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Product Datasheet

AFCT-5805AZ-C (5V)

Avago Broadcom® Compatible 155Mb/s 1x9 Transceiver

Duplex SC, +5V, LD-FP, Single Mode, 15km, -40 ~ 85°C

FEATURES

- 1X9 Pin Package, Single-Mode Transceiver
- Single +5V Power Supply
- Extended Operating Temperature Range: -40 ~ 85°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-5805AZ 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℃)

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

Recommended Operating Environment

Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	VCC	+4.75	+5	+5.25	V
Operating Temperature	TOP	-40	-	+85	℃

Pin Assignment

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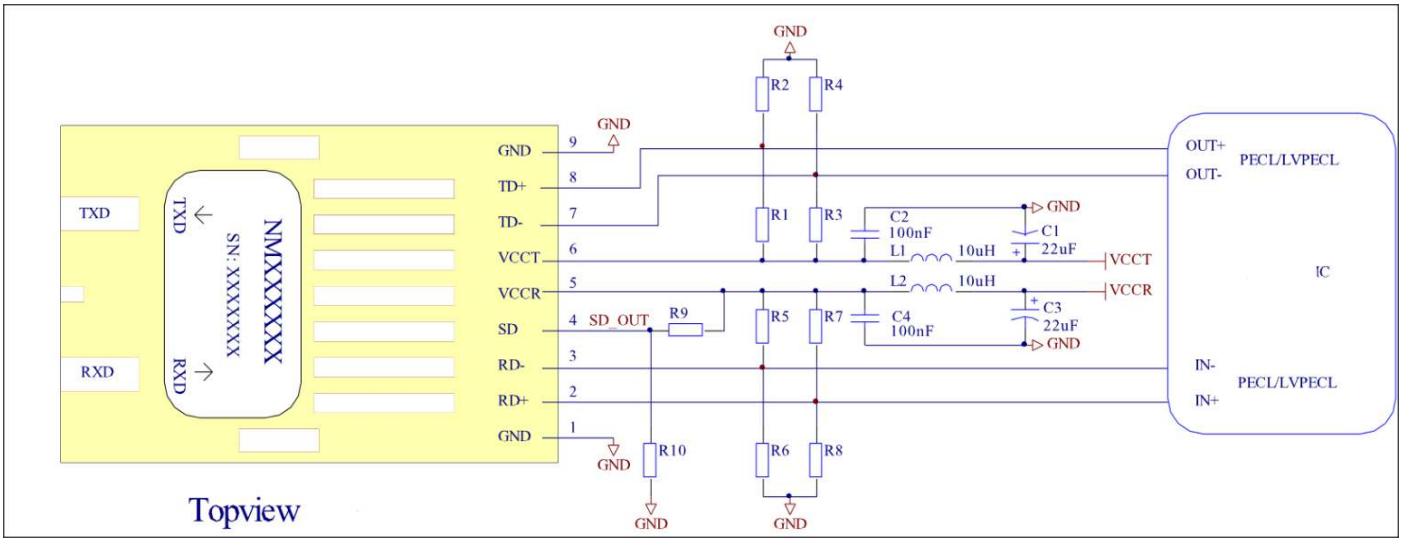
Recommended Circuit



Note: FOR +5.0V OPERATION.
R2 = R4 = R6 = R8 = R10 = 130Ω
R1 = R3 = R5 = R7 = R9 = 82Ω
C2=C4=100nF, C1=C3=22uF
L1 = L2 = 10 μH COIL OR FERRITE INDUCTOR
TD+,TD-,RD+,RD- WIHT 50Ω MICROSTRIP SIGNAL PATHS BE USED

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Mechanical Dimensions