TTC-1C23-300

1 × 9 Fiber Optic Transceiver for Fast Ethernet, FDDI, ATM/SONET/SDH

FEATURES:

- Compatible with 1300 nm optical links.
- Designed for 155 Mbps ATM ; 100 Mbps Fast Ethernet
- Driving up to 2 km for multimode optical fiber.
- Industry standard 1 × 9 package footprint.
- Duplex SC connector.
- Single +3.3V power supply.
- Very low power consumption.
- High performance-to-cost ratio.

TRANSMITTER ELECTRO-OPTICAL CHARACTERISTICS

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT
Supply Current	I_{CC}		50	70	mA
Power Dissipation	P_{DISS}		0.165		W
Supply Voltage	V_{CC}	3.13		3.47	V
Wavelength	λ	830	850	860	nm
Output Optical Power (1)	P_O	-19		-14	dbm
Data Input Voltage - Low (2)	V_{IL}	- 1.810		-1.475	V_{CC}
Data Input Voltage - High (2)	V_{IH}	-1.165		-0.880	V_{CC}
Output Extinction Ratio (3)		10			dB
Optical Rise Time	t_r		1	3	ns
Optical Fall Time	t_f		1	3	ns
Duty Cycle Distortion	DCD			0.6	ns p-p
Data Dependent Jitter	DDJ			0.6	ns p-p

(1) The launch power is detected by an InGaAs PIN photodiode calibrated at 1300nm, and the maximum optical power meets the class I laser safety standard.

(2) Voltage levels listed are compatible with 100K Series PECL logic levels. The parts are compatible with 10K and 10KH Series logic when driven with differential signals.

(3) This Optical Extinction Ratio is expressed in decibels (dB) by the relationship $10*\log(P_{high\ avg}/P_{low\ avg})$.

RECEIVER ELECTRO-OPTICAL CHARACTERISTICS

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT
Supply Current	I_{CC}		50	70	mA
Power Dissipation	P_{DISS}		0.165		W
Supply Voltage	V_{CC}	3.13		3.47	V
Data Output Voltage – Low(1)	V_{IL}	-1.810		-1.475	V_{CC}
Data Output Voltage - High(1)	V_{IH}	-1.165		-0.880	V_{CC}
Signal Detect Output Voltage - Low	V_{IL}	-1.810		-1.475	V_{CC}
Signal Detect Output Voltage - High	V_{IH}	-1.165		-0.880	V_{CC}
Rise Time	t_r		1.3	2.2	ns
Fall Time	t_f		1.3	2.2	ns
Duty Cycle Distortion	DCD			0.4	ns p-p
Data Dependent Jitter	DDJ			1.0	ns p-p
Sensitivity			-33	-31	dBm

Input power	P_{in}		-3	dBm
Operating Wavelength	λ	1270	1380	nm
Power level (avg.) Detect Assert	P_A		-33	dBm
Power level (avg.) Detect Deassert	P_D	-48		dBm

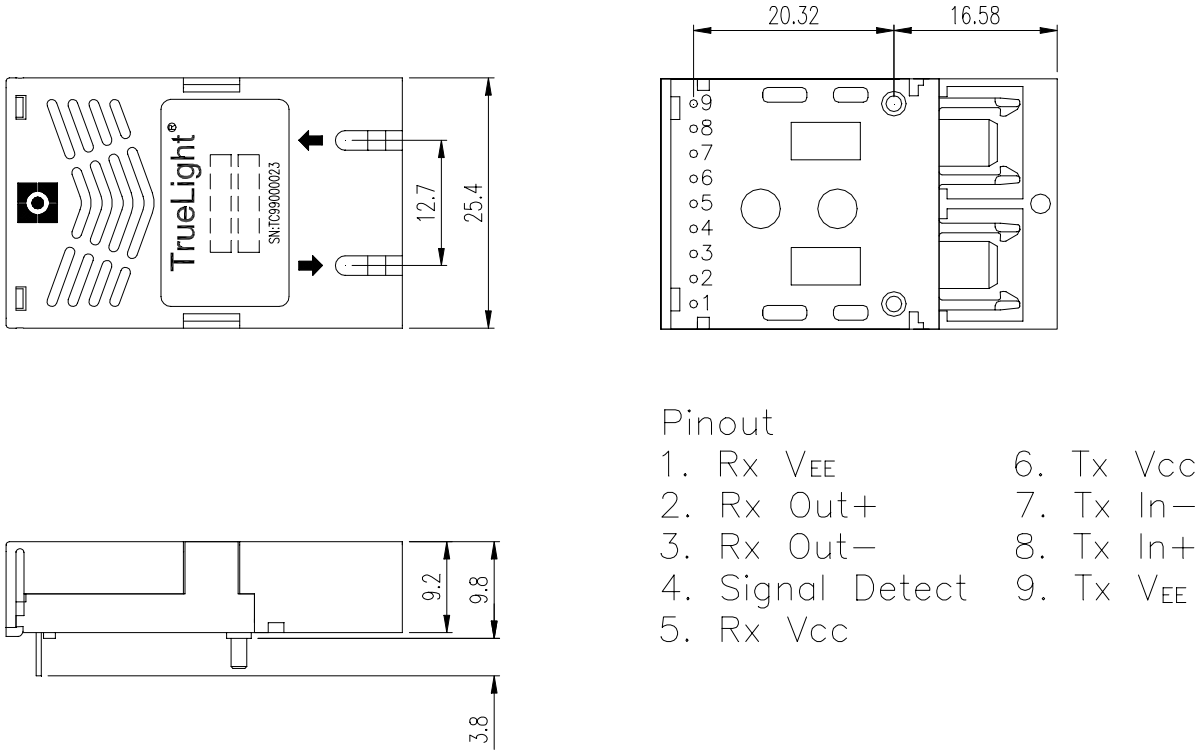
(1) Voltage levels listed are compatible with 100K Series PECL logic levels. The parts are compatible with 10K and 10KH Series logic when driven with differential signals.

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	SYMBOL	MIN	MAX	UNIT
Storage Temperature	T_S	-40	100	°C
Lead Soldering Limits			260/10	°C/sec
Operating Temperature	T_A	0	70	°C
Supply Voltage	V_{CC}	-0.5	4.5	V

OUTLINE and PINOUT

Unit:mm



Pinout

1. Rx V_{EE}	6. Tx Vcc
2. Rx Out+	7. Tx In−
3. Rx Out−	8. Tx In+
4. Signal Detect	9. Tx V_{EE}
5. Rx Vcc	