0061704504-03-NT-PRO

ADVA® 0061704504-03 Compatible TAA Compliant 1000Base-DWDM 100GHz SFP Transceiver (SMF, 1531.90nm, 120km, DOM, 0 to 70C, LC)

Features

- INF-8074 and SFF-8472 Compliance
- Commercial Temperature 0 to 70 Celsius
- Duplex LC Connector
- Hot Pluggable
- Excellent ESD Protection
- Single-mode Fiber
- RoHS Compliant and Lead Free
- Metal with Lower EMI

Applications:

- Gigabit Ethernet over DWDM
- 1x Fibre Channel
- Access, Metro and Enterprise

Product Description

This ADVA® 0061704504-03 compatible SFP transceiver provides 1000Base-DWDM throughput up to 120km over single-mode fiber (SMF) using a wavelength of 1531.90nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent ADVA® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Proline's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products.

Rev. 030124

Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4
- ESD to the LC Receptacle: compatible with IEC 61000-4-3
- EMI/EMC compatible with FCC Part 15 Subpart B Rules, EN55022:2010
- Laser Eye Safety compatible with FDA 21CFR, EN60950-1& EN (IEC) 60825-1,2
- RoHS compliant with EU RoHS 2.0 directive 2015/863/EU

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Maximum Supply Voltage	Vcc	0		3.6	V	
Storage Temperature	TS	-40		+85	°C	
Operating Case Temperature	Tc	0		+70	°C	
Relative Humidity	RH	5		85	%	1
Electrical static discharge (HBM Model)	ESD	500		1000	V	2
Receiver Optical Damage Threshold	RXDmg			+3.5	dBm	3

Notes:

1. Non-condensing
2. ESD, per JEDEC JESD22-A114-B
3. This must not be exceeded

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	Vcc	3.14	3.3	3.46	V	
Power supply current	Icc			550	mA	
Total power dissipation	PD			1.8	W	

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Transmitter					
Signaling Rate				1.25	Gbps
Optical Output Power	Po	-1		+5	dBm
Transmission Distance		0		120	km
Transmitter Dispersion Penalty	TDP			2	dB
Extinction Ratio	ER	8.2			dB
Optical Eye Shape & Mask		IEEE 802.3ab			
Eye Mask Margin		10			%
Spectral Width				1	nm
Optical Frequency Tuning Range (5 bands)		192.00 (1561.42)		195.90 (1530.33)	THz (nm)
SMSR		30	35		dB
Optical Frequency Minimum Tuning Grid		100			GHz
Optical Centre Wavelength	λc	As per ITU-T 694.1			nm
Optical Frequency Accuracy (deviation from centre)		-12.5		+12.5	GHz
Time to Initialize Cooled Operation			10	90	Sec
Tuning Speed (Channel to Channel)				10	Sec
Receiver					
Receiver Wavelength Range		191.00 (1569.59)		197.00 (1521.79)	THz (nm)
Receiver Overload		-12			dBm
Receiver Sensitivity (BER lE-12, PRBS 231-1)				-30	dBm
Receiver Optical Reflectance				-27	dB
LOS assert		-35		-30	dBm
LOS assert/de-assert hysteresis		0.5		2.0	dB

Block Diagram

Pin Descriptions

Pin	Logic	Symbol	Name/Descriptions	Notes
1		VeeT	Module Transmitter Ground	1
2	LVTTL-O	TX Fault	Module Transmitter Fault	2
3	LVTTL-I	TX Disable	Transmitter Disable. Turns off laser output	3
4	LVTTL-I/O	SDA	2-wire Serial interface Data line	
5	LVTTL-I/O	SCL	2-wire Serial Interface Clock	
6		Mod ABS	Module absent, connect to VeeT or VeeR in the module	
7	LVTTL-I	RS0	Unused	
8	LVTTL-O	Rx LOS	Receiver Loss of Signal Indication	2
9	LVTTL-I	RSl	Unused	
10		VeeR	Module Receiver Ground	1
11		VeeR	Module Receiver Ground	1
12	CML-O	RD-	Receiver Inverted Data Output	
13	CML-O	RD+	Receiver Non-Inverted Data Output	1
14		VeeR	Module Receiver Ground	
15		VccR	Module Receiver 3.3V Supply	
16		VccT	Module Transmitter 3.3V Supply	
17		VeeT	Module Transmitter Ground	1
18	CML-I	TD+	Transmitter Non-Inverted Data Input	
19	CML-I	TD-	Transmitter Inverted Data Input	
20		VeeT	Module Transmitter Ground	1

Notes:
1. The module signal ground pins, VeeR and VeeT, are isolated from the module chasis ground.

2. This pin is an open collector/drain output pin and shall be pulled up with 4.7-10 kohms to power supply voltage between 3.3V and 3.5V on the host board.
3. TX_Disable is an input contact with a 4.7-10 kohm pull-up to VccT inside the module.

Electrical Pin-out Details
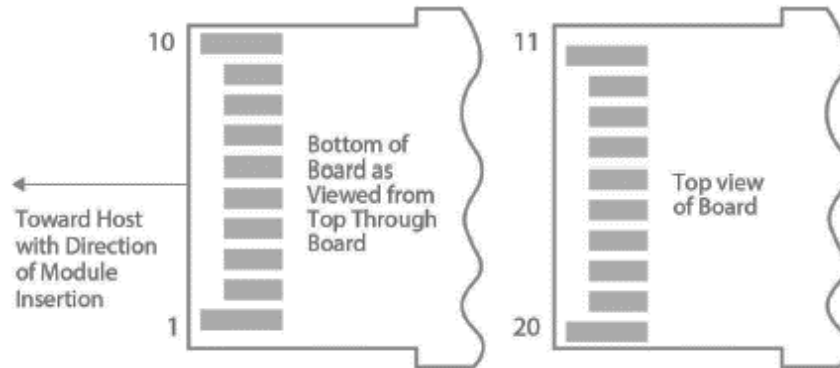
Mechanical Specifications

Small Form Factor Pluggable (SFP) transceivers are compatible with the dimensions defined by the SFP Multi-Sourcing Agreement (MSA).

W 13.9mm x L 56.5mm x H 11.85mm

About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.

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