

Description:

GWTR-12 transceiver is a cost effective module compliant with SONET OC-12/SDH STM-4 recommendation. GWTR-12 transceiver operates at 1310nm or 1550nm wavelength. The transmitter section incorporates a high performance FP or DFB Laser and driver IC with temperature compensation and automatic power control function. The receiver section incorporates an efficient InGaAs/InP PIN photodiode and transimpedance with wide dynamic range AGC. The transceiver has excellent immunity and reliability.



Features:

- 2 1x9 pin Package Single Mode Transceiver
- 2 Single +3.3V/5V Power supply
- 2 LVPECL/PECL logic interface
- 2 Full compliance with ITU-T G957, G.958 and Telcordia GR-468-CORE
- 2 Class I laser product complies with IEC 60825-1
- 2 Complies with RoHS

Applications:

- 2 SONET/SDH/PDH
- 2 ATM

Specification:

I Electrical and Optical Characteristics (Condition: $T_a=T_{OP}$)

GWTR-12-331-X11X2 (1310nm FP/20Km) :

TX Parameter	Symbol	Min	typ	Max	Unit
Data Rate	B	-	622	-	Mb/s
Centre wavelength	λ_c	1290	1310	1330	nm
Output Spectral Width	$\Delta\lambda$	Compliant with ITU-T G.957			nm
Average Output Power	P_o	-15	-10	-8	dBm
Extinction Ratio	EXT	10	-	-	dB
Supply Current	I_{CC}	-	-	70	mA
Output Optical Eye	Compliant with ITU-T G.957				
Data Input Voltage-High, Low	$V_{IH}-V_{CC}$	-1.49	-1.3	-1.19	V
Input Differential Voltage	V_{ID}	0.5	-	1.6	V
RX Parameter	Symbol	Min	typ	Max	Unit
Data Rate	B	-	622	-	Mb/s
Receive Sensitivity	P_{min}	5V	-30	-29	dBm
		3.3V	-29	-28	
Maximum Input Power	P_{MAX}	-3	-	-	dBm
Signal Detection-Asserted	P_{H-L}	-42	-	-	dBm
Signal Detection-Deserted	P_{L-H}	-	-	-32	dBm
Operating Wavelength	λ_c	1100	-	1600	nm
Supply Current	I_{CC}	-	80	100	mA
Date Output High Voltage	$V_{OH}-V_{CC}$	-1.1	-	-0.879	V
Date Output Low Voltage	$V_{OL}-V_{CC}$	-1.89	-	-1.548	V

GWTR-12-131-X11X2 (1310nm FP/40Km):

TX Parameter	Symbol	Min	typ	Max	Unit
Data Rate	B	-	622	-	Mb/s
Centre wavelength	λ_c	1290	1310	1330	nm
Output Spectral Width	$\Delta\lambda$	Compliant with ITU-T G.957			nm
Average Output Power	P_o	-3	-	+2	dBm
Extinction Ratio	EXT	10	-	-	dB
Supply Current	I_{CC}	-	-	70	mA
Output Optical Eye	Compliant with ITU-T G.957				
Data Input Voltage-High, Low	$V_{IH-V_{CC}}$	-1.49	-1.3	-1.19	V
Input Differential Voltage	V_{ID}	0.5	-	1.6	V
RX Parameter	Symbol	Min	typ	Max	Unit
Data Rate	B	-	622	-	Mb/s
Receive Sensitivity	P_{min}	5V	-	-31	dBm
		3.3V	-	-30	
Maximum Input Power	P_{MAX}	-3	-	-	dBm
Signal Detection-Asserted	P_{H-L}	-42	-	-	dBm
Signal Detection-Deserted	P_{L-H}	-	-	-32	dBm
Operating Wavelength	λ_c	1100	-	1600	nm
Supply Current	I_{CC}	-	80	100	mA
Date Output High Voltage	$V_{OH-V_{CC}}$	-1.1	-	-0.879	V
Date Output Low Voltage	$V_{OL-V_{CC}}$	-1.89	-	-1.548	V

GWTR-12-152-X11X2 (1550nm DFB/80Km):

TX Parameter	Symbol	Min	typ	Max	Unit
Data Rate	B	-	622	-	Mb/s
Centre wavelength	λ_c	1480	1550	1580	nm
Output Spectral Width	$\Delta\lambda$	Compliant with ITU-T G.957			nm
Average Output Power	P_o	-3	-	-	dBm
Extinction Ratio	EXT	10	-	-	dB
Supply Current	I_{CC}	-	-	70	mA
Output Optical Eye	Compliant with ITU-T G.957				
Data Input Voltage-High, Low	$V_{IH-V_{CC}}$	-1.49	-1.3	-1.19	V
Input Differential Voltage	V_{ID}	0.5	-	1.6	V
RX Parameter	Symbol	Min	typ	Max	Unit
Data Rate	B	-	622	-	Mb/s
Receive Sensitivity	P_{min}	5V	-	-32	dBm
		3.3V	-	-31	
Maximum Input Power	P_{MAX}	-3	-	+2	dBm
Signal Detection-Asserted	P_{H-L}	-42	-	-	dBm
Signal Detection-Deserted	P_{L-H}	-	-	-32	dBm
Operating Wavelength	λ_c	1100	-	1600	nm
Supply Current	I_{CC}	-	80	100	mA
Date Output High Voltage	$V_{OH-V_{CC}}$	-1.1	-	-0.879	V
Date Output Low Voltage	$V_{OL-V_{CC}}$	-1.89	-	-1.548	V

I Absolute Maximum Ratings:

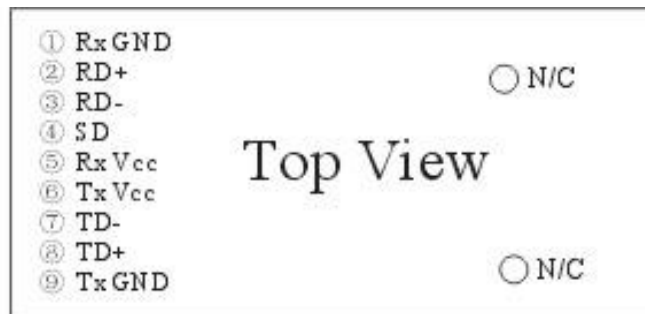
Parameter	Symbol	Min	Max	Unit
Storage Temperature	T _{ST}	-40	+85	°C
Operating Temperature	T _{IP}	0	+70	°C
Operating Temperature		-40	+85	
Supply Voltage	V _{CC}	0	+3.6	V
		0	+6	V
Input Voltage	V _{IN}	0	V _{CC}	V
Output Current	I _O	0	30	mA
Soldering Temperature &Time	-		240/10	°C /S

I Recommend Operation Environment:

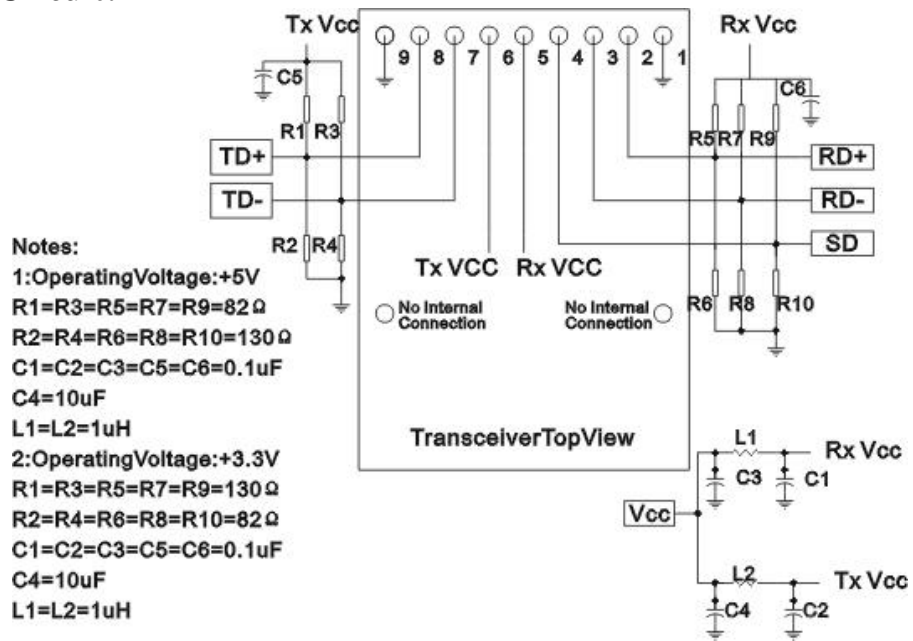
Parameter	Symbol	Min	typ	Max	Unit
Supply Voltage	V _{CC}	+3.1	3.3	+3.5	V
Supply Voltage	V _{CC}	+4.75	5.0	+5.25	V
Operating Temperature	T _{OP}	0	-	+70	°C
Operating Temperature		-40	-	+85	

Pin Assignment:

Receiver Signal Ground
 Receiver Data Out
 Receiver Data Out Bar
 Signal Detect
 Receiver Power Supply
 Transmitter Power Supply
 Transmitter Data In
 Transmitter Data In Bar
 Transmitter Signal Ground

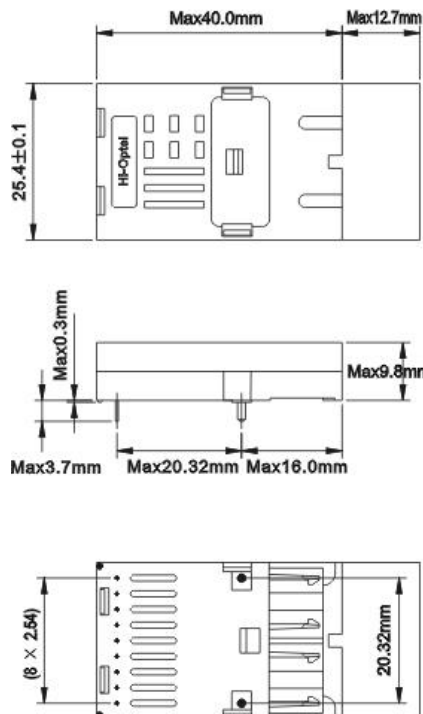


Recommended Circuit:



Mechanical Dimensions:

SC Receptacle



Ordering Information:

