## NOVASTACK ${ }^{\circledR}$ 35-HDN

Ideal for 5G mmWave antenna module and devices, fully-shielded and narrow design, Power supply is available with Corson Alloy contact, 0.35 mm pitch, 0.7 mm height Product Specifications:

| Board Pitch (mm) |  | 0.35 |
| :---: | :---: | :---: |
| Wiping Length (mm) |  | 0.14 |
| $\begin{gathered} \text { Mated Size } \\ (\mathrm{mm}) \end{gathered}$ | Height | $0.7+/-0.05$ |
|  | Width | Formula: 4.15 (10 P), 5.90 (20 P), 7.90 (30 P) |
|  | Depth | 2.15 mm |
| Frequency |  | DC ~ 15 GHz |
| Current <br> Rating | Signal | 1.0 A / pin (Max. 10 P) <br> (12 P and over : 12.0 A AC/DC (Total)) |
|  | Power | - |
| Pin Counts | Range | 10-60 |
|  | Available | 10, 20, 30 |

Applicable Standards (Reference Only): USB4 (20 Gbps/lane) USB 3.1 Gen 2 (10

Please inquire for pin counts not listed or outside of the pin count range.

## Ideal for high frequency applications (5G mmWave, USB4 / Thunderbolt 4, etc.)



ZenShield ${ }^{\circledR}$ fully-shielded design, decreases EMI issue caused by 5G applications

E-Field comparison of adjacent signal lines with or without shields


Narrow depth and low height, fully-shielded board-to-board connector


## Component Parts Detail

## Plug Assembly

| Recommended P/N | 20864-010E-01 |
| ---: | ---: | | PART NO. | Pos. |
| :---: | :---: |
| $20864-010 \mathrm{E}-01$ | 10 |



| 3 | SHELL | COPPER ALLOY | SOLDERING PART A $0.01 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. |
| :---: | :---: | :---: | :---: |
| 2 | CONTACT | COPPER ALLOY | CONTACT PART Au $0.05 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. SOLDERING PART Au $0.01 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. |
| 1 | HOUSING | LCP | UL94V-0. BLACK |
| NO. | DISCRIPTION | MATERIAL | FINISH. REMARKS |

## Plug Assembly


(HF)


| 3 | SHELL | COPPER ALLOY | SOLDERING PART A $0.01 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. |
| :--- | :--- | :--- | :--- |
| 2 | CONTACT | COPPER ALLOY | CONTACT PART Au $0.05 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. <br> SOLDERING PART A $\mu 0.01 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. |
| 1 | HOUSING | LCP | UL94V-0. BLACK |
| NO. | DISCRIPTION | MATERIAL | FINISH. REMARKS |

## Plug Assembly



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN


REFLOW TEMPERATURE PROFILE
SENJU METAL INDUSTRY CO., LTD. M705-SHF(Sn96.5 Ag3.0 Cu0.5)

| ITEMS | SPECIFICATION |
| :---: | :---: |
| APPLICABLE CONNECTOR PART No. | 20865-0**E-** |
| RATING VOLTAGE | 60 V AC(rms) / DC (PER CONTACT PIN) |
| RATING AMPERAGE (FOR SIGNAL CONTACT) | 10P: 1.0 A MAX $\mathrm{AC} / \mathrm{DC} \times$ PIN COUNTS $=10.0 \mathrm{~A}($ TOTAL $)$ 12P AND OVER : $12.0 \mathrm{~A} \mathrm{AC/DC}$ (TOTAL) |
| OPERARING TEMPERATURE | $233 \sim 358 \mathrm{~K}\left(-40^{\circ} \mathrm{C} \sim 85^{\circ} \mathrm{C}\right)$ |
| OPERATING HUMIDITY | 85\% MAX(NON-CONDENDING) |
| CONTACT RESISTANCE (FOR SIGNAL CONTACT) | INITIAL : 40mohm MAX. / AFTER TEST : $\triangle 40$ mohm MAX |
| CONTACT RESISTANCE (FOR GROUND) | INITIAL : 20 mohm MAX. / AFTER TEST : $\triangle 20$ mohm MAX |
| INSULATION RESISTAMCE | INITIAL : 1,000Mohm MIN. / AFTER TEST: 500Mohm MIN. |
| DIELECTRIC WITHSTANDING VOLTAGE | AC250V 1 min |
| DURABILITY | 10 CYCLES |
| MATING FORCE (INITIAL / AFTER TEST) | INITIAL $2.0 \mathrm{~N} / \mathrm{Pin}$ MAX |
| UNMATING FORCE (INITIAL / AFTER TEST) | 10 CYCLES $0.15 \mathrm{~N} / \mathrm{Pin}$ MIN. |
| COPLANARITY | 0.08 MAX |
| PRODUCT SPECIFICATION | PRS-2607 |
| TEST REPORT | TR-19055 |
| PACKING STANDARD | PST-18022 |
| INSTRUCTION MANUAL | HIM-18019 |
| APPEARANCE CRITERIA No. | QLS-A*** |

## Receptacle Assembly

| Recommended P/N | 20865-010E-03 |
| :--- | :--- | | PART NO. | Pos |
| :---: | :---: |
| 2095 - 010 E |  |



| 3 | SHELL | COPPER ALLOY | SOLDERING PART Au $0.01 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m} \mathrm{MIN}$. |
| :---: | :--- | :--- | :--- |
| 2 | CONTACT | COPPER ALLOY | CONTACT PART Au $0.05 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. <br> SOLDERING PARTA A $0.01 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m} \mathrm{MIN}$. |
| 1 | HOUSING | LCP | UL.94V- 0 BLACK |
| NO | DISCRIPTION | MATERIAL | FINISH. REMARKS |


(HF)

. FOOT PRINT PATTERN PROHIBITION AREA
SOLDER RESIST MUST BE APPLIED TO THIS HATCHED AREA
IF SURFACE TRACES ARE ROUNTED.


| 3 | Shell | COPPER ALLOY | SOLDERING PART A $0.01 \mu \mathrm{mmin}$. OVER $\mathrm{Ni} 1.27 \mu \mathrm{~m}$ MIN. |
| :---: | :---: | :---: | :---: |
| 2 | CONTACT | COPPER ALLOY | CONTACT PART Au $0.05 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. SOLDERING PART Au $0.01 \mu \mathrm{~m}$ MIN. OVER Ni $1.27 \mu \mathrm{~m}$ MIN. |
| 1 | Housing | LCP | UL94V-0 BLACK |
| NO. | DISCRIPTION | MATERIAL | FINISH, REMARKS |

## Receptacle Assembly




CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN


## Receptacle Assembly

| ITEMS | SPECIFICATION |
| :---: | :---: |
| APPLICABLE CONNECTOR PART No. | 20864-0**E-** |
| RATING VOLTAGE | 60V AC(r.m.s) / DC (PER CONTACT PIN) |
| RATING AMPERAGE (FOR SIGNAL CONTACT) | 10P:1.0 A MAX. AC/DC $\times$ PIN COUNTS $=10.0 \mathrm{~A}$ (TOTAL) <br> 12P AND OVER : 12.0 A AC/DC (TOTAL) |
| OPERARING TEMPERATURE | $233 \sim 358 \mathrm{~K}\left(-40^{\circ} \mathrm{C} \sim 85^{\circ} \mathrm{C}\right)$ |
| OPERATING HUMIDITY | 85\% MAX (NON-CONDENDING) |
| CONTACT RESISTANCE (FOR SIGNAL CONTACT) | INITIAL : 40mohm MAX. / AFTER TEST : $\triangle 40 \mathrm{mohm} \mathrm{MAX}$ |
| CONTACT RESISTANCE (FOR GROUND) | INITIAL : $20 \mathrm{mohm} \mathrm{MAX}. \mathrm{/} \mathrm{AFTER} \mathrm{TEST} \mathrm{:} \triangle 20 \mathrm{mohm} \mathrm{MAX}$ |
| INSULATION RESISTAMCE | INITIAL: 1.000 Mohm MIN. / AFTER TEST : 500 Mohm MIN . |
| DIELECTRIC WITHSTANDING VOLTAGE | AC250V 1 min |
| DURABILITY | 10 CYCLES |
| MATING FORCE (INITIAL / AFTER TEST) | INITIAL 2.ON/Pin MAX |
| UNMATING FORCE (INITIAL / AFTER TEST) | 10 CYCLES 0.15N/Pin MIN. |
| COPLANARITY | 0.08 MAX . |
| PRODUCT SPECIFICATION | PRS-2607 |
| TEST REPORT | TR-19055 |
| PACKING STANDARD | PST-18023 |
| INSTRUCTION MANUAL | HIM-18019 |
| APPEARANCE CRITERIA No. | QLS-A*** |

## Custom Connectors Available



 Module

## LIGHTPASS ${ }^{\circledR}$ series



## $\mathrm{MHF}^{\circledR}$ series

