ZX200L508-HD Precision Terminated 50 Ohms Load Module

Zebax ZX200L508-HD is an 8 ports precision terminated 49.9Ω 0.1% load. The Terminated voltage is precision 3.3V 0.1% accuracy. It is designed for high speed applications (6GHz+) or any general purpose applications. It is USB based precision Load module supporting HDMI 2.0+ compliance test suit. This document lists the ZX200L508-HD precision terminated 50 Ohms load module which complements Zebax ZX200x series HDMI test fixture and 3rd party HDMI TPA-P or TPA-S HDMI test fixture.

This document identifies:

1. 8 Port precision load configuration.
2. Precision Load, 49.9Ω 0.1% tolerance.
3. Precision terminated supply voltage, 3.3Volts 0.1% accuracy.
4. Onboard 2x2 0.1" (2.54mm) pitch connector footprint interfacing with scope or general test equipment.

Revision History

Version	Date	Description
v01	Jan 14, 2017	Initial release –

1 Description

The Zebax ZX200L508-HD is an 8 port precision terminated load module. It is designed for 6GHz+ bandwidth applications or any general purpose test and development needs. It provides precision 49.9Ω 0.1% load as well as optional features, enabling various configurations. The termination voltage is precision 3.3V 0.1% or optional use of external power supply or source. ZX200L508-HD is designed supporting HDMI 2.0+ compliance test suit.

It has been designed for interfacing with Zebax ZX200x series HDMI test fixture and interfaces easily with 3rd party HDMI TPA-P or TPA-S HDMI test fixture or general test and measurement applications.

I. Provides 8 precision load ports - 49.9Ω 0.1% with optional features.

II. Precision terminated voltage 3.3V 0.1% accuracy - sourced from USB connector.

III. Each port is accessible for interfacing with scope via onboard 2x2 0.1" (2.54mm) pitch connector.

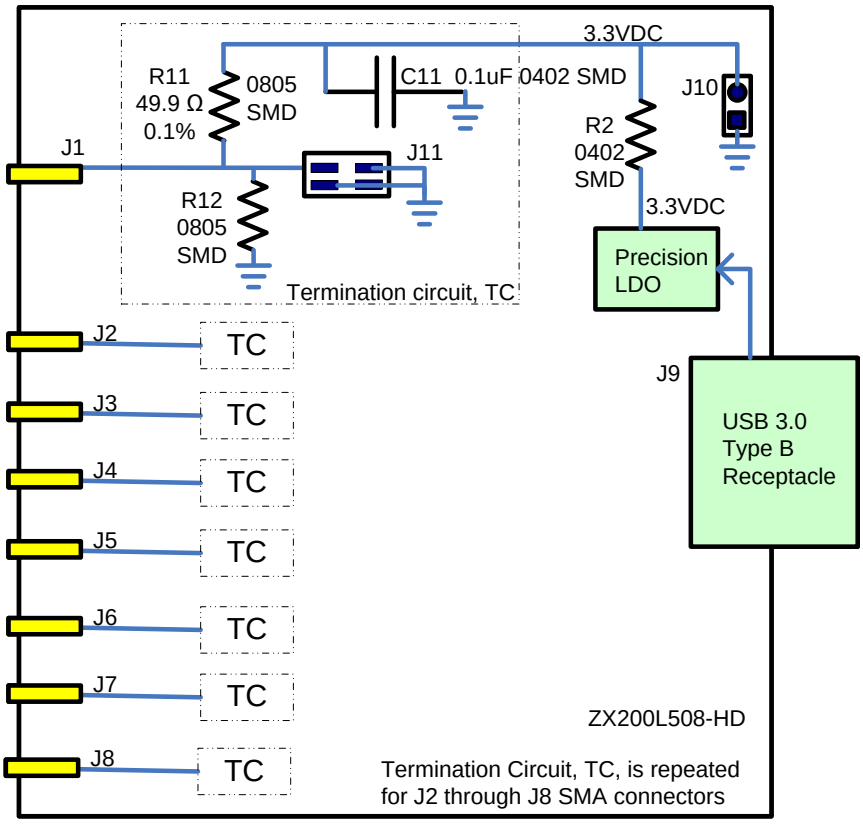
2 Zebax ZX200L508-HD Precision Terminated Load Module

Terminated Load Module

ZX200L508-HD is USB based precision 8 port terminated load module. It is designed for 6GHz+ bandwidth applications or any general purpose test and development needs. It provides precision 49.9Ω 0.1% load as well as optional features, enabling various configurations.

The termination voltage is precision 3.3V 0.1% or optional use of external power supply or source.

- Precision 49.9Ω 0.1% terminated load, R11.
- Onboard precision LDO generating 3.3V 0.1% accuracy with optional feature using external source, J10
- Configurable termination load offering termination to system ground, GND , or supply voltage, R11, R12.
- Designed to interface with any scope or test equipment via onboard 0.1" (2.54mm) 2x2 connector, J11.

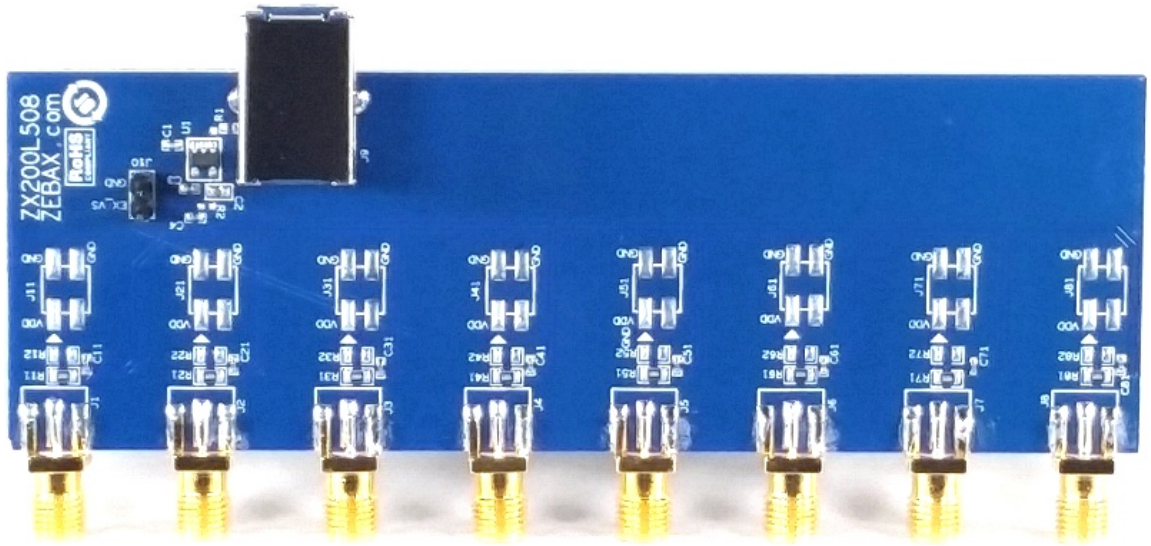


Note: To stimulate the termination circuit via external source, please remove **R2.**

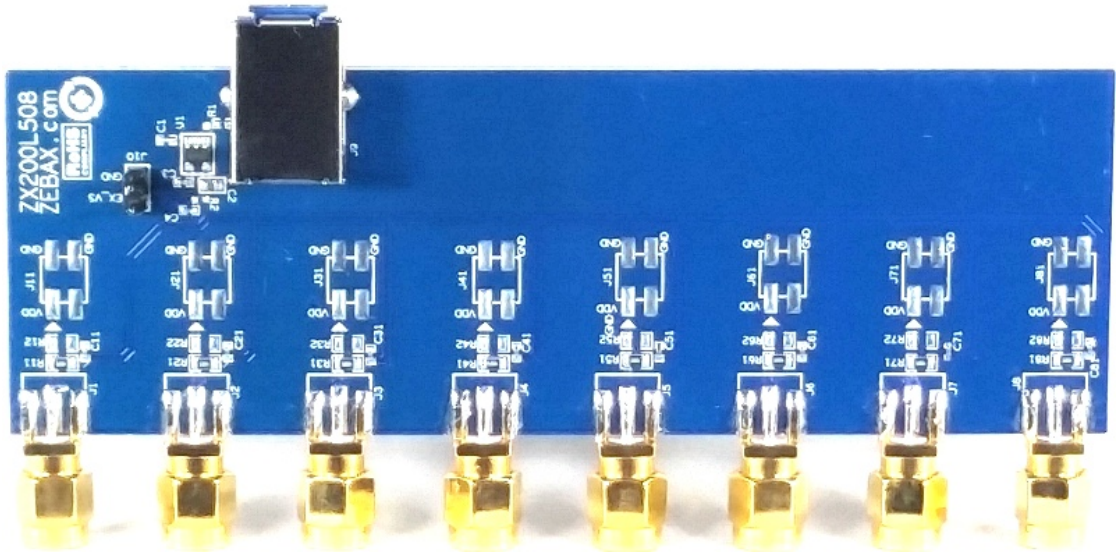
ZX200L508-HD Precision Terminated Load circuit diagram

Precision Terminated Load

The ZX200L508-HD is offered with precision 49.9Ω 0.1% resistive load for each 8 ports. Each port is accessible via standard SMA connector interface. ZX200L508-HS is offered with SMA Plug or SMA Jack connectors. It is designed supporting HDMI 2.0+ compliance test suit or any high speed or general application debug, validation test and measurement.



ZX200L508-HD - SMA Jack connectors



ZX200L508-HD - SMA Plug connectors

Precision termination supply

The ZX200L508-HD is designed using precision linear regulator, LDO, providing 3.3 Volts 0.1% tolerance. It requires USB port interface, requiring 5.0 Volts input. Applications requiring external precision supply voltage may bypass the onboard LDO by removing R2 and applying the external termination voltage at pin 2 of J10, J10.2.

Each Port is designed with 0.1uF (SMD 0402 package) capacitor to the termination supply voltage, please see C11.

Termination Load

The ZX200L508-HD provides 49.9Ω 0.1% resistive load for each of the 8 onboard ports. Additionally; the ZX200L508 provides stuffing option for termination load to system ground, GND , via R12.
R11 provides termination to the supply voltage where the R12 offers termination to the system GND.

The load configurable stuffing option provides ample solution for various design requirements meeting various design needs.

Test and Measurement Interface

The ZX200L508-HD provides footprint for 0.1" (2.54mm) 2x2 header, J11, where any scope probe or test equipment can be interfaced with. It provides excellent point of measurement with ease of access to the signal to GND test points.

Additionally the J11 may be applied with external loading configuration application to specific design needs.

Test Automation

ZX200L508-HD is an ideal precision terminated load module. It can be interfaced with test automation solutions, providing full validation coverage for any or all design needs.

Accessories

ZX200L508-HD is shipped with USB 3.0 cable assembly to interface to any USB port. The main supply voltage to the onboard LDO is applied via the USB port.

Zebax offers best in class HDMI Display Port, DP USB test fixture USB Type C test fixture (a.k.a. test board breakout adapter). ZX200L508 precision terminated load module is offered supporting full test & validation coverage along and test automation environment.

Zebax is dedicated in providing best in class solutions supporting engineering and technical communities in test and measurements disciplines.

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