

# Technical Datasheet

## AFCT-5179AZ-C (3.3V)

### Avago Broadcom® Compatible 155Mb/s 1x9 Transceiver

Duplex SC, +3.3V, LD-FP, Single Mode, up to 20km, Industrial Temperature

#### FEATURES

- 1X9 Pin Package, Single-Mode Transceiver
- Single+5V Power Supply
- Fully Compliant with ITU-TG957, G958 Specification
- PECL Logic Interface
- Class 1 Laser Product, Compliant with IEC 60825-1
- Compliant with Telcordia (Bellcore) GR-468-CORE
- RoHS Compliant
- Industrial Operating Temperature Range: -40 to 85°C

#### APPLICATIONS

- SONET/SDH/PDH
- ATM

#### DESCRIPTION

ATGBICS® Compatible AFCT-5179AZ-C 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 1310nm. 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	$\lambda_c$	1270	1310	1360	nm
Output Spectral Width	$\Delta\lambda$ (RMS)	Compliant with ITU-T G.957			nm
Average Output Power	Po	-15	-	-8	dBm
Extinction Ratio	E.R.	10	-	-	dB
Supply Current	ICC	-	-	70	mA
Output Optical Eye	Compliant with ITU-T G.957				
Data Input Voltage-High, Low	VIH-VCC	-1.49	-1.3	-1.19	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	-	-	-34	dBm
Maximum Input Power	PMAX	-3	-	-	dBm
Signal Detection-Asserted	PH-L	-37	-	-	dBm
Signal Detection-Deserted	PL-H	-	-	-45	dBm
Operating Wavelength	$\lambda_c$	1100	-	1600	nm
Supply Current	ICC	-	80	100	mA
Date Output High Voltage	VOH-VCC	-1.1	-	-0.9	V
Date Output Low Voltage	VOL-VCC	-1.89	-	-1.6	V

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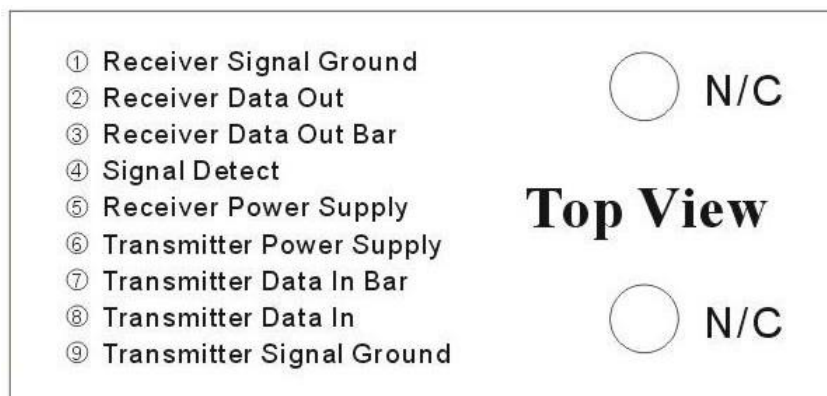
Absolute Maximum Ratings: (T<sub>c</sub> = 25°C)

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TST	-40	+85	°C
Operating Temperature	TIP	-40	+85	°C
Supply Voltage	VCC	0	+3.3	V
Input Voltage	VIN	0	VCC	V
Output Current	IO	0	30	mA
Soldering Temperature & Time	-		240/10	°C/S

Recommended Operating Environment

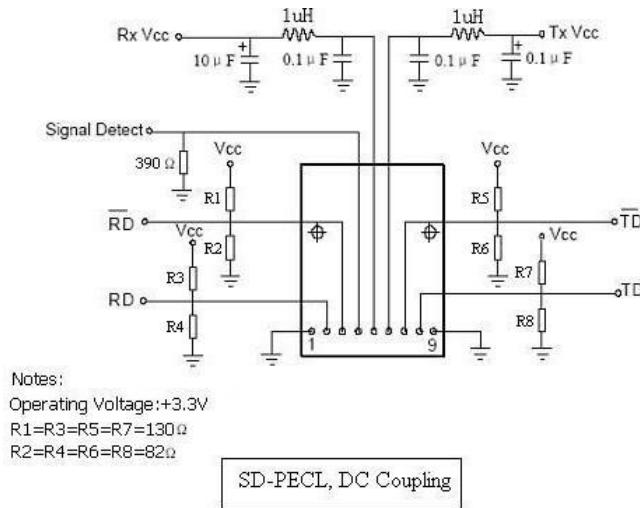
Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	VCC	+3.1	+3.3	+3.6	V
Operating Temperature	TOP	-40	-	+85	°C

Pin Assignment:



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**Recommended Circuit:**



**Mechanical Dimensions (units: mm)**

