

Product Name: ZX230CAPC USB type C test fixture TPA-P TDR electrical test fixture breakout adapter for 10+GHz bandwidth

Product Description: USB Type C TPA-P TDR electrical test fixture breakout adapter supporting **USB Type C** connector Plug. **ZX230CAPC** TPA USB type C electrical test fixture is designed for application requiring USB type C connector, but have application specific signal assignments, including **Display Port (DP) HDMI** , connector characterization and more. ALL USB type C signals are accessible for test and measurement. ZX230CAPC is designed for 16GHz applications offering reduced insertion loss and full flexibility in adapting to any designs applications for purpose of validation, characterization and functional test.

The ZX230CAPC is multi-layers PCB with 50 Ohms trace impedance. USB type C test fixture offering best in class signal integrity and performance. The test fixture is designed to meet variety of applications using USB type C connector such as DP, HDMI and more.

- 1- All signals (from USB type C connector) are accessible at SMA connector.
- 2- All USB type C signals have onboard 0402 SMD footprint (not populated) in order to accommodate any/all application specific applications.

- Any of the USB type C signals may be assigned to system GND via onboard 0402 SMD footprints. As default the 0402 SMD components are not populated.

- Any of the USB type C signal may be loaded with 50 Ohms or EMI filter (for testing) via onboard 0402 SMD footprint.

- 3- Using ZX00SMAS-P cable assembly, the ZX230CAPC may be interfaced with any test equipment, evaluation module requiring standard pin header.

ZX230CAPC is offered with 8" (20cm) long semi-flexible cable assemblies with SMA Plug or Jack connectors interfacing directly to scope probe or other cable assemblies, Please see ordering Information. Cable replacement or longer 16" (40cm) cable assemblies can be purchased, see "**Package Includes**". ZX230CAPC USB type C electrical test fixture is characterized using the supplied 8" (20cm) long cable assemblies. Tektronix DPO71604C scope using P7313SMA differential probes requires -P (SMA Plug cable assembly). Keysight (Agilent) DSA164A Infiniium scope using N2800A probes + differential probe leads N5444A,

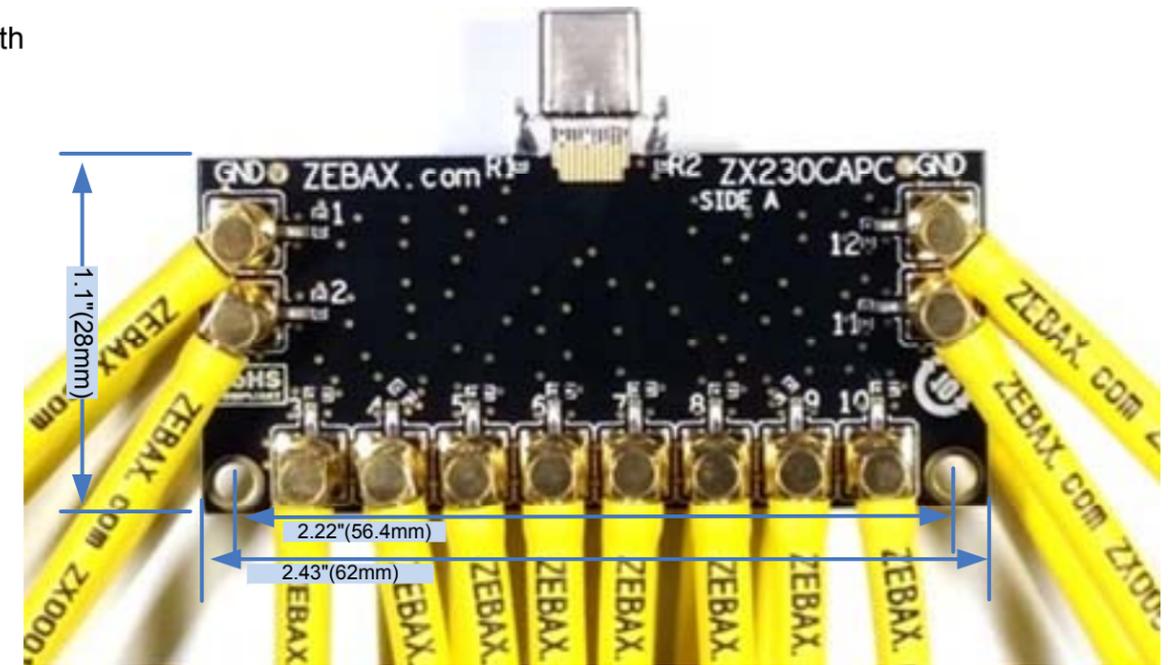
Application: Full USB 3.1 electrical compliance test fixture – Electrical measurement of application specific designs using USB Type C connector such as Display Port, DP, HDMI , connector characterization and more.

Supported bandwidth: Supporting SuperSpeed Gen1 (2.5GHz) SuperSpeed Gen2 (5GHz) and future 20Gbps (10GHz) Nyquist frequencies, bandwidth.

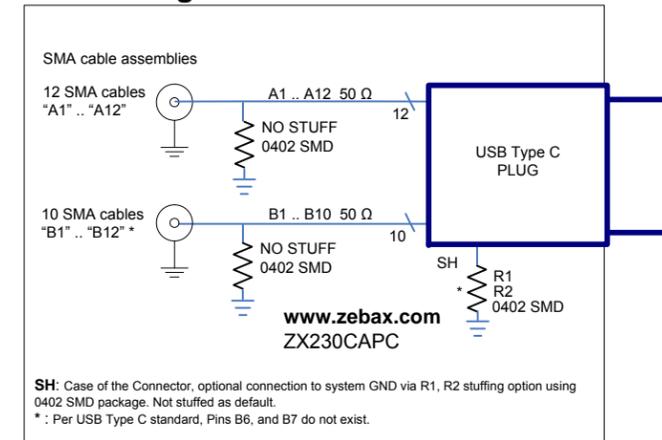
Mates with : **USB Type C Socket (receptacle)** connector.
SMA connectors mates with standard SMA cable assembly , see ordering information

Package includes:

Item	Part number	Quantity	Description
1	ZX230CAPC	1	USB Type C test fixture
2	ZX00010308R-US	1	Complete set (24pc) of USB 8" (20cm) long coax cable assemblies, SMA Jack.
	or ZX00020308R-US	1	or SMA Plug – Please see ordering information.
3	ZX230CP	0	USB Type C test fixture
4	ZX230CAP	0	USB Type C test fixture - application specific
5	ZX00SMAH-P	0	SMA to 2 pin header cable assembly
6	ZX00WT-09NM	0	SMA Wrench Torque 5/16" (8mm)

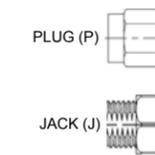


Circuit Diagram



SH: Case of the Connector, optional connection to system GND via R1, R2 stuffing option using 0402 SMD package. Not stuffed as default.
*: Per USB Type C standard, Pins B6, and B7 do not exist.

See Page 2 for more information



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

Ordering INFO:
Part Number
ZX230CAPC-X options
J : SMA Jack (Standard)
P : SMA Plug connector

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SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING	
	ITEM: ZX230CAPC	
DESCRIPTION: USB 3.1 Type C Plug TPA-P electrical test fixture board breakout adapter Gen1 Gen2		
CHECKED: M. MARINA	DRAWN: SLAVIK	REVISION: 1.0 SHEET 1 OF 2

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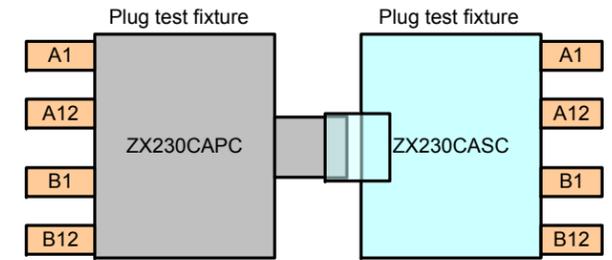
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S-Parameter, Insertion loss: The ZX230CAPC USB type C test fixture exhibits unprecedented insertion loss. Using Agilent NA, the s-parameter for all the signal lanes have been complied for reference, see below.

Test case: Using mated network configuration (ZX230CAPC – ZX230CASC)

S-Parameter files: [ZX230CAPC-ZX230CASC](#) – It is .7z file. It consists of 22 .s4p files.



Test network : ZX230CAPC – ZX230CASC Plug and Receptacle via the supplied SMA cable assembly

S12 : A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12
S11: B6, B7 on ZX230CASC module only



SMA Cable Assembly is semi-flexible coax cable with maximum bends of 35mm. Please do not over exert beyond the cable's tolerance.



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