AFBR-7CERxxZ

10G Ethernet SFP+ Active Optical Cable (AOC)



Product Brief

Description

The Avago Technologies' AFBR-7CERxxZ Active Optical Cable (AOC) is part of a family of SFP+ products to serve 10Gb Ethernet (10GbE) applications. The letters "xx" of the part number AFBR-7CERxxZ denote the cable length in meters. The AFBR-7CERxxZ AOC is designed to enable 10GbE equipment designs with very high port density based on the electrical and mechanical specification enhancements to the well known SFP specifications developed by the SFF Committee. The specifications are referred to as "SFP+" to represent the enhancements over previous SFP specifications. The SFP+ AOC have a cable length up to 20m. These AOCs can be used as an alternative solution to SFP+ passive and active copper cables, while providing improved signal integrity, longer distances, superior electromagnetic immunity and better bit error rate performance.

Part Numbers

| AFBR-7CER01Z | 1 meter SFP+ Active Optical Cable | |
|--------------|------------------------------------|--|
| AFBR-7CER02Z | 2 meter SFP+ Active Optical Cable | |
| AFBR-7CER03Z | 3 meter SFP+ Active Optical Cable | |
| AFBR-7CER05Z | 5 meter SFP+ Active Optical Cable | |
| AFBR-7CER07Z | 7 meter SFP+ Active Optical Cable | |
| AFBR-7CER10Z | 10 meter SFP+ Active Optical Cable | |
| AFBR-7CER15Z | 15 meter SFP+ Active Optical Cable | |
| AFBR-7CER20Z | 20 meter SFP+ Active Optical Cable | |
| AFCT-5016Z | SFP+ Evaluation Board | |

Applications

- 10 Gigabit Ethernet (10GbE)
- 8G Fibre Channel (8GFC), Fibre Channel over Ethernet (FCoE)
- InfiniBand (QDR/DDR/SDR)
- Data Center Networking
 - Converged Enhanced Ethernet Data Centers
 - Data Center Bridging
- Networked storage systems
- High Performance Computing
- Proprietary Interconnects

Features

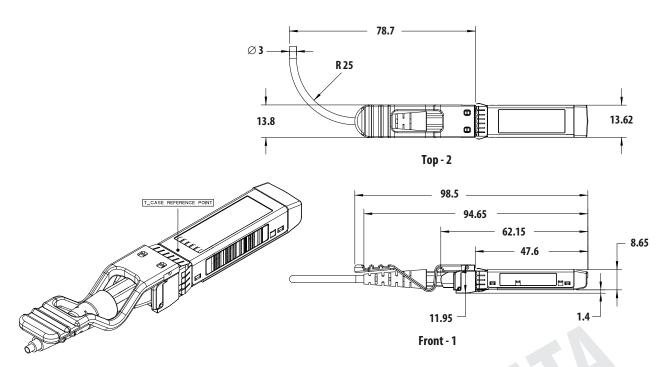
- Proven High Reliability 850 nm technology: Avago VCSEL transmitter and Avago PIN receiver
- Maximum power dissipation 350 mW per Active Cable end
- Avago SFP+ package design enables equipment EMI performance in high port density applications with margin to Class B limits

Specifications

- Electrical specifications per SFF-8431 Specifications for Enhanced Small Form Factor Pluggable Module SFP+
- 0 to 70°C case temperature operating range
- Rx_LOS and Tx_DISABLE supported
- Mechanical specifications per SFF Committee SFF 8432 Improved Pluggable Formfactor "IPF"
- Compliant to Restriction on Hazardous Substances (RoHS) per EU and China requirements
- Class 1 eye safe per requirement of EN 60825-1 2007, EN 60825-2 A2 2010
- 1E-15 BER performance

Related Products

- The AFBR-703SDZ (AFBR-703ASDZ) is an SFP+ 10 Gigabit Ethernet 10GBASE-SR transceiver with case temperature operated at 0-70 (0-85) °C for use on multimode fiber cables. It is best suited for OM3 high bandwidth MMF link applications with link lengths up to 300 meters.
- AFBR-707SDZ SFP+ 10 Gigabit Ethernet 10GBASE-LRM transceiver for 220 meter operation in all MMF link applications including OM1 and OM2 legacy fiber cables and new high bandwidth OM3 fiber cables.
- The AFBR-704SDZ is an SFP+ transceiver for 10GbE 10GBASE-USR applications with case temperature 0-70 °C for use on multimode fiber cables up to 100m.
- AFCT-5016Z SFP+ Evaluation Board The purpose of this SFP+ evaluation board is to provide the designer with a convenient means for evaluating SFP+ fiber optic transceivers.



Key Parameters

| Parameter | Value | Units | Notes |
|----------------------------|-----------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data rate per lane | From 1 to 10.3125 | Gbps | No retimer or CDR devices embedded in the module. Allows operation at datarates below 10.3125Gbps |
| Protocols | 1 GbE, 10GbE 1/2/4/8/10 GFC SDR/DDR QDR | | Ethernet, Fibre Channel, InfiniBand, Other Protocols and Proprietary Datarates as well |
| Power Supply Voltage | 3.3 | V | +/- 5% |
| Temperature Range | 0 - 70 | °C | |
| Wavelength | 850 | nm | |
| Bit Error Rate Performance | 1E-15 | | |
| Management Interface | Two-Wire Serial | | Memory Map access Page A0h only per SFF-8472 Revision 11.0 |
| Laser Output Power | Class 1 | | EN 60825-1 2007, EN 60825-2 A2 2010 |
| Power consumption per end | 275 | mW | Nominal Power |
| Mechanical Specification | | | Mechanical specifications per SFF Committee SFF-8432 Improved Pluggable Formfactor "IPF" Can be installed in any INF-8074 or SFF-8431/2 compliant Small Form Pluggable (SFP) port |
| Electrical Interface | 20 | pins | SFF Committee SFF 8431 Specifications for Enhanced 8.5 and 10 Gigabit Small Form Factor Pluggable Module "SFP+" |

For product information and a complete list of distributors, please go to our website: **www.avagotech.com**

