ZX127HSEC-84S ZEBAX.com Product Name: ZX127HSEC6-84V Samtec GENERATE HSEC6 / Mini Cool Edge IO, MCIO, breakout adapter Page 1 OF 2 **PLEASE NOTE –** Pictures on this document are placeholders along Product Description: ZX127HSEC6-84V is Samtec HSEC6 0.6mm pitch also referred as Mini Cool Edge IO, MCIO / SFF-TA-1002, breakout adapter. with dimensions. This document will be updated in 10 days. ZX127HSEC6-84V is designed for test & measurements of Add-In-Card, AIC, in real-time electrical test & measurements, signal integrity, characterization, manufacturing loopback test applications. ZX127HSEC6-84V is breakout adapter, supporting Samtec GENERATE HSEC6 / MCIO edge card 0.6mm pitch connectors using 1.6mm PCB thickness. It provides full access to all HSEC6 / MCIO connector's signals via onboard headers for purpose of test & measurement of AIC. 1- Provides access to all Samtec HSEC6 / MCIO signals via onboard headers. 2- The headers are standard 0.1" (2.54mm) pitch. 3- Listed number adjacent to each header's pin is in reference to the Samtec HSEC6 / MCIO connector's pin. 4- All traces are impedance controlled. 5- Four, 4, layers PCB design, inner layers are GND planes. 6- Accessible GND test point. The test point is connected to inner GND planes. ZX127HSEC6-84V simplified cross section diagram 7- Ease of interface with single channel and differential scope probes. 8- Facilitates Add in Card, AIC, testing & development. 9- Flying lead wire assembly or similar is recommended - See ordering information **Electrical:** Insertion loss > -2dB @6GHz HDR: Header Trace impedance:  $50 \Omega$ Operating Temperature: -55°C to +125°C Connector: Samtec HSEC6 / MCIO 0.60mm pitch Mates with: Add in Card, edge card test board Pitch: 0.60mm pin to pin pitch Thickness: 1.6mm (0.062") Plating:  $10\mu$ " (  $0.25\mu$ m ) Header: Inner layers GND planes Pitch: 0.1" (2.54mm) pin to pin pitch Inner lavers GND planes Pin: Square 0.025" ( 0.635mm ) Height: 0.24" (6mm) Signal lavers Plating: Gold Flash ZX100ACC-SS Ground layers. Please note – The GND test point is connector to: Flying leads wire assembly 2- The inner layers ground planes Application: Manufacturing test measurement & re-use, design, testing, debugging C # HSEC6 / MCIO signals path to headers loopback test, characterization, pre-bringup, bringup, interface Mates with: Samtec GENERATE High Speed Edge Card Add in card HSEC6 & GC6 cable assembly Industry standard Mini Cool Edge IO, MCIO, SFF-TA-1016, SFF-TA 1002, GEN-Z 1C Amphenol G97, GH01 series. ACES Electronics, LOTES MET005610101011 ME1005610203071 ME1005610201091 ME1005611201041 ZX127HSEC6-84V package includes: ME1005611202041 ME1005610211081 ME1005610205081 ME1005613401101 Part number **Quantity Description** ME1005634478101 Compliance: ZX127HSEC6-84V **Breakout Adapter** ISO2001 certified В ZX100ACC-SS Flying lead wire assembly RoHs - Lead Free **Industry Standard:** HSEC6 & MCIO connectors have been adopted by industry standards such as: EU RoHS2 UL E111594 document SFF-TA 1002, SFF-TA-1016, PCI Express Gen 3.0, 4.0, 5.0, 6.0, OCP DC-MHS (HSIO recommended) ELV- Vehicle Directive ( Directive 2000/EC) ALL ZEBAX products are RoHS compliant and Lead Free unless otherwise indicated Supporting Up to 64 Gbps PAM4 performance. PCIe, NVMe, SAS, SFP(+), SFP 28 European Union Directive (203/11/EC) Halogen Free per IEC-61249-2.21 : 2003 ZEBAX TECHNOLOGIES RoHs Directive 2011/65/EU WEEE Directive (2012/12/EU) SANTA CRUZ, CA U.S.A (831) 2 2 2 - 0717 WWW.ZEBAX.COM Certificate of Compliance for Radioactive substances Certificate of Compliance for Asbestos ASSEMBLY DRAWING SPECIFIED DIMENSIONS Certificate of Compliance for Ozone Depleting Substances, ODS ARE INCHES (MM). Certificate REACH SVHC ITEM: ZX127HSEC6-84V ROHS COMPLIANT Certificate of Compliance RoHS EN CoC Samtec HSEC6 / Mini Cool IO, MCIO, **DESCRIPTION:** ALL ZEBAX TECHNOLOGIES DESIGN SPECIFICATIONS, DRAWINGS, PUBLICATIONS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." ZEBAX MAKES NO WARRANTIES, EXPRESSED, **Breakout Adapter** IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NO INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE Information furnished is believed to be accurate and reliable. However, Zebax Technologies assumes no responsibility for the consequences of use of such information or for any infringement of patents or other rights of third parties that may result from its use. CHECKED: DRAWN: REVISSION: 1.0 Specifications mentioned in this publication are subject to change without notice. This publication replaces all other information previously supplied. Zebax Technologies products are not authorized as in life support devices or systems M. MAHIN KADIJEH SHEET: 1 OF 2

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**Product Name:** ZX127HSEC6-84V Samtec GENERATE HSEC6 / Mini Cool Edge IO, MCIO, breakout adapter - Page 2 OF 2 Ground: ZX127HSEC6-84V is 4 layers PCB design where the inner layers are Ground layers. They are connected to the GND test point as well as top & bottom GND fills. For improved signal integrity, please connect the GND test point to system GND reference point. See Cross Section diagram for details. Typical Application: ZX127HSEC6-84V is designed for purpose of test and debugging at full connector's bandwidth. It provides new approach in usage of breakout adapters by: 1- Utilizing single or differential scope probe. 2-Test and measurement, manufacturing loopback test, validation, pre-bringup applications. **Scope Probe wire Installation:** 1- It is recommended to keep the probe wire length at 0.5" (1.2cm) long. 2- In order to avoid ground loop problems, please use the shortest Ground probe wire interfacing to the nearest GND reference point. ZX127HSEC6-84V provides GND test point to be utilized as GND reference interface with host. SFF-TA-1002 1C ( 2 rows x 28 pins/row ) 56 pins standard- Below are listed signals and Ground pins assignments for the SFF-TA-1002 standard, please refer to the standard for formal signals map naming. This table denotes "SIG" or "GND" PIN geometry locations. The Grounds are not bussed together in the connector or the ZX127HSEC6-84V breakout adapter. The listed GND signals are routed similar to the SIG signals, they are all individually routed signals. Header pin access configuration: Table below is header's pin configuration ZX127HSEC6-84V header pin assignments **OA11** J2 OA8 OB11 OB6 OB10 OB14 64 OB1 OB5 OB9 Header pin numbers refer to the HSEC6 / MCIO connector's pin numbers В HSEC6 / MCIO footprint: ZX127HSEC6-84V mates with industry standard footprint for SFF-TA-1002 1C ( 2rows x 28 pins per row ) 56 pins connectors. ALL ZEBAX products are RoHS compliant and Lead Free unless otherwise indica ZEBAX TECHNOLOGIES SANTA CRUZ, CA U.S.A (831) 2 2 2 - 0717 WWW.ZEBAX.COM ASSEMBLY DRAWING SPECIFIED DIMENSIONS ARE INCHES (MM). ITEM: ZX127HSEC6-84V ROHS COMPLIANT Samtec HSEC6 / Mini Cool IO, MCIO, **DESCRIPTION:** ALL ZEBAX TECHNOLOGIES DESIGN SPECIFICATIONS, DRAWINGS, PUBLICATIONS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." ZEBAX MAKES NO WARRANTIES, EXPRESSED, **Breakout Adapter** IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NO INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE Information furnished is believed to be accurate and reliable. However, Zebax Technologies assumes no responsibility for the consequences of use of such information or for any infringement of patents or other rights of third parties that may result from its use CHECKED: DRAWN: REVISSION: 1.0 Specifications mentioned in this publication are subject to change without notice. This publication replaces all other information previously supplied. Zebax Technologies products are not authorized as in life support devices or system M. MAHIN **KADIJEH** SHEET: 2 OF 2