbps Data Links
- 1270nm DFB /1330 DFB laser transmitter and PIN/TIA receiver
- Maximum link length of 20km on 9/125um SMF
- Hot-pluggable SFP footprint
- LC receptacles
- Low power dissipation
- RoHS compliant and lead-free
- Support Digital Diagnostic Monitor interface
- Single +3.3V power supply
- Compliant with SFF-8472
- Case operating temperature
- Commercial: 0°C to +70°C

Applications

- 10GBASE-LR/LW 10G Ethernet
- 1Gb/s,2Gb/s,4Gb/s,8Gb/s and 10Gb/s Fibre Channel
- CPRI Rates 10.138 Gb/s, 9.830 Gb/s
- 7.373 Gb/s, 6.144 Gb/s, 4.915 Gb/s
- 2.458 Gb/s, 1.229 Gb/s, 0.614 Gb/s
- Other Optical Links

2. Ordering Information

Part No.	Bit Rate (Gbps)	Laser (nm)	Distance（km）	Fiber Type	DDMI	Connector	Temp
WTS10L2B23-K20C	10.3125	1270	20	SMF	YES	LC	0℃~70℃
WTS10L2B23-K20I	10.3125	1270	20	SMF	YES	LC	-40℃~85℃
WTS10L2B32-K20C	10.3125	1330	20	SMF	YES	LC	0℃~70℃
WTS10L2B32-K20I	10.3125	1330	20	SMF	YES	LC	-40℃~85℃

3. Absolute Maximum Ratings

Parameter	Symbol	Min	Type	Max	Unit	Ref.	Ref.
Maximum Supply Voltage	Vcc	-0.5		3.6	V		
Storage Temperature	TS	-40		85	℃		

Parameter	Symbol	Min	Type	Max	Unit	Ref.	Ref.
Relative Humidity	RH	0		85	%	1	

4. Recommended Operating Conditions

Parameter	Symbol	Min	Type	Max	Unit	Ref.	Ref.
Case Operating Temperature	TOP	0		70	℃	Commercial	
Case Operating Temperature	TOP	-40		85	℃	Industrial	

5. Optical Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter
Center Wavelength	λc	1260	1270	1280	nm	WTHKLB23-K20
Center Wavelength	λc	1320	1330	1340	nm	WTHKLB32-K20
Spectral Width(-20dB)	Pm			1	nm	
Side-mode Suppression Ratio	SMSR	30			dB	
Average Output Power	Pavg	-3		3	dBm	
Extinction Ratio	ER	3.5			dB	
Return Loss		12			dB	
Transmitter OFF Output Power	POff			-30	dBm	
Receiver	Receiver	Receiver	Receiver	Receiver	Receiver	Receiver
Center Wavelength	λc	1320	1330	1340	nm	WTHKLB23-K20
Center Wavelength	λc	1260	1270	1280	nm	WTHKLB32-K20
Receiver Sensitivity, Average Power				-14.4	dBm	1
Receiver Saturation Power	Psat			0.5	dBm	
Loss of Signal Assert	PA	-30			dBm	
Loss of Signal De-assert	PD			-17	dBm	
LOS Hysteresis	PD- PA	0.5			dB	

6. Electrical Characteristics

Parameter	Symbol	Min	Type	Max	Unit	Ref.
Supply Voltage	Vcc	3.135	3.3	3.465	V	
Supply Current	Icc			300	mA	
Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter

Parameter	Symbol	Min	Type	Max	Unit	Ref.
Input differential impedance	Rin		100			1
Differential data input swing	Vin, pp	200		1000	mV	
Transmit Disable Voltage	VD	2		VCC	V	
Transmit Enable Voltage	VEN	Vee		Vee+0.8	V	
Receiver	Receiver	Receiver	Receiver	Receiver	Receiver	Receiver
Differential data output swing	Vout, pp	200		1000	mV	2
LOS Fault	VLOS_fault	2		Vcc	V	3
LOS Normal	VLOS_norm	Vee		Vee+0.8	V	3
Power Supply Noise Tolerance	VCCT/VCCR	Per SFF-8431	Per SFF-8431	Per SFF-8431	mVpp	

7. Digital Diagnostics

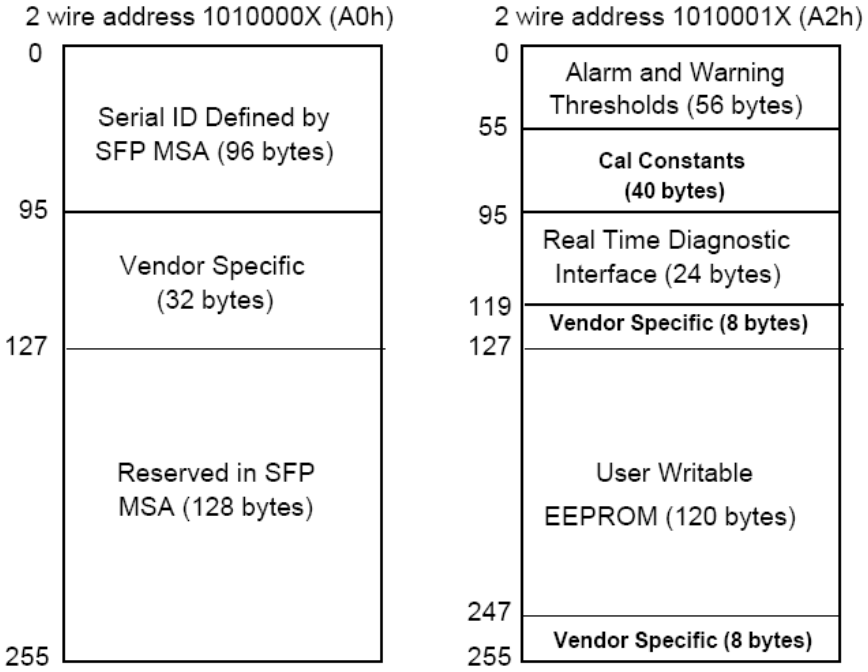
Parameter	Unit	Accuracy
Case Temperature	℃	±3
Supply Voltage	V	±3%
Tx Bias Current	mA	±10%
Tx Optical Power	dB	±3
Rx Optical Power	dB	±3

8. Pin Descriptions

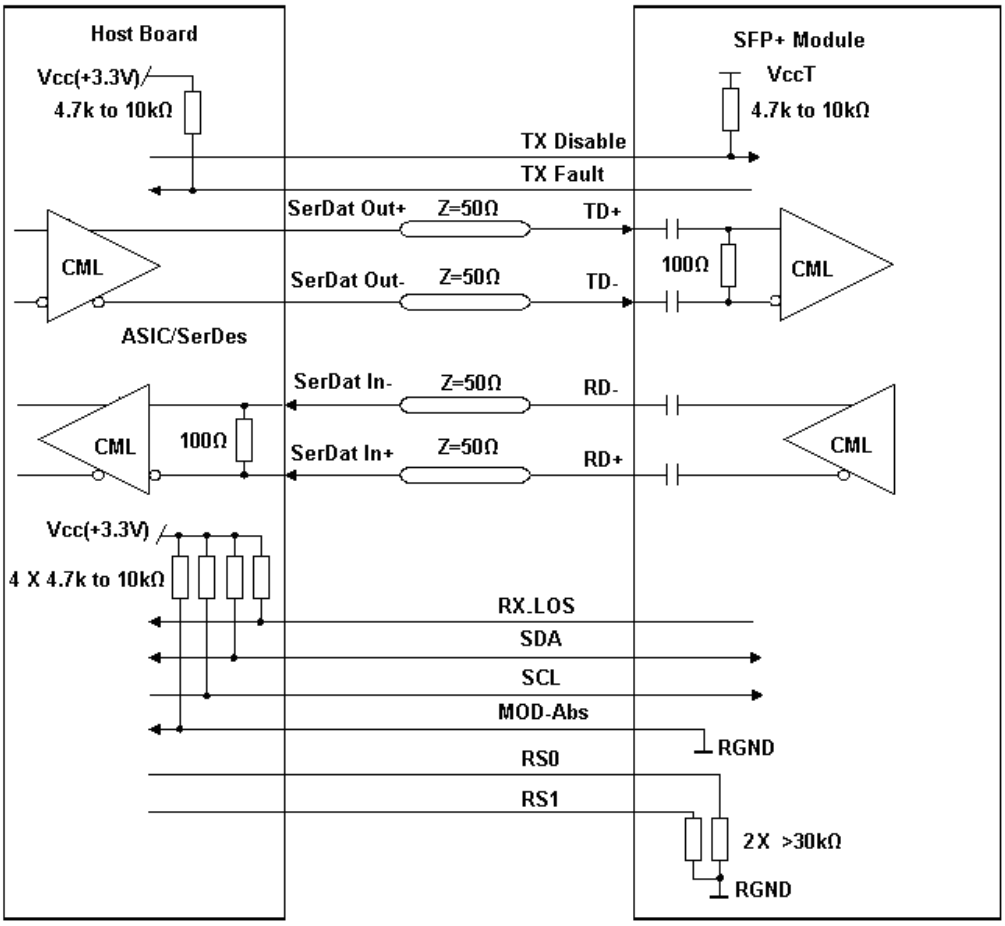
Pin	Symbol	Name/Description	Ref.
1	VEET	Transmitter Ground (Common with Receiver Ground)	1
2	TFAULT	Transmitter Fault.	2
3	TDIS	Transmitter Disable. Laser output disabled on high or open.	3
4	SDA	2-wire Serial Interface Data Line	4
5	SCL	2-wire Serial Interface Clock Line	4
6	MOD_ABS	Module Absent. Grounded within the module	4
7	RS0	No connection required	
8	LOS	Loss of Signal indication. Logic “0” indicates normal operation.	5
9	RS1	No connection required	
10	VEER	Receiver Ground (Common with Transmitter Ground)	1
11	VEER	Receiver Ground (Common with Transmitter Ground)	1

Pin	Symbol	Name/Description	Ref.
12	RD-	Receiver Inverted DATA out. AC Coupled	
13	RD+	Receiver Non-inverted DATA out. AC Coupled	
14	VEER	Receiver Ground (Common with Transmitter Ground)	1
15	VCCR	Receiver Power Supply	
16	VCCT	Transmitter Power Supply	
17	VEET	Transmitter Ground (Common with Receiver Ground)	1
18	TD+	Transmitter Non-Inverted DATA in. AC Coupled.	
19	TD-	Transmitter Inverted DATA in. AC Coupled.	
20	VEET	Transmitter Ground (Common with Receiver Ground)	1

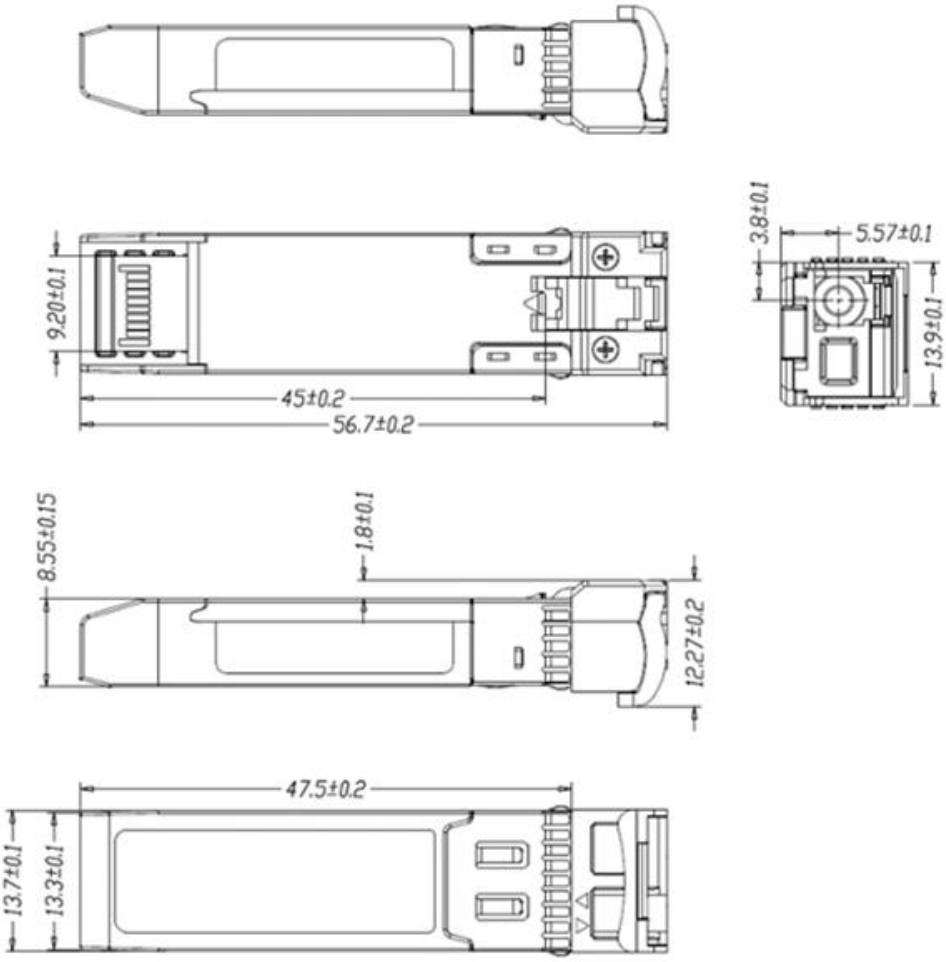
9. Digital Diagnostics Memory Map



10. Recommended Interface Circuit



11. Mechanical Specifications



12. Revision History

Version	Date	Description	Prepared by
V6	2025	Unified WincoTek datasheet format	WincoTek
V6.1	2026-10-23	Engineering and format review	WincoTek