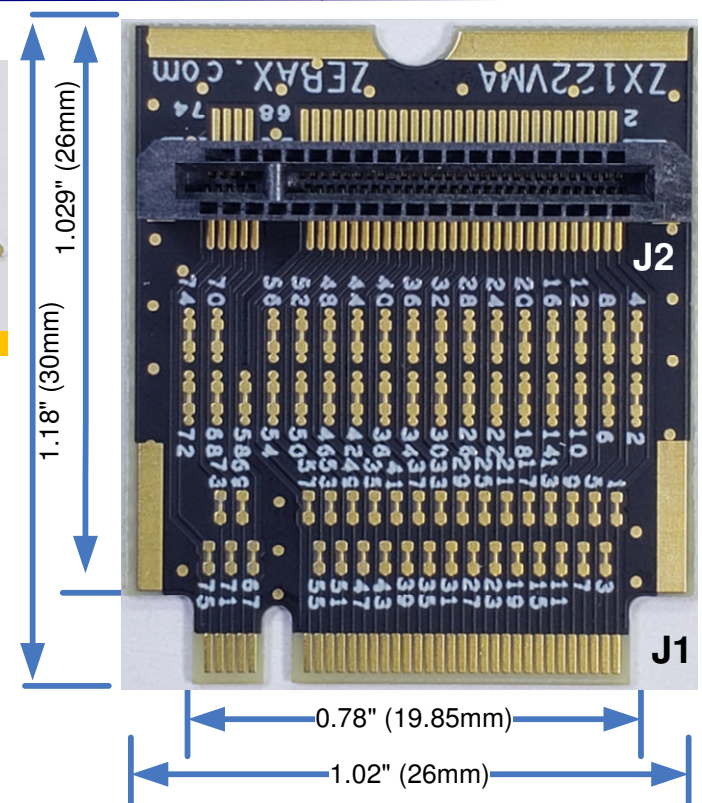
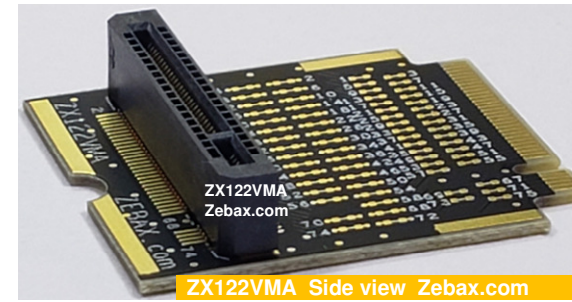


Product Name: ZX122VMA – PCISIG M.2 NGFF passive breakout adapter module

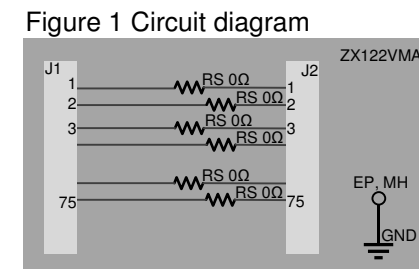
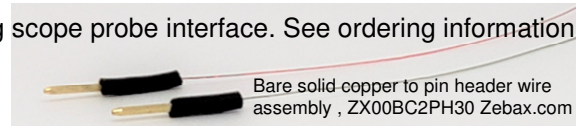
Product Description: ZX122VMA is PCISIG M.2 (NGFF) breakout adapter providing access to all PCISIG M.2 signals. It is designed to be placed in between Host and Target for real-time test and measurements. ZX122VMA is breakout adapter designed for Test & Measurement , signal integrity , characterization , test and debug of any PCISIG M.2 design via onboard 0405 SMD shunt landing pads.

ZX122VMA features:

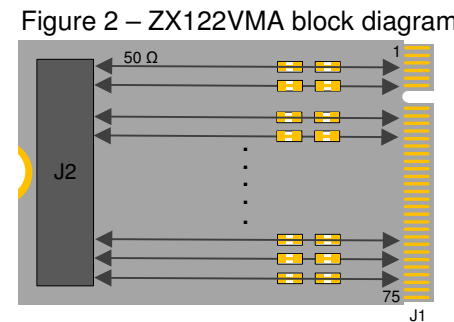
- 1- Provides access to ALL PCISIG signals via onboard 0402 SMD shunt packages, (67 signals on single M.2 Key design).
- 2- Each 0402 SMD shunt package may be cut and redirected to another signal (onboard or offboard) for test and debug.
- 3- Ideal breakout module for manufacturing / development loopback test.
- 4- Listed number adjacent to each 0402 SMD shunt package represents the PCISIG M.2 connector's pin number.
- 5- All traces are 50 Ohms impedance controlled with exceptional signal integrity & crosstalk.
- 6- Four layers PCB design, inner layers are GND planes with direct connection to GND stitching vias & top/bottom GND fills.
- 7- Accessible GND Exposed Copper, EP, enabling ease of access for test & measurement.
- 8- Mates with any M key M.2 Host and Device / DUT
- 9- Probing wire , ZX00BC2PH30, is offered to applications requiring scope probe interface. See ordering information



Electrical:
 Insertion loss > -1.6dB @6GHz
 Trace impedance: 50 Ω
 Operating Temperature: -65°C to +170°C
 M.2 Edge Connector type (J1) : see Ordering INFO
 Mates with: see Ordering INFO
 Plating: Gold 100U
 M.2 Receptacle (J2) :
 Key Type: see Ordering INFO
 Height: 0.16" (4.2mm) – See Figure 4
 Spacer : 0.1" (2.54mm) – See Figure 4
 Plating: Gold 100U
 Current per pin: 0.5A (maximum)
 Shunt:
 Package: 0402 SMD



RS - Shunt 0 Ω resistor , 0402 SMD package
 50 Ω : All traces are designed 50 Ω trace impedance control
 J1 : M.2 edge connector
 J2 : M.2 receptacle connector
 GND – Inner GND planes as well as GND stitching vias are available at the Exposed Copper, EP, and the Mounting Hole, MH.



Shunt 0402 SMD package 0 Ω
 50 Ω : All traces are designed 50 Ω trace impedance control
 J2 : PCISIG M.2 receptacle connector – See Ordering Information for details

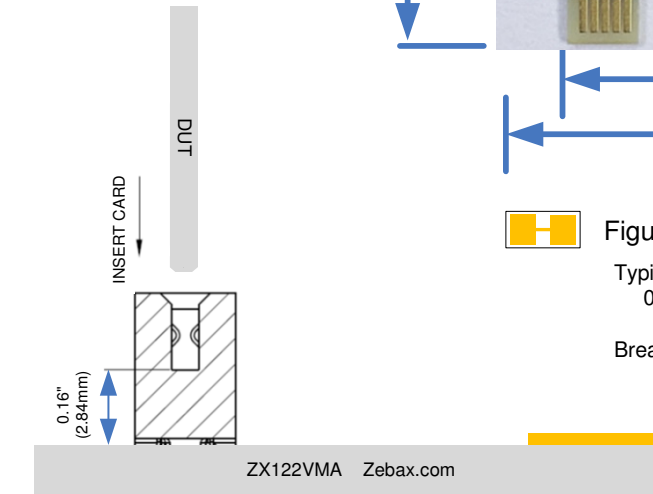


Figure 3 – ZX122VMA typical application

Figure 4- 0402 SMD shunt – not scaled
 Typical signal connection:
 Break signal path:

Application: Bringup, testing, emulation, development, modular design evaluations of PCISIG M.2 (NGFF – Next Generation Form Factor). Manufacturing - Development loopback test. M.2 PCISIG module design test characterization. DP WIFI GPS GYRO Compass BT FM sensor module Add-in Card DisplayPort SDIO WWAN PCIe-based SSD SATA-based PCIe / USB 3.1 SSIC Gen1-Based Socket 1 2 3. NGSFF NF1 EDSFF interface solution.

Mates with : Any standard M.2 Key ID M NGFF PCISIG connectors on host and device.

Ground Access : ZX122VM's exposed copper is the reference GND. The ZX122VMA is 4 layers PCB design where the 2 inner layers are ground reference planes. The Ground stitching vias, the top / bottom ground fills & the inner ground planes are all interconnected, hence referred as "GND".

For improved signal integrity, it is recommended to follow the below listed steps:

- 1- Ensure the Mounting Screw has full contact with ZX122VMA exposed copper, GND.
- 2- Connect One of the exposed copper to system GND.

Compliance:

ISO2001 certified
 RoHs - Lead Free
 EU RoHS2
 UL E111594 document
 ELV- Vehicle Directive (Directive 2000/EC)
 European Union Directive (203/11/EC)
 Halogen Free per IEC-61249-2.21 : 2003
 RoHs Directive 2011/65/EU
 WEEE Directive (2012/12/EU)
 Certificate of Compliance for Radioactive substances
 Certificate of Compliance for Asbestos
 Certificate of Compliance for Ozone Depleting Substances, ODS
 Certificate REACH SVHC
 Certificate of Compliance RoHS_EN_CoC

Ordering Information:

Part number	J1 Key ID	J2 Key ID	Description
ZX122VMA	M	M	PCISIG M.2 passive breakout adapter

ZX00BC2PH30 30AWG Bare Copper wire to pin header wire assembly

ZX00BC2PH30 site page for viewing ZX00BC2PH30 wire assembly

Note ALL ZEBAX products are RoHS compliant and Lead Free unless otherwise indicated.

ZEBAX TECHNOLOGIES SANTA CRUZ, CA U.S.A (831) 222-0717 WWW.ZEBAX.COM		
SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT		ASSEMBLY DRAWING ITEM: ZX122VMA M.2 NGFF PCISIG
DESCRIPTION: PCISIG M.2 NGFF passive breakout adapter module keys M		
CHECKED: M. MARINA	DRAWN: SONYA	REVISION: 1.0 SHEET: 1 OF 1

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