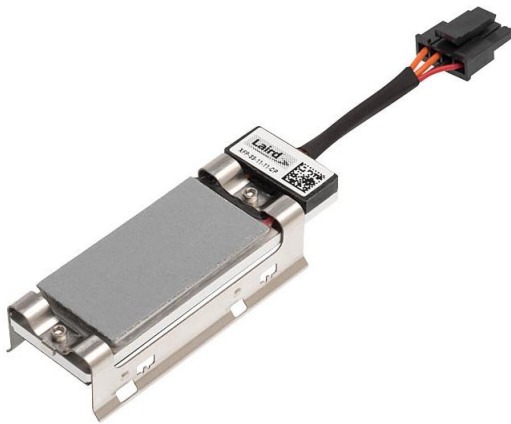


ATC Series XFP-33-11-11-CP

Active Transceiver Cooler



Americas: +1.919.597.7300
Europe: +46.31.420530
Asia: +86.755.2714.1166
ets.sales@lairdtech.com
www.lairdtech.com

XFP transceivers are used in communication's equipment to transmit data over fiber up to 1 km for outdoor applications. The upcoming 5G deployment requires faster data communications, which is driving higher temperatures due to increased heat flux densities. This has become a real challenge for optical transceivers where high temperature environments can exceed their maximum operating condition. The conventional passive thermal solution of heat sink with interface material is not capable of reducing the temperature below ambient, so an active cooling solution is required.

The Active Transceiver Cooler (ATC) is specifically designed for small form-factor pluggable (SFP) transceivers. The ATC thermoelectric assembly consists of a custom thermoelectric module (TEM), an aluminum base, Tflex thermal gap fillers, an NTC thermistor, fastener clips and connector.

Featuring a Coefficient of Performance (COP) rating above 1.0 without forced airflow, the customizable thermoelectric modules offer a highly reliable thermal solution built to operate in high temperature environments.

Laird Part number: 387001007

FEATURES

- Operation in high temperature environment
- High COP TEM
- Compact form factor
- Reliable solid-state operation
- RoHS compliant
- Telcordia GR-486 Core compliant

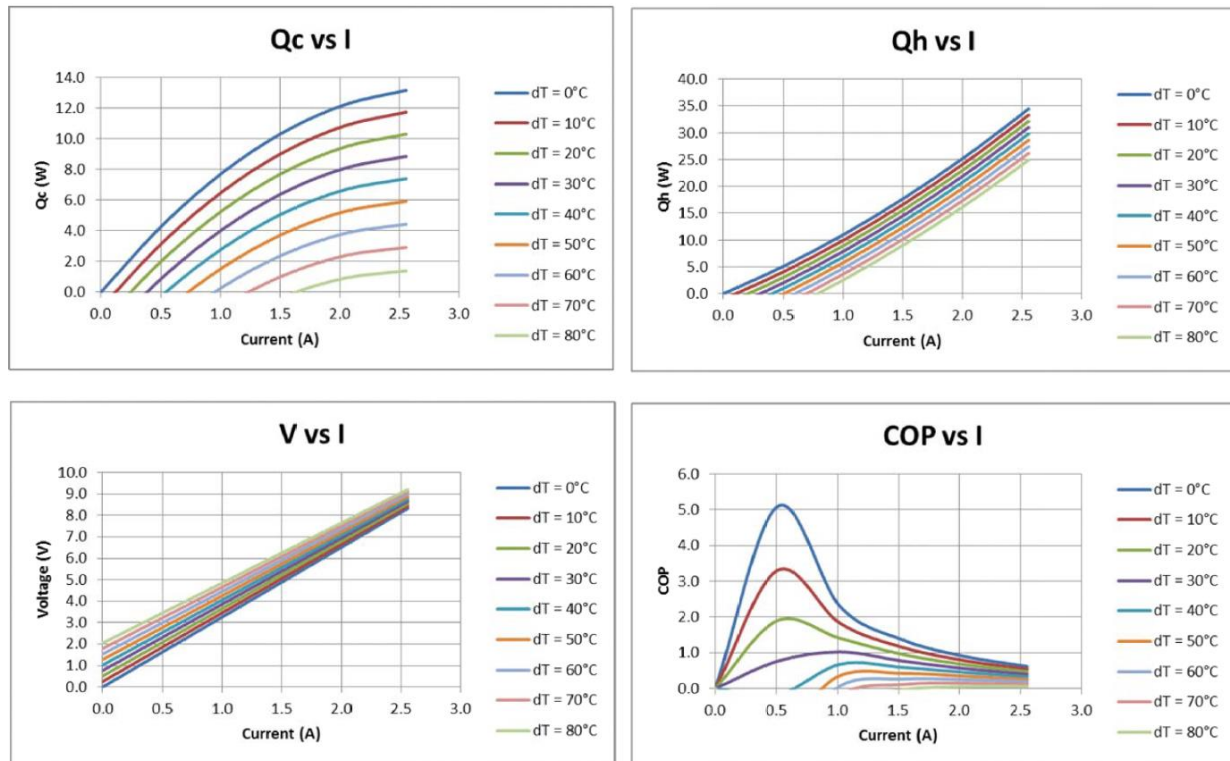
APPLICATIONS

- Telecom Infrastructure

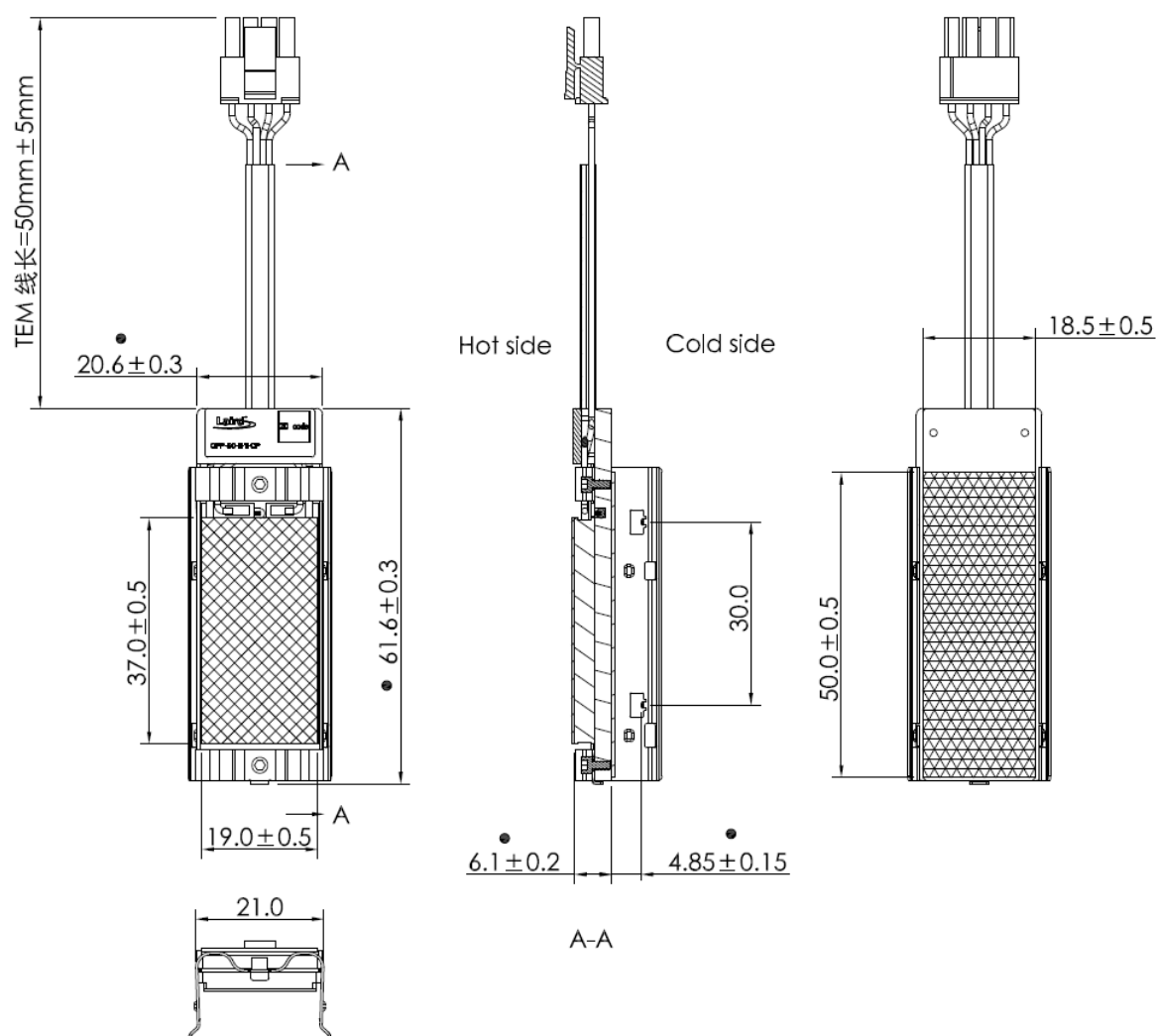
SPECIFICATIONS	
TEM Dimension (mm)	20 x 40 x 2.9
Clips	N
Height limitation (mm)	8
Max Voltage (V)	3.3
Power of SFP (W)	3.5
Quantity of SFP	4
Total Active Heat Load (W)	14
Temp of Hot Side (°C)	85
Delta T (°C)	30
Temp of Cold Side (°C)	55
COP	1
Size of EMI Cage (mm)	59 x 19
Cooling Power (W)	15 Watts @ $\Delta T=0^{\circ}\text{C}$, $T_a=95^{\circ}\text{C}$
Voltage Nominal (VDC)	3.30 VDC
TEM Voltage (VDC) Nominal	3.3 VDC, Max 8.0 VDC
TEM Current (A) Nominal	1.8A @ $\Delta T=0^{\circ}\text{C}$
Sensor Type	Thermistor, NTC nxft15xh103fa2b110
Connector Type	Crimp, Molex, Housing: 43645-0400, Terminal: 43030-0001
Weight	23.2 grams
Operating Temperature	-40 C to 95°C

PERFORMANCE CURVES

TEM module performance at $T_h=95^\circ\text{C}$



ISOMETRIC DRAWINGS



ATC CONNECTIONS

OBJECT	WIRE TYPE	COLOR	TERMINAL	RECEPTICLE HOUSING	POLE	PLUG HOUSING
TEM -	AWG #22	Red	Molex 43010-0001	Molex 43645-040	1	Molex 43640-0400
TEM +		Black			2	
NTC -		Black			3	
NTC -		Black			4	

INSTALLATION INSTRUCTIONS

To mount the ATC assembly to the EMI cage:

1. Remove the TIM protective liner from underside of assembly.
2. Align the fixed holes on the ATC with the fixed points on the cage (see figure 1)
3. Place fingers at pressed positions as indicated in figure 2
4. Firmly press ATC into place making sure ATC holes and cage points are latched

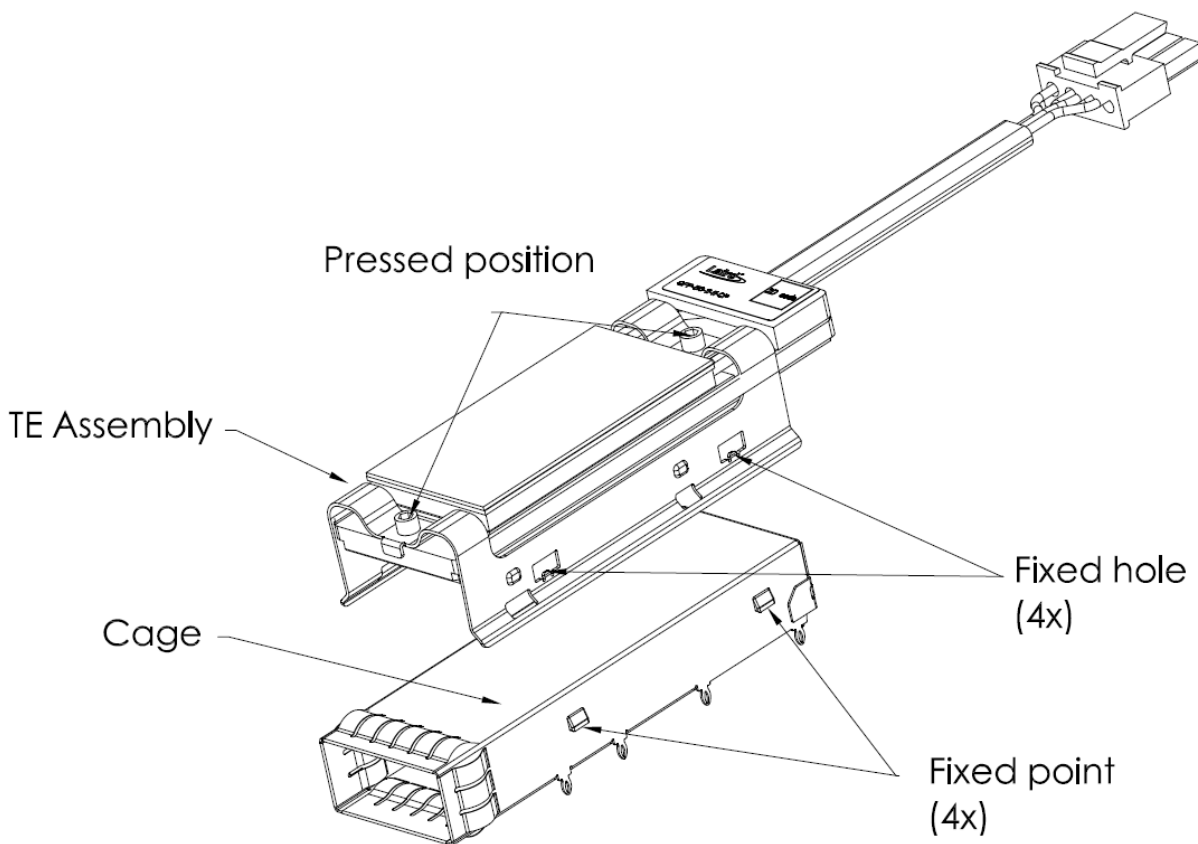


Figure 1: Alignment holes and points

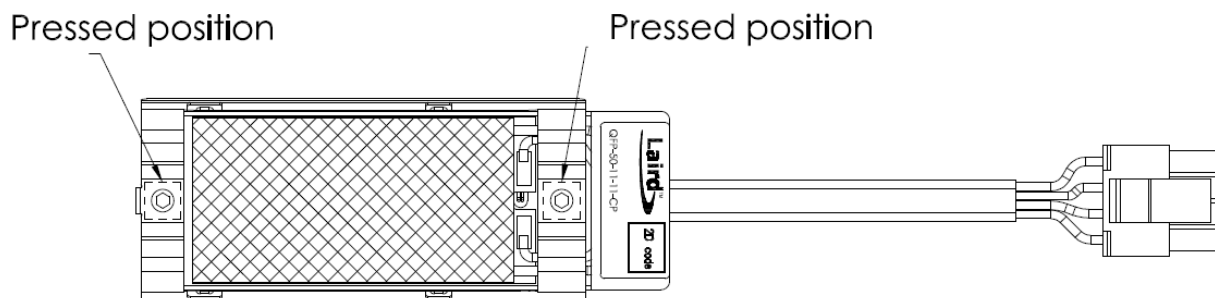


Figure 2: Press positions

NOTES

- Isolate the assembly from high humidity to minimize risk of condensation
- Avoid switching the power to TEMs at frequencies between 0.01 Hz to 5k Hz, which can cause premature failure of the TEM modules
- Max ripple on supplied power = 5%
- Input voltage must not exceed 8.0 VDC
- The hot side temperature of TEM must not exceed 120°C.

LAIRD-ETS-ATC-SFP-33-11-11-CP-DATA-SHEET-110117

Any information furnished by Laird Technologies, Inc. and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird Technologies materials rests with the end user. Laird Technologies makes no warranties as to the fitness, merchantability, suitability or non-infringement of any Laird Technologies materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies products are sold pursuant to the Laird Technologies' Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request. © Copyright 2017 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies Logo, and other marks are trademarks or registered trademarks of Laird Technologies, Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird Technologies or any third party intellectual property rights.