

Application Specification

For GenZ VT Connector

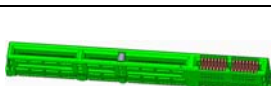
Product Name	Part No.	Product Picture
GENZ VT 1C Shielded	PGZB56-5300-008-1H	
GENZ VT 1C Unshielded	PGZB56-5300-005-1H	
GENZ VT 2C Shielded	PGZB84-5300-008-1H	
GENZ VT 2C Unshielded	PGZB84-5300-005-1H	
GENZ VT 4C Shielded	PGZBA4-5300-008-1H	
GENZ VT 4C Unshielded	PGZBA4-5300-005-1H	
GENZ VT 4C HP 12V	PGZBA4-5301-005-1H	
GENZ VT 4C+ Unshielded	PGZBA6-5300-005-0H	
GENZ VT 8C	PGZBB8-5300-005-1H	

Table 1. Part NO. List

Prepared by:

Shark Lin

Check by:

Hengshan Cheng

Approved by:

Rongzhe Guo

Date:

11/12/2025

Date:

11/12/2025

Date:

11/12/2025

1 Instruction

This specification covers the requirements for application of GenZ VT Connector designed to be mounted to a printed circuit (pc) board. There are 6 types of connectors including:1C Shielded, 1C Unshielded, 2C Shielded, 2C Unshielded 4C Shielded, 4C Unshielded, 4C HP12V,4C+ Unshielded,8C. When corresponding with LuxshareTECH Personnel, use the terminology provided on this specification to help facilitate assistance. Basic terms and features of components are provided in Figure 1 to Figure 9.

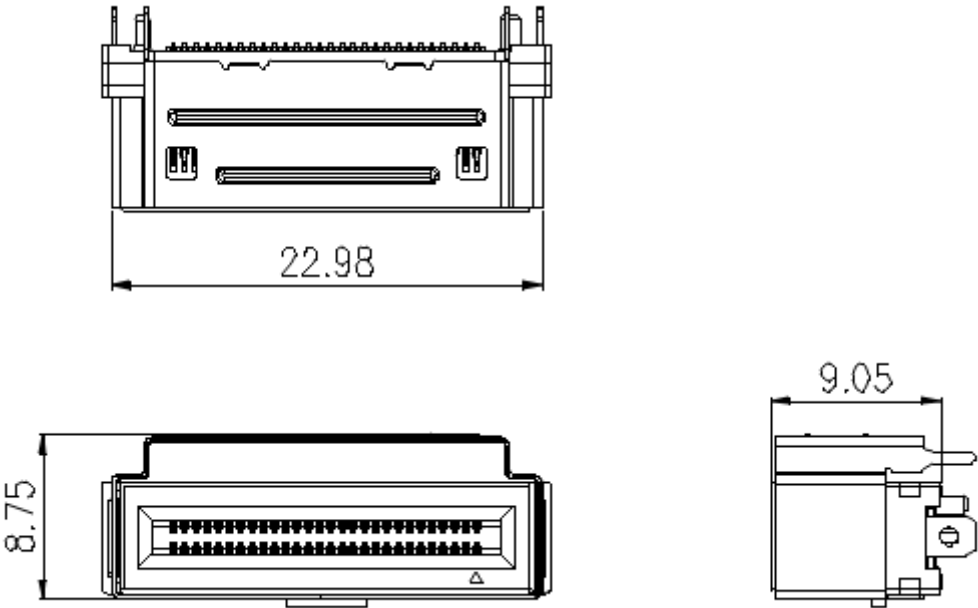


Figure 1. Product Outline of GenZ VT 1C Shielded

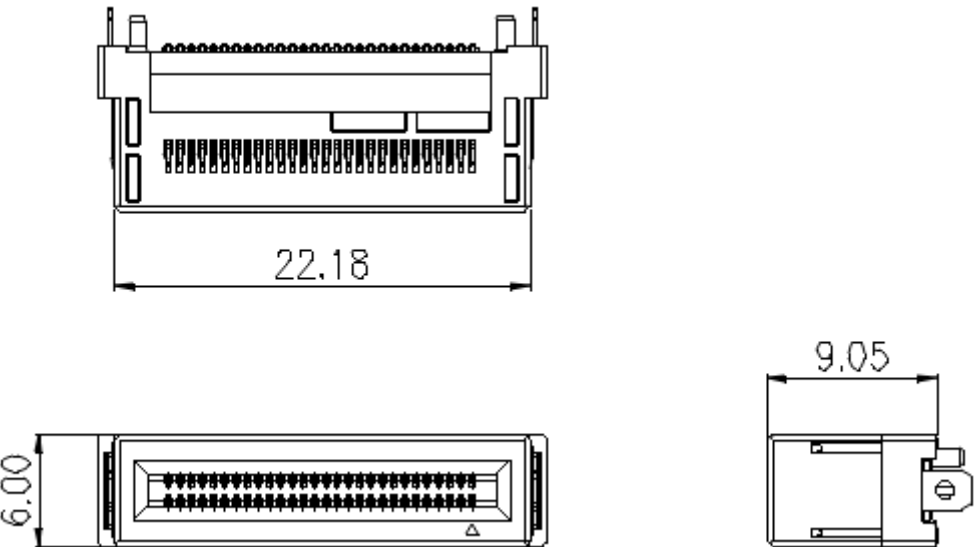


Figure 2. Product Outline of GenZ VT 1C Unshielded

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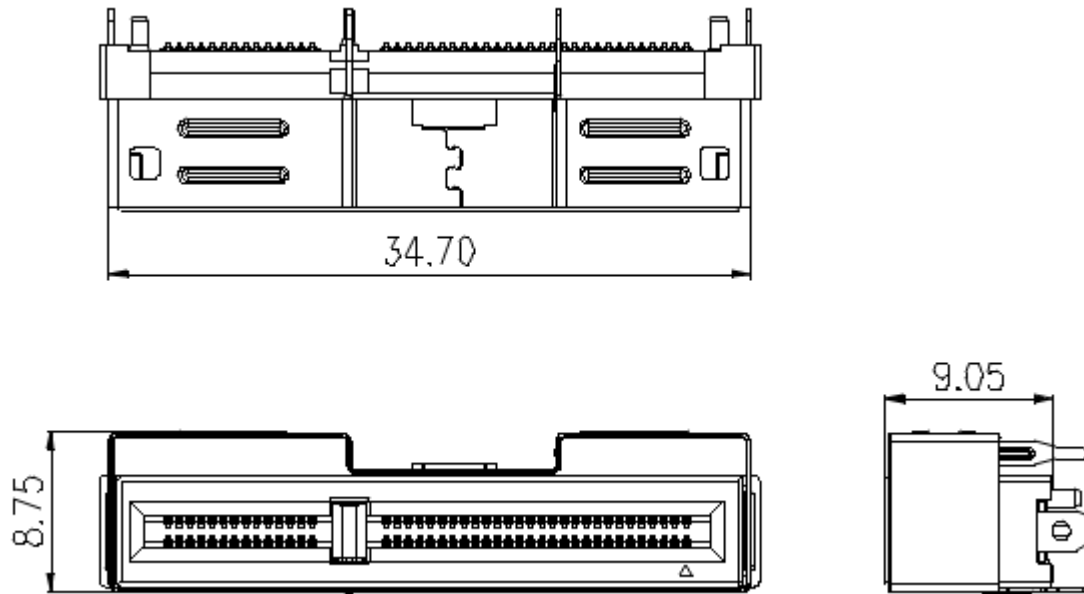


Figure 3. Product Outline of GenZ VT 2C Shielded

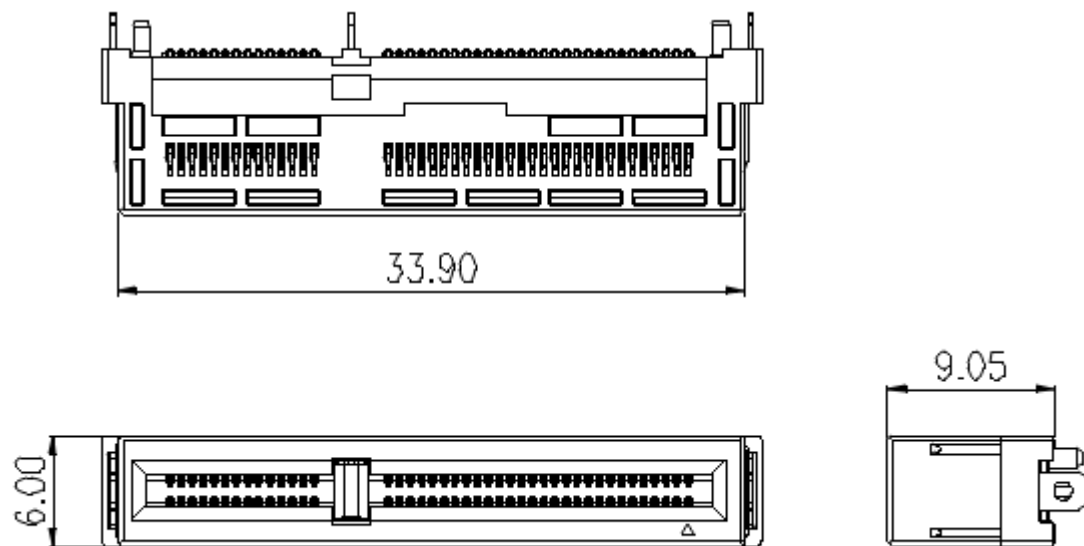


Figure 4. Product Outline of GenZ RA 2C Unshielded

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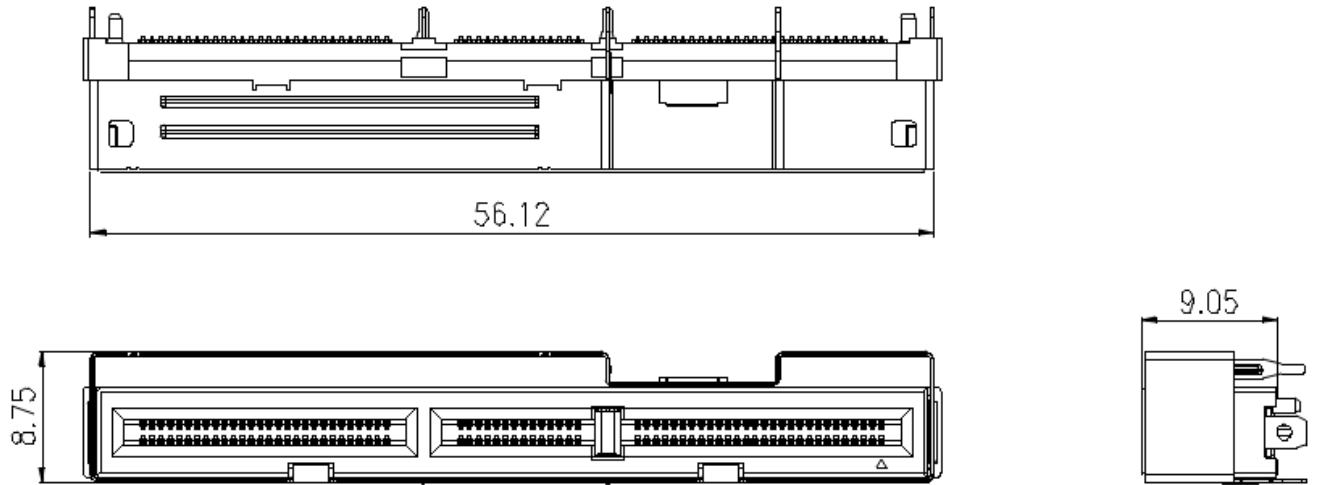


Figure 5. Product Outline of GenZ VT 4C Shielded

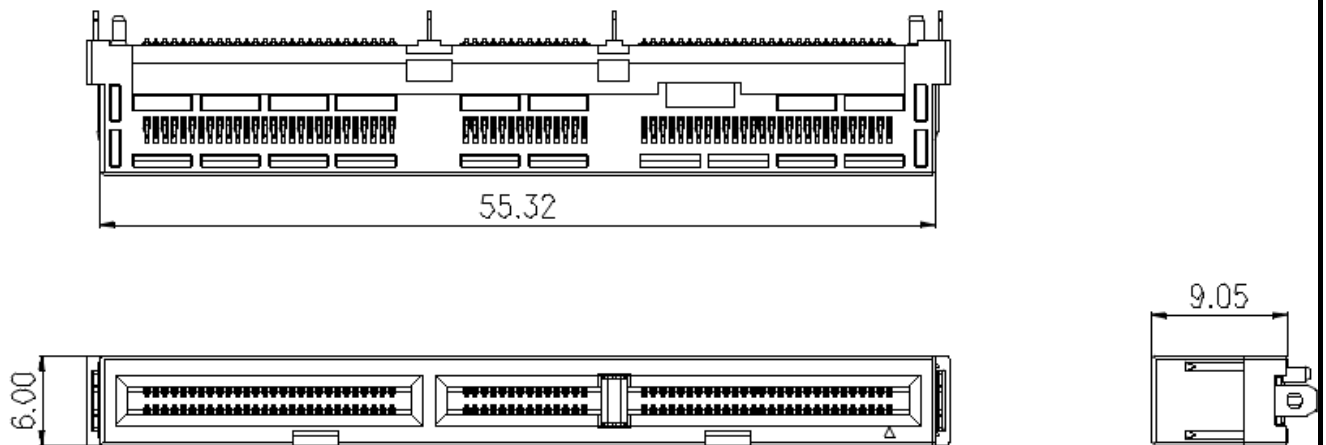


Figure 6. Product Outline of GenZ VT 4C Unshielded

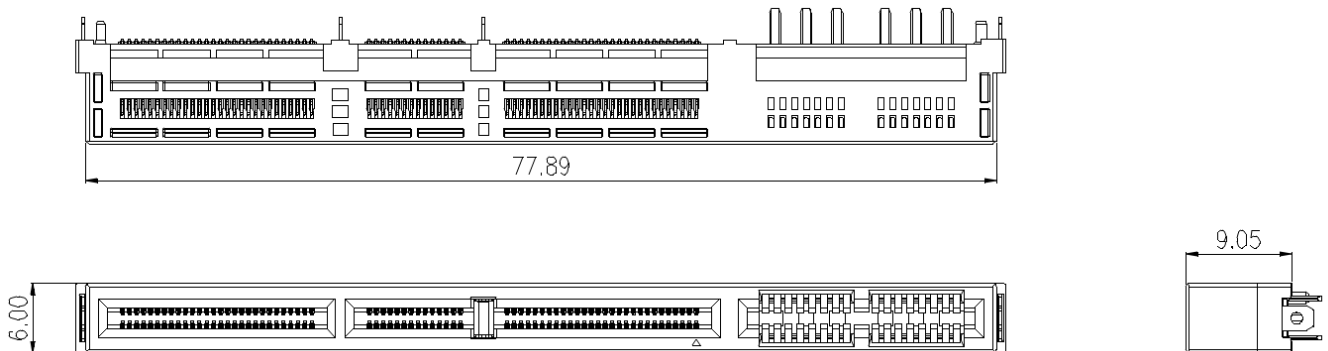


Figure 7. Product Outline of GenZ VT 4C HP 12V

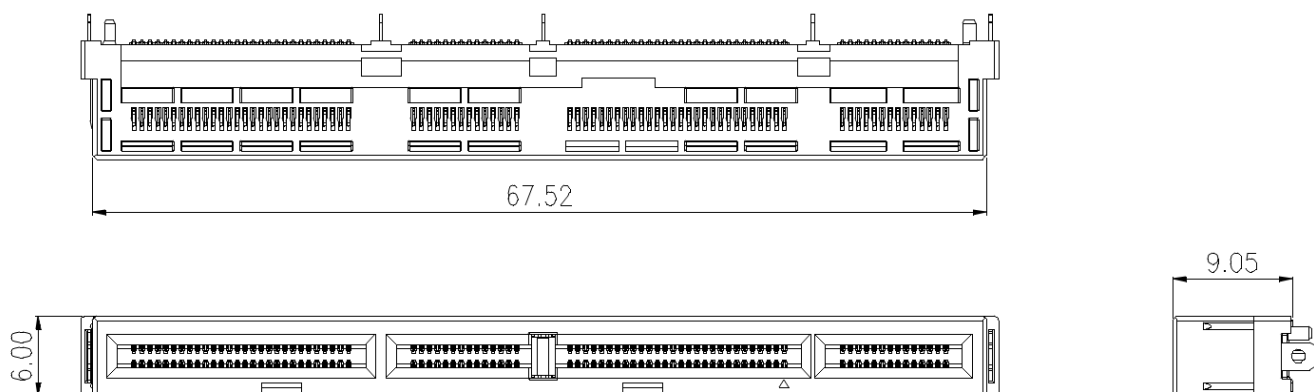


Figure 8. Product Outline of GenZ VT 4C+

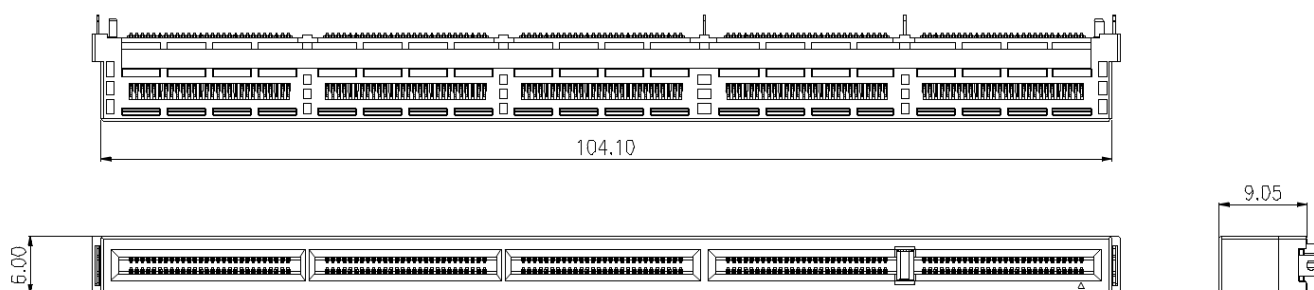


Figure 9. Product Outline of GenZ VT 8C

2. REFERENCE MATERIAL

2.1. Customer Assistance

Genz VT connector's Part NO. are listed in table1. These part NO. are used in a service network of customer service to access tooling and product application information. This service is provided by your local LuxshareTech Representative or, after purchase, by calling the Tooling Assistance Center or Visit LuxshareTech Website: www.Luxshare-ict.com.

2.2. Drawings

Customer Drawings for product numbers are available from the service network. The information on the customer drawing and this specification takes priority over any other document supplied by LuxshareTech. If there is a conflict with the information on the customer drawing and this specification, please contact LuxshareTech Representative for assistance.

2.3. Product Specifications

Product Specifications cover test and performance requirements, please contact LuxshareTech Representative to get the related product specification.

3. REQUIREMENTS

3.1. Storage

A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the modular jack housings.

B. Shelf Life

GenZ VT connectors should remain in the shipping containers until ready for use to prevent damage. The products should be used on a first in, first out basis to avoid storage contamination that could adversely affect signal transmissions.

C. Chemical Exposure

Do not store GenZ VT connectors near any chemicals listed below, as they may cause stress corrosion cracking in the components.

Alkalies	Ammonia	Citrates	Phosphates	Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites		Tartrates

3.2. PCB Layout

Please find the PCB layout as below figure 10 to figure 18 for different GenZ VT types.

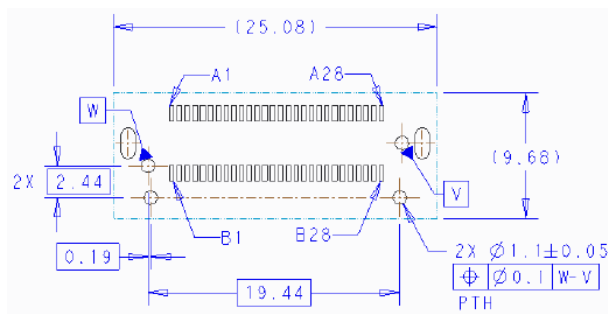


Figure 10. PCB Layout for GenZ VT 1C Shielded

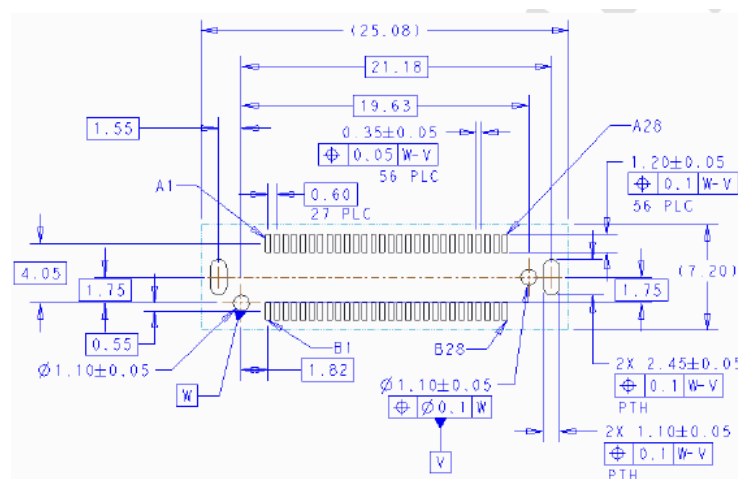


Figure 11. PCB Layout for GenZ VT 1C Unshielded

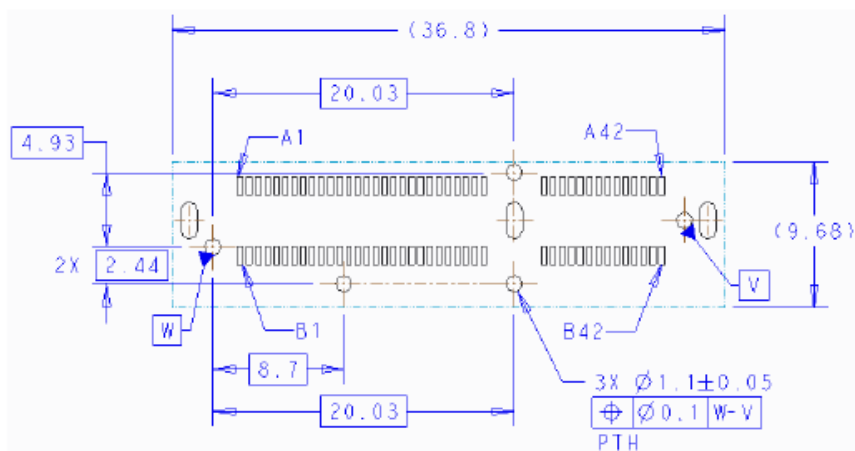


Figure 12. PCB Layout for GenZ VT 2C Shielded

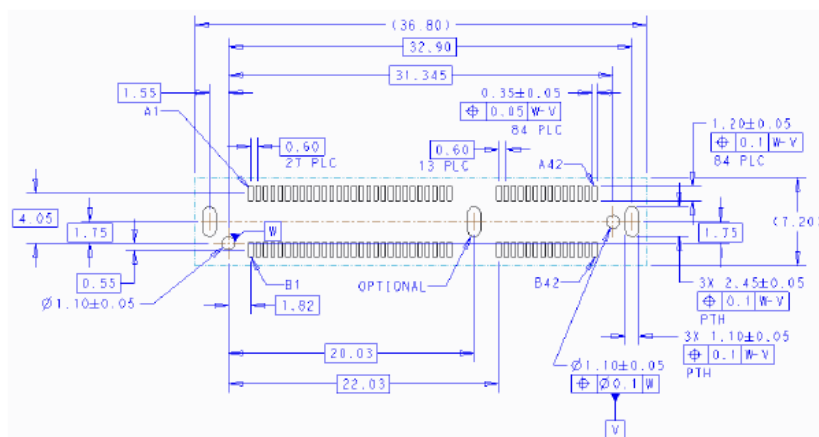


Figure 13. PCB Layout for GenZ VT 2C Unshielded

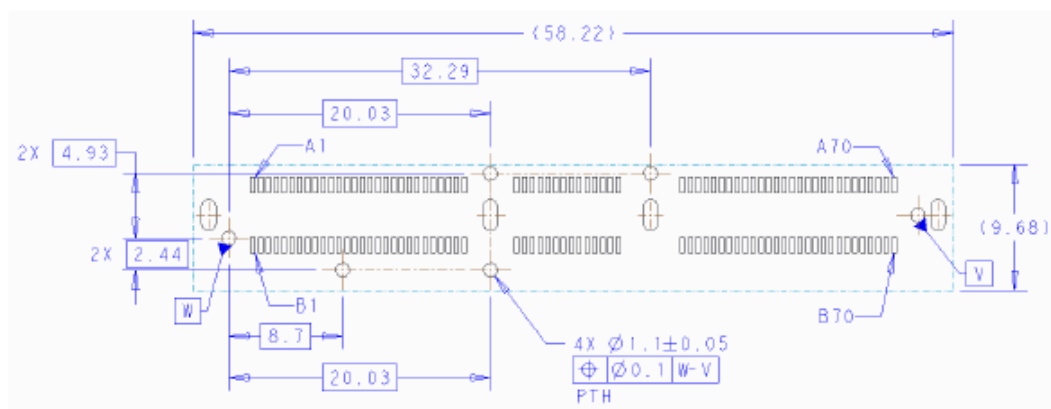


Figure 14. PCB Layout for GenZ VT 4C Shielded

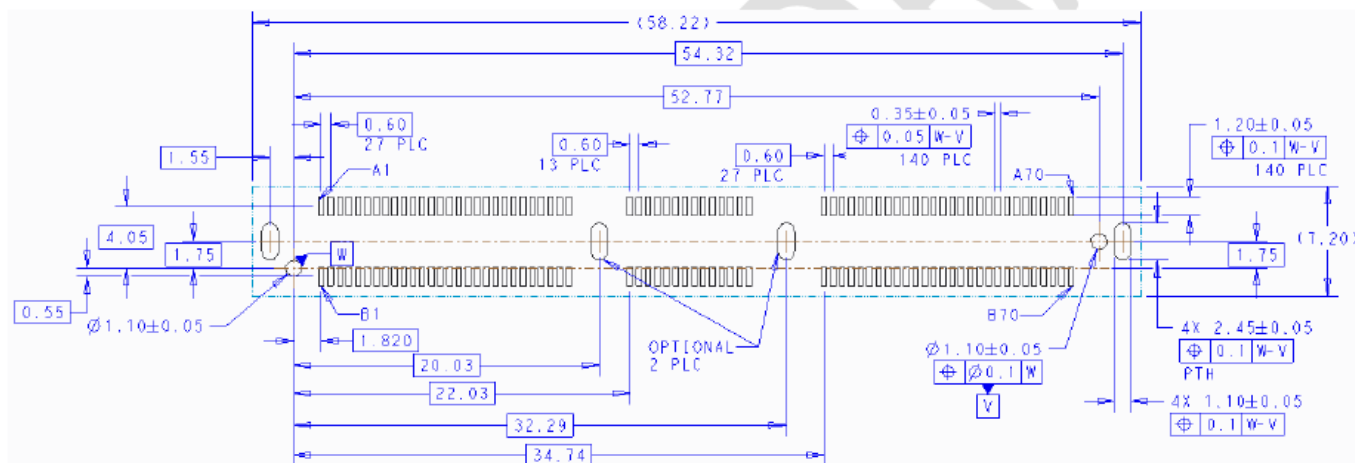


Figure 15. PCB Layout for GenZ VT 4C Unshielded

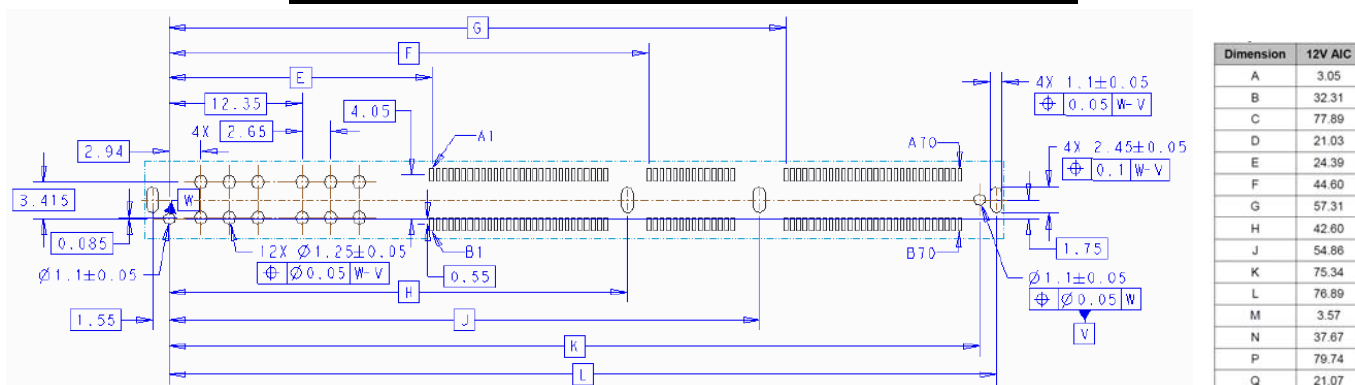


Figure 16. PCB Layout for GenZ VT 4C HP 12V Unshielded

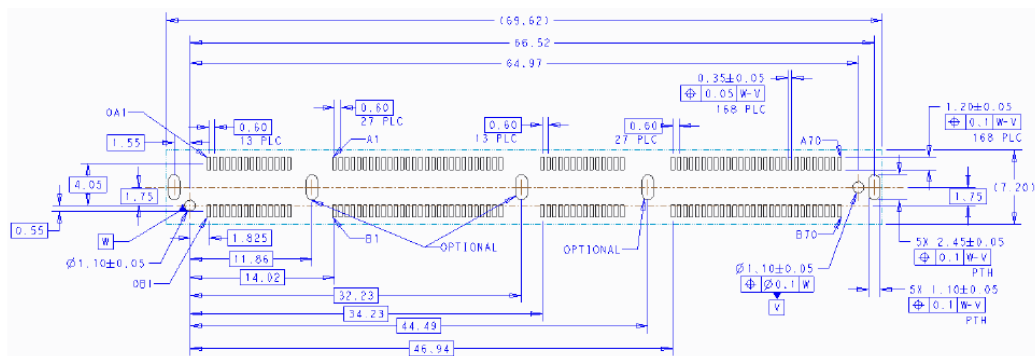


Figure 17. PCB Layout for GenZ VT 4C+

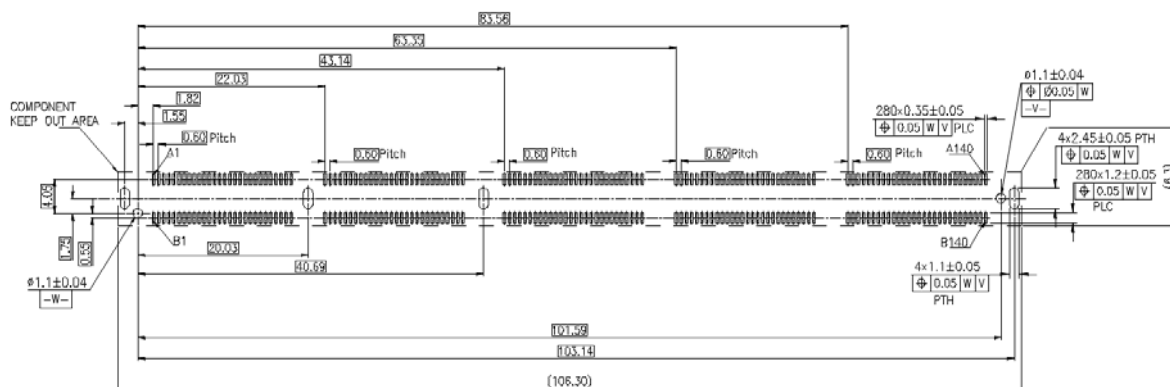


Figure 18. PCB Layout for GenZ VT 8C

3.3. PC Board Shield Tine Holes

Plated through holes must be used for shield solder tines. The drilled hole size, plating types, and plating thickness are dependent on your application requirements. The finished hole size must be as stated to provide unrestricted insertion, proper retention in the pc board, and to ensure adequate application of solder to the tines. See Figure 19.

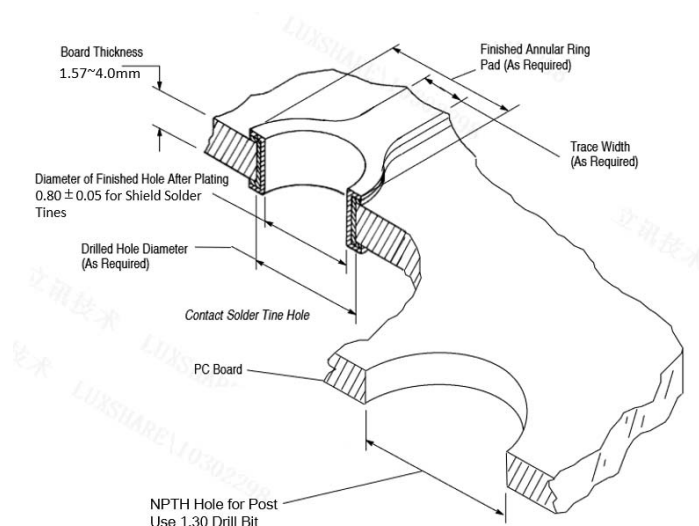


Figure 19. PC Board Shield Tine Holes

3.4. Alignment

The GenZ VT connector shall be flush and evenly seated on the pc board. A post is designed to guild the connector in place during the soldering process.

3.5. Shielding

Shielded GenZ VT connector feature tin plated stainless shell which provides continuity for EMC (Electromagnetic Compatibility) applications. When mated with corresponding shielded modular plugs, shielding and grounding continuity are achieved. When the shield solder tines are soldered to the pc board, they provide electrical continuity to any ground path on the pc board and, where applicable, panel ground tabs on the shield provide electrical continuity to any ground path through the equipment panel.

3.6. GenZ VT Connector Placement



The GenZ VT connector should be handled only by the shell outline to avoid deformation, contamination, or other damage to the contact solder tines and, where applicable, shield solder tines.

Determine which hole in the pc board is to receive the number one contact tine, then orient the GenZ VT connector so the number one solder tine is aligned with the hole. Start all solder tines into the board, then press on the top of the GenZ VT connector until it seats on the pc board.

3.7. Soldering

A. Flux Selection

Contact solder tines must be fluxed prior to soldering with a mildly active, rosin base flux. Selection of the flux will depend on the type of pc board and other components mounted on the board. Additionally, the flux must be compatible with the wave solder line, manufacturing, health, and safety requirements. Some fluxes that are compatible with these modular jacks are provided in Figure 20.

FLUX TYPE	ACTIVITY	RESIDUE	COMMERCIAL DESIGNATION	
			KESTER	ALPHA
Type RMA (Mildly Activated)	Mild	Noncorrosive	186	611

Figure 20. Recommended Fluxes

B. Soldering Guidelines

GenZ VT connector can be soldered using Through Hole Reflow (THR) soldering techniques. We recommend using SN60 or SN62 solder for these connectors. The temperatures and exposure time shall be within the ranges specified in Figure 21. Recommended Steel mesh Dimensions (For DIP Feet) ;

Recommended Steel mesh thickness: 0.15~0.18mm

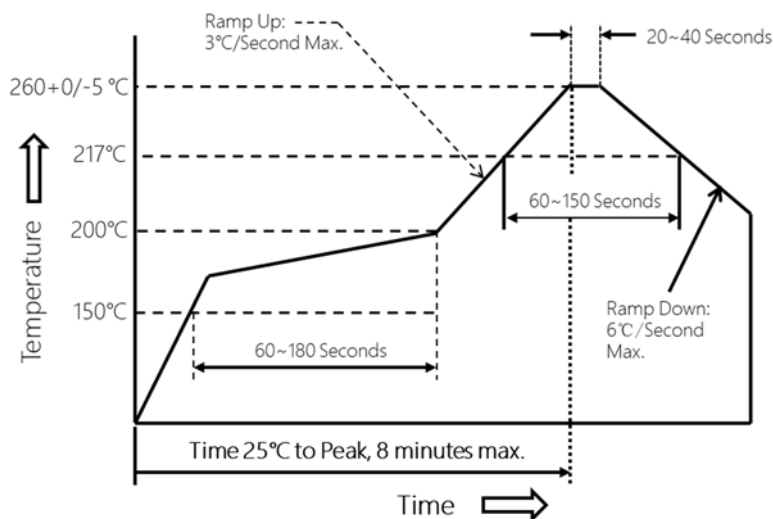


Figure 21. Recommended Reflow Curve

C. Cleaning

After soldering, removal of fluxes, residues, and activators is necessary. Consult with the supplier of the solder and flux for recommended cleaning solvents. The following is a listing of common cleaning solvents that will not affect the modular jacks for the time and temperature specified. See Figure 22.

CLEANER		TIME (Minutes)	TEMPERATURES (Maximum)	
NAME	TYPE		CELSIUS	FAHRENHEIT
ALPHA 2110	Aqueous	1	132	270
BIOACT EC-7	Solvent	5	100	212
BUTYL CARBITOL	Solvent	1	Room Ambient	
Isopropyl Alcohol	Solvent	5	100	212
KESTER 5778	Aqueous	5	100	212
KESTER 5779	Aqueous	5	100	212
LONCOTERGE 520	Aqueous	5	100	212
LONCOTERGE 530	Aqueous	5	100	212
Terpene Solvent	Solvent	5	100	212

Figure 22

Cleaners must be free of dissolved flux and other contaminants. We recommend cleaning with the pc board on its edge. If using an aqueous cleaner, we recommend standard equipment such as a soak--tank or an automatic in--line machine.



Consideration must be given to toxicity and other safety requirements recommended by the solvent manufacturer. Refer to the manufacturer's Material Safety Data Sheet (MSDS) for characteristics and handling of cleaners. Trichloroethylene and Methylene Chloride can be used with no harmful effect to the connectors; however LUXSHARE does not recommend them because of the harmful occupational and environmental effects. Both are carcinogenic (cancer—causing) and Trichloroethylene is harmful to the earth's ozone layer.

D. Drying

When drying cleaned assemblies and printed circuit boards, make certain that temperature limitations are not exceeded: -40°C to 70°C . Excessive temperatures may cause housing degradation.

3.8. Checking Installed GenZ VT Connector

The GenZ VT connector must be seated on the pc board within the dimensions shown in Figure 23.

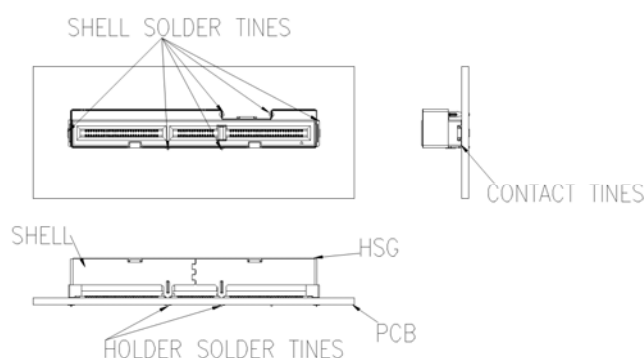


Figure 23

3.9. Repair/Removal

If the GENZ VT connector is damaged, it must be replaced. It may be removed from the pc board by normal desoldering methods and replaced with a new GenZ VT connector.

CAUTION


When repair ignore replacing a modular jack, be careful not to damage other pc board components during the desoldering process.

4. TOOLING

No special tooling is required for hand placement of GenZ VT connector onto a pc board. However, a backup support that provides relief for protruding components is needed to prevent deformation of contact solder tines and, when applicable, shield solder tines.

5. VISUAL AID

Figure 18 shows typical installation applications of GenZ VT connector and should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification.

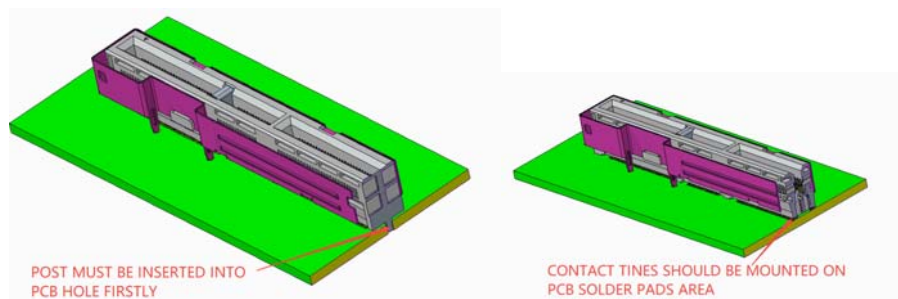


Figure 24

6. GATHERABILITY

Figure 25 and Figure 26 show the linear and angular gatherability of the connector.

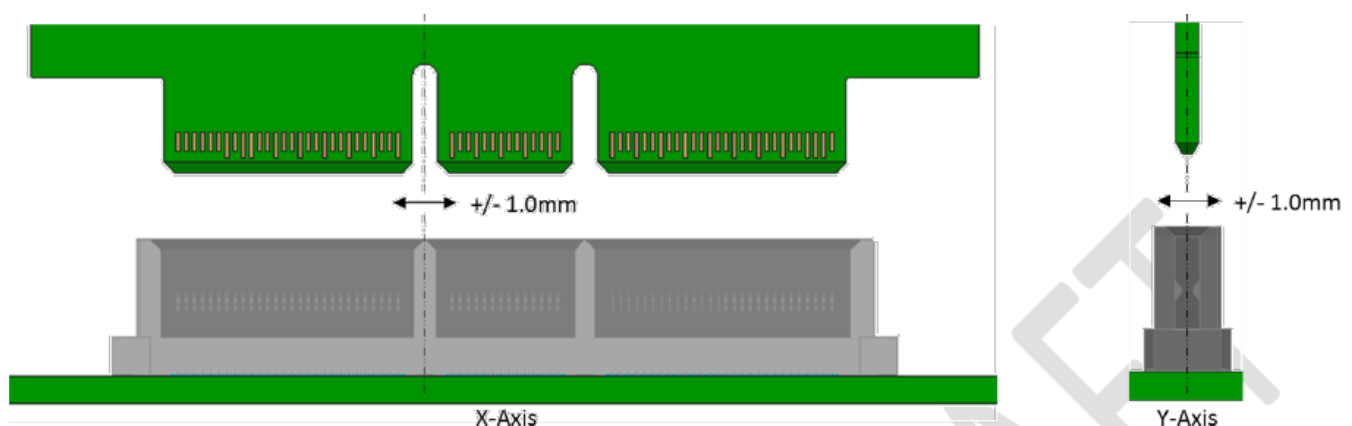


Figure 25 LINEAR GATHERABILITY

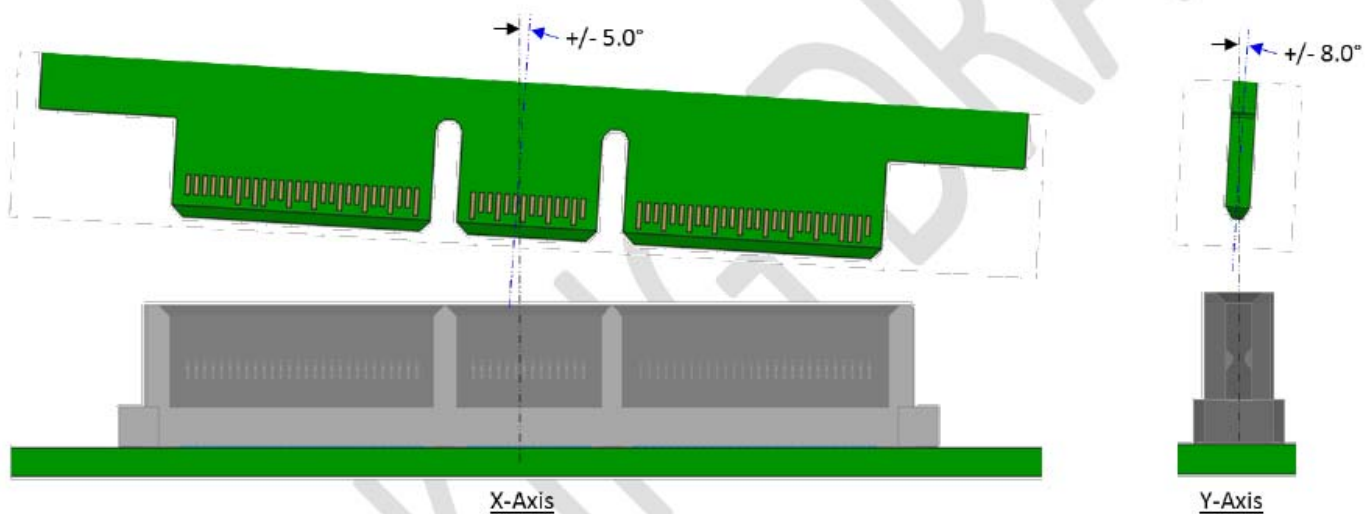


Figure 26 ANGULAR GATHERABILITY

REVISION RECORD

Rev	Page	Description	EC#	Date
X1		Initial		2025.09.15
X2		ADD GATHERABILITY		2025.11.12