

Product Datasheet

AFCT-5805BZ-C (3.3V)

Avago Broadcom® Compatible 155Mb/s 1x9 Transceiver

Duplex SC, +3.3V, LD-FP, Single Mode, 15km, 0 ~ 70°C

FEATURES

- 1X9 Pin Package, Single-Mode Transceiver
- Single +3.3V Power Supply
- Operating Temperature Range: 0 ~ 70°C
- Fully Compliant with ITU-T G957, G958 Specification
- PECL Logic Interface
- Class 1 Laser Product, Compliant with IEC 60825-1
- Compliant with Telcordia (Bellcore) GR-468-CORE
- RoHS Compliant

APPLICATIONS

- SONET/SDH/PDH
- ATM

DESCRIPTION

ATGBICS AFCT-5805BZ Transceiver is a high-performance, cost-effective module for optical data communication applications. All versions are compliant with SONET/SDH recommendations from OC-01 to OC-03. This module is designed for Single-Mode fiber and operates at the normal wavelength of 1300 nm. The receiver section incorporates an efficient InGaAs/InP PIN photodiode and transimpedance with AGC for wide dynamic range. The transceiver has excellent immunity and reliability.

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Electrical and Optical Characteristics: (Condition: Ta=TOP)

Transmitter Section:

Parameter	Symbol	Min.	Typical	Max.	Unit
Data Rate	B	-	155	-	Mb/s
Centre Wavelength	λ_c	1261	1300	1360	nm
Output Spectral Width	λ (RMS)			7.7	nm
Average Output Power	Po	-15	-	-8	dBm
Extinction Ratio	E.R.	8.2	-	-	dB
Supply Current	ICC	-	50	140	mA
Output Optical Eye	Compliant with ITU-T G.957				
Data Input Voltage-High, Low	VIH-VCC	-1.16, -2	-1.3	-0.74, -1.475	V
Input Differential Voltage	VID	0.5	-	1.6	V

Receiver Section:

Parameter	Symbol	Min.	Typical	Max.	Unit
Data Rate	B	-	155	-	Mb/s
Receive Sensitivity	Pmin	-	-	-31	dBm
Maximum Input Power	PMAX	-7	-	-	dBm
Signal Detection-Asserted	PH-L	-31	-	-	dBm
Signal Detection-Deserted	PL-H	-	-	-45	dBm
Operating Wavelength	λ_c	1100	-	1600	nm
Supply Current	ICC	-	55	100	mA
Date Output High Voltage	VOH-VCC	-1.1	-	-0.85	V
Date Output Low Voltage	VOL-VCC	-2	-	-1.45	V

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Absolute Maximum Ratings: (TC=25°C)

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TST	-40	+85	°C
Operating Temperature	TIP	0	+70	°C
Supply Voltage	VCC	0	6	V
Input Voltage	VIN	GND	VCC	V
Output Current	IO	0	30	mA
Soldering Temperature & Time	-		240/10	°C/S

Recommended Operating Environment

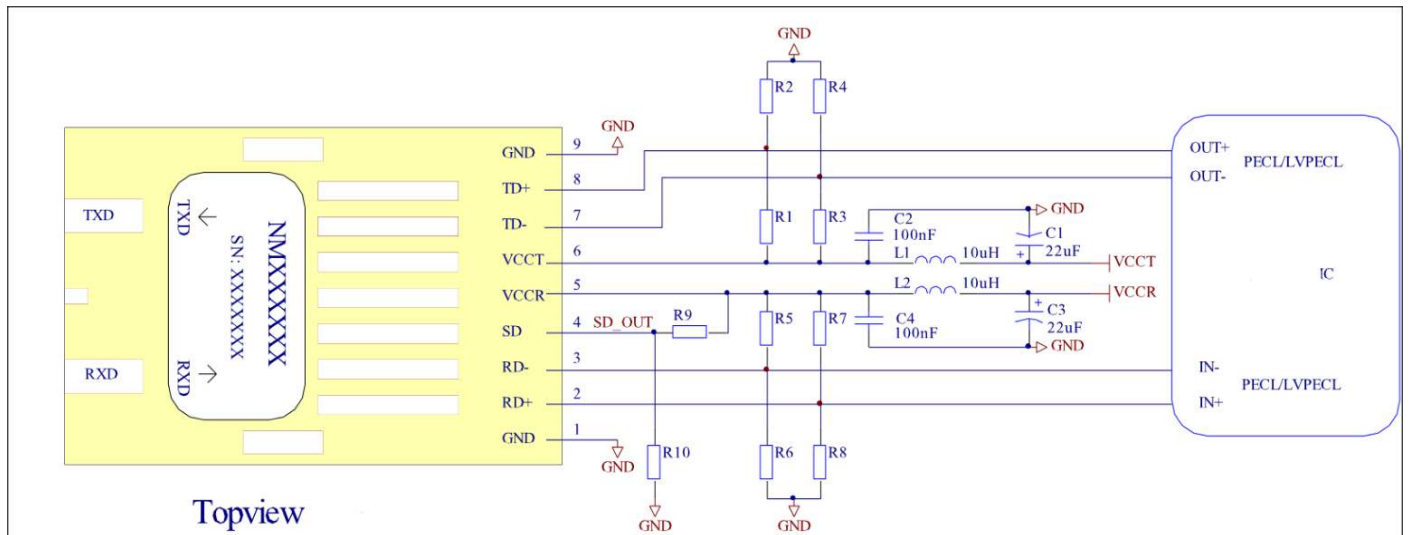
Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	VCC		+3.3		V
Operating Temperature	TOP	0	-	+70	°C

Pin Assignment



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Recommended Circuit



Note: FOR +5.0V OPERATION.

$R2 = R4 = R6 = R8 = R10 = 130\Omega$

$R1 = R3 = R5 = R7 = R9 = 82\Omega$

$C2 = C4 = 100\text{nF}$, $C1 = C3 = 22\mu\text{F}$

$L1 = L2 = 10\text{ }\mu\text{H}$ COIL OR FERRITE INDUCTOR

TD+, TD-, RD+, RD- WIHT 50Ω MICROSTRIP SIGNAL PATHS BE USED

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Mechanical Dimensions

