

- ✓ High-data-rate transfer, ideal for eDP HBR 2 (5.4 Gbps) applications.
- ✓ Simultaneous soldering of different size cables for micro-coaxial and discrete wire.
- ✓ Click sensation provides audible and tactile check for proper mating.

Pin counts:

| | |
|-----------|------------|
| Range | 30 – 50 |
| Available | 30, 40, 50 |

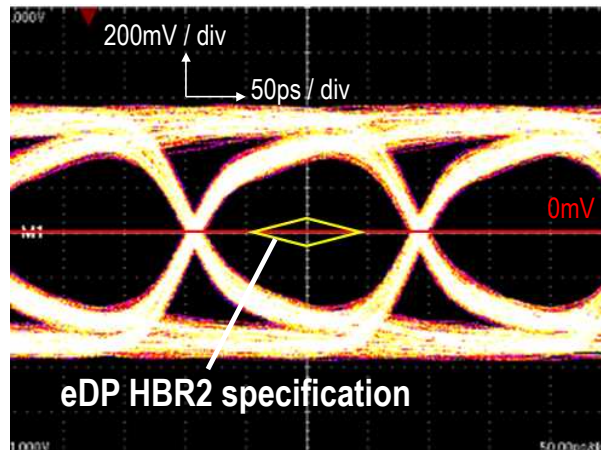
*Please inquire for pin counts not listed or outside of the pin count range.

| | | |
|------------------------------|--|--|
| Mating Type | Right angle vertical | |
| Wire Pitch (mm) | 0.5 | |
| Board Pitch (mm) | 0.5 | |
| Mated Size (mm) | Height | 2.2 +/- 0.2 |
| | Width Formula | 5.8 + (0.5*?p) |
| | Depth | 6.1 |
| Wiping Length (mm) | 0.51 | |
| Applicable Wire (AWG#) | Micro-coax for Signals | 45Ω : #36 or smaller 50Ω : #38 or smaller |
| | Twincoax | #40 |
| | Discrete | #32 or smaller |
| Compatibility | - | |
| Performance (Reference Only) | eDP HBR 2 (5.4 Gbps) USB 3.1 Gen 1 (5 Gbps) | |

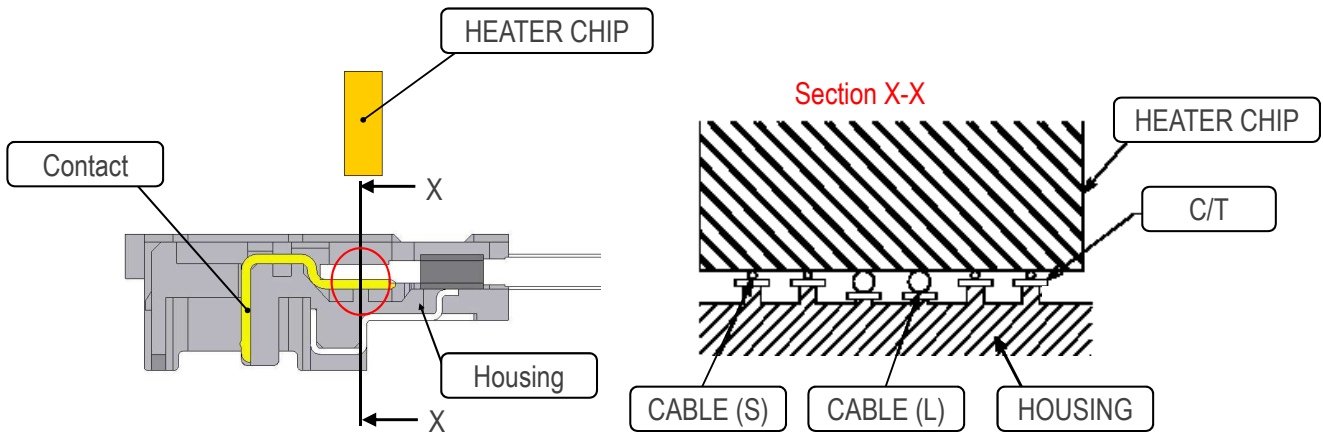
High-Data-Rate Transfer, Ideal for eDP HBR 2 (5.4 Gbps) Applications

Eye pattern (Differential)
Bit rate : 5.4 Gbps
Rise time : 60ps (10-90%)
Input voltage : 800mVp-p

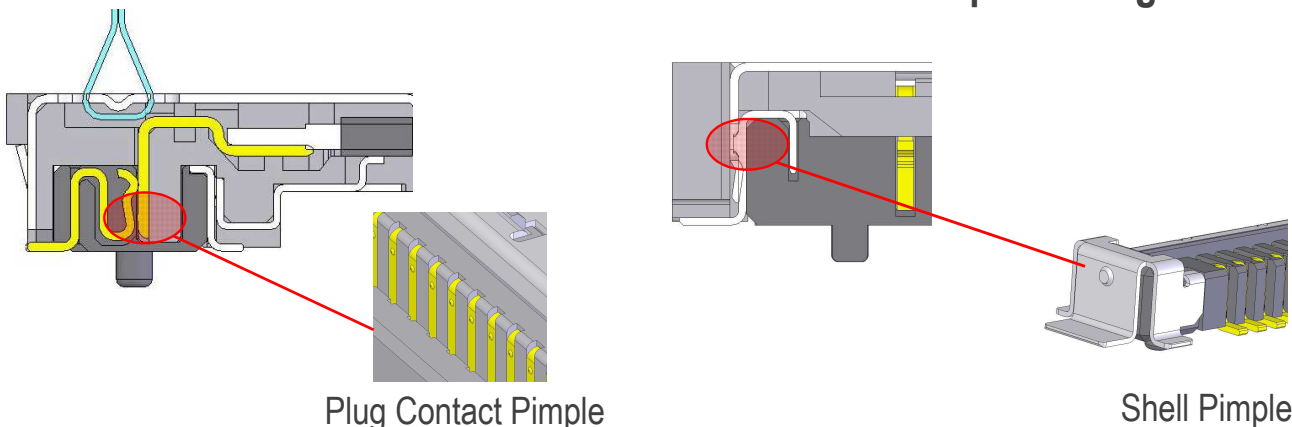
*Please contact I-PEX Connectors for more test details.



Simultaneous Soldering of Different Size Cables for Micro-coaxial and Discrete Wire



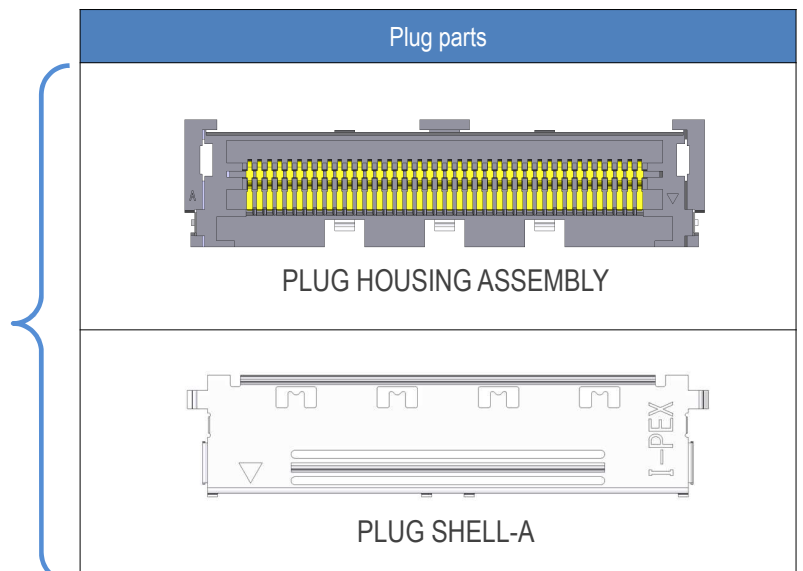
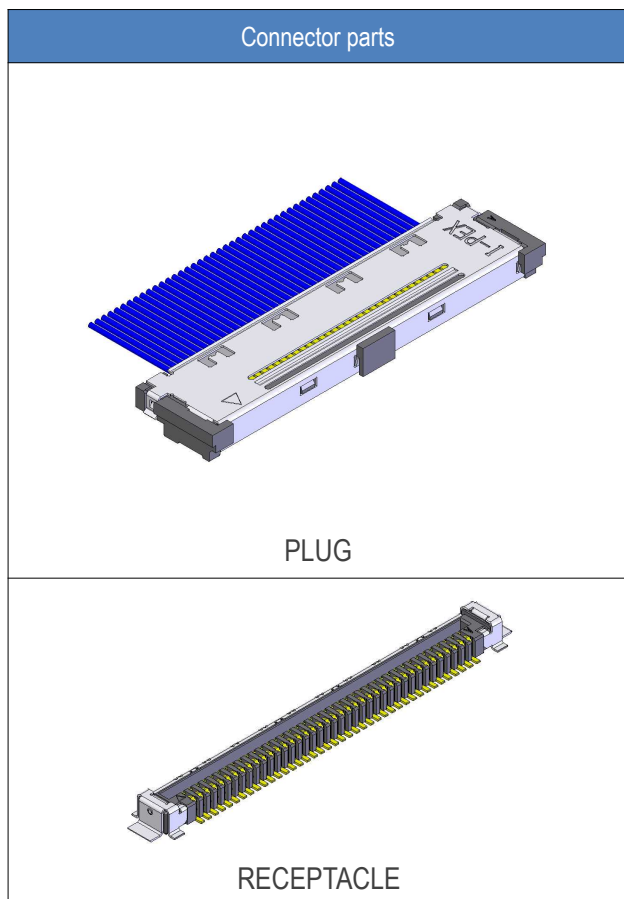
Click Sensation Provides Audible and Tactile Check for Proper Mating



FPL II[®]

Component Parts Detail

Component Parts:

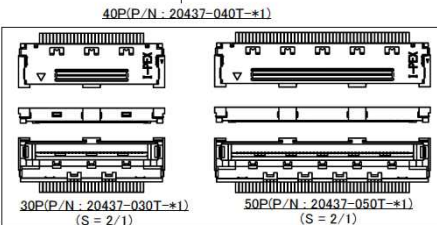
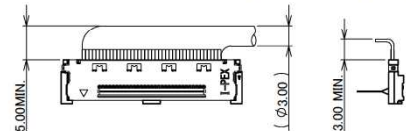
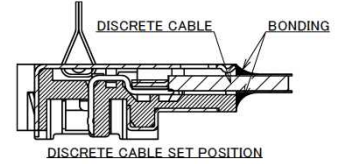
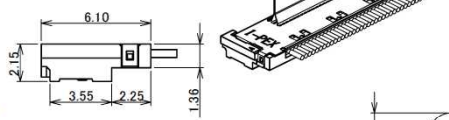
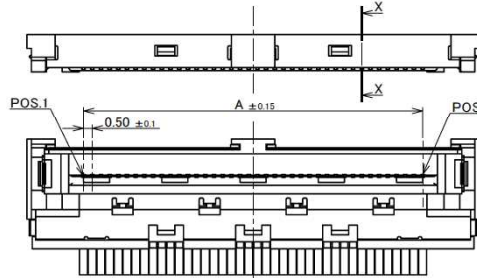
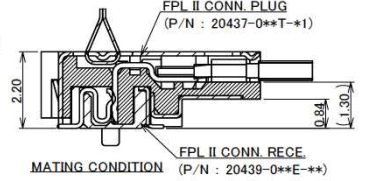
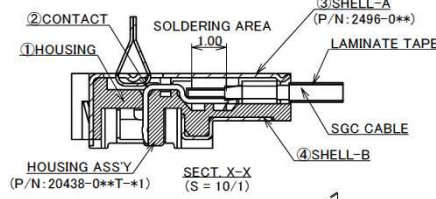
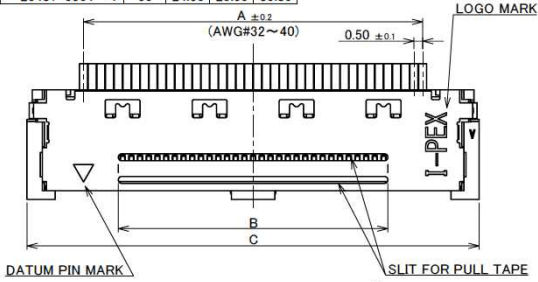


Plug Cable Assembly :

| Recommended P/N | | 20437-0**T-01 | | |
|-----------------|------|---------------|-------|-------|
| PART No. | POS. | A | B | C |
| 20437-030T-1 | 30 | 14.50 | 10.50 | 20.80 |
| 20437-040T-1 | 40 | 19.50 | 15.50 | 25.80 |
| 20437-050T-1 | 50 | 24.50 | 20.50 | 30.80 |



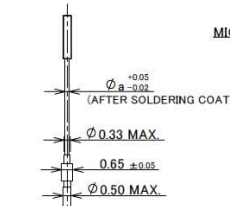
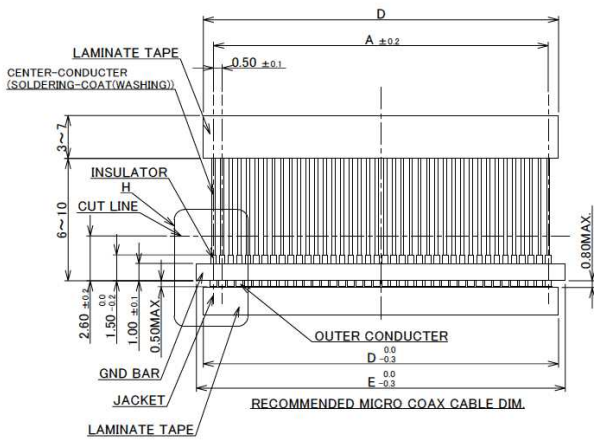
| CABLE ASSY PART No. | HOUSING ASSY PART No. | SHELL-A PART No. | CONTACT FINISH (MATING AREA) |
|---------------------|-----------------------|------------------|------------------------------|
| 20437-0**T-01 | 20438-0**T-01 | 2496-0** | Au 0.10 μm MIN. |
| 20437-0**T-11 | 20438-0**T-11 | | Au 0.30 μm MIN. |



| NO. | DISCRIPTION | MATERIAL | FINISH, REMARKS |
|-----|-------------|-----------------|---|
| 4 | SHELL-B | PHOSPHOR BRONZE | Sn 2.00 μm MIN. OVER Ni 1.00 μm MIN. |
| 3 | SHELL-A | PHOSPHOR BRONZE | Sn 2.00 μm MIN. OVER Ni 1.00 μm MIN. |
| 2 | CONTACT | PHOSPHOR BRONZE | PART NO. 20437-0**T-01 MATING AREA : Au 0.10 μm MIN. OVER Ni 1.00 μm MIN. OTHER AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN. |
| 1 | HOUSING | LCP | PART NO. 20437-0**T-11 MATING AREA : Au 0.30 μm MIN. OVER Ni 1.00 μm MIN. OTHER AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN. |

CAUTION VISIT OUR WEBSITE FOR LATEST VERSIONS OF INSTRUCTION MANUAL NO. HIM-09007 TO HANDLE THE PRODUCT PROPERLY AND SAFELY.
 ※DAI-ICHI SEIKO HP (<https://www.i-pex.com/ja/Products/detail/9>)

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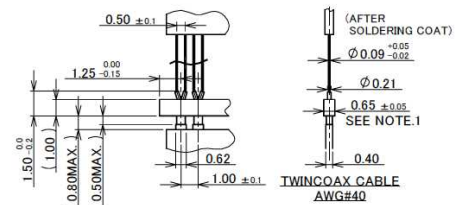


MICRO COAX CABLE DIMENSION

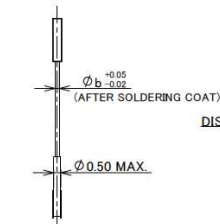
| | a |
|-----|-------|
| #32 | 0.24 |
| #34 | 0.192 |
| #36 | 0.15 |
| #38 | 0.12 |
| #40 | 0.09 |

MICRO COAX CABLE #32, 34, 36 : NOT RECOMMENDED FOR HIGH SPEED SIGNAL TRANSFER

MICRO COAX CABLE AWG#**



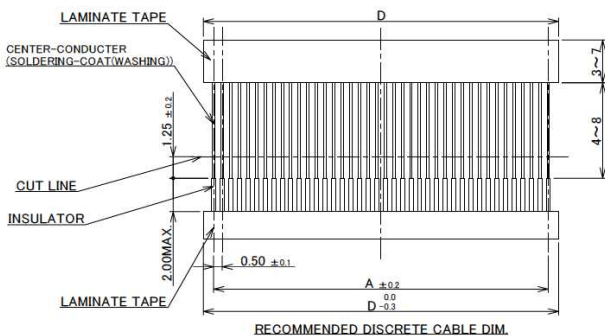
DETAIL H (RECOMMENDED TWIN COAX CABLE DIM.)



DISCRETE CABLE DIMENSION

| | b |
|-----|-------|
| #32 | 0.24 |
| #34 | 0.192 |
| #36 | 0.15 |

DISCRETE CABLE AWG#**



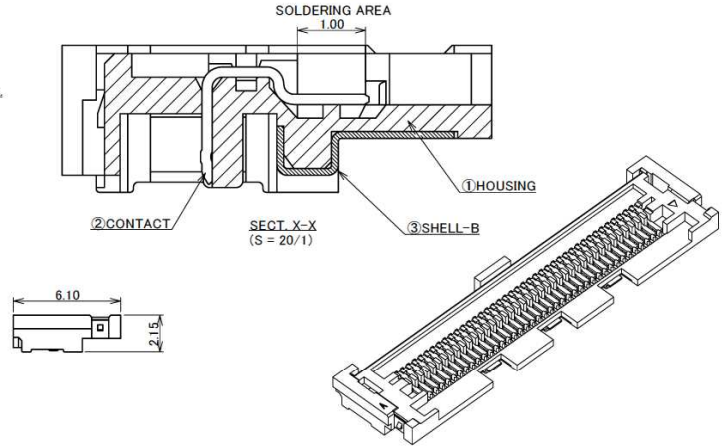
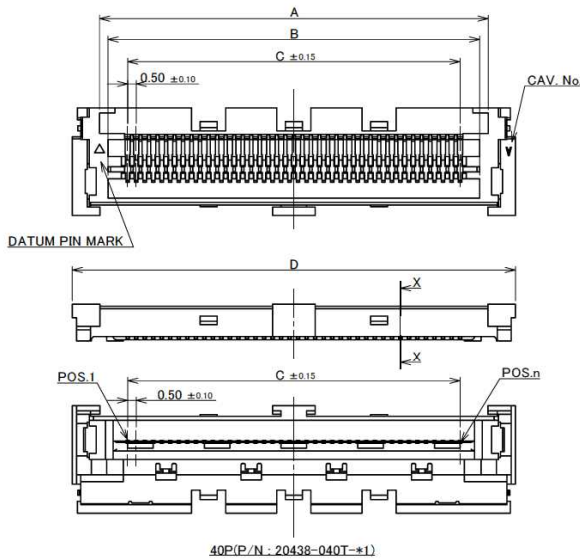
RECOMMENDED DISCRETE CABLE DIM.

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Plug Housing Assembly :

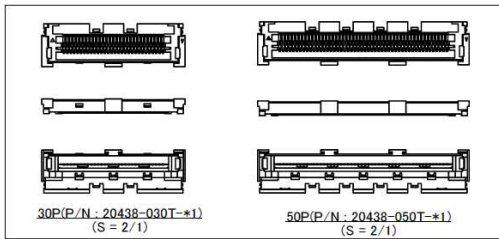
| Recommended P/N | | 20438-0**T-01 | | | |
|-----------------|------|---------------|-------|-------|-------|
| PART No. | POS. | A | B | C | D |
| 20438-030T-*1 | 30 | 17.80 | 16.80 | 14.50 | 20.80 |
| 20438-040T-*1 | 40 | 22.80 | 21.80 | 19.50 | 25.80 |
| 20438-050T-*1 | 50 | 27.80 | 26.80 | 24.50 | 30.80 |

| PART NO. | CONTACT FINISH (MATING AREA). |
|---------------|-------------------------------|
| 20438-0**T-01 | Au 0.10 μm MIN. |
| 20438-0**T-11 | Au 0.30 μm MIN. |



NOTES
1. THIS PART IS ASSEMBLY WITH SHELL-A(PART NO. 2496-0**)
AFTER SOLDERED THE CABLE, AND IT BECOMES PART NO. 20437-0**T-*1

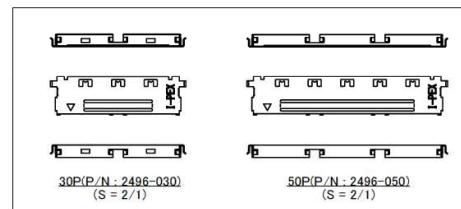
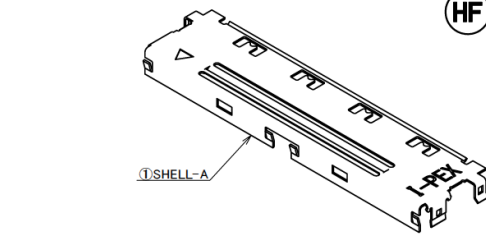
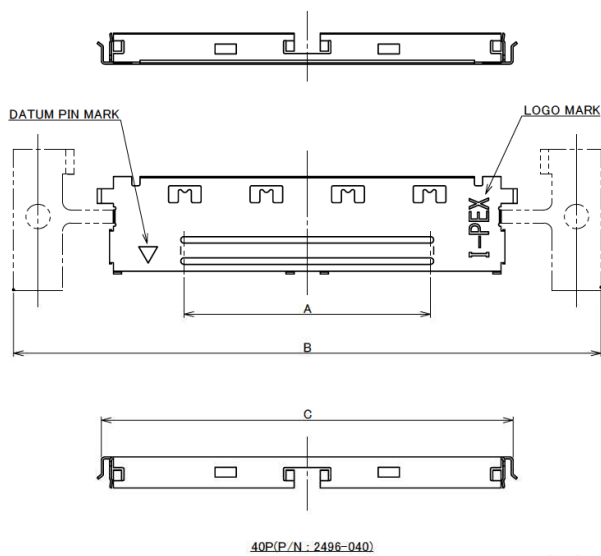
| NO. | DISCRIPTION | MATERIAL | FINISH , REMARKS |
|-----|-------------|-----------------|---|
| 3 | SHELL-B | PHOSPHOR BRONZE | Sn 2.00 μm MIN. OVER Ni 1.00 μm MIN. PART NO. 20438-0**T-01 |
| 2 | CONTACT | PHOSPHOR BRONZE | MATING AREA : Au 0.10 μm MIN. OVER Ni 1.00 μm MIN. OTHER AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN. PART NO. 20438-0**T-11 |
| 1 | HOUSING | LCP | UL94V-0, BLACK |



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Plug Shell-A:

| Recommended P/N | | 2496-0** | | | |
|-----------------|------|----------|-------|-------|-------|
| PART NO. | Pos. | A | B | C | D |
| 2496-030 | 30 | 10.00 | 30.00 | 20.24 | 35.00 |
| 2496-040 | 40 | 15.00 | 36.00 | 25.24 | 40.00 |
| 2496-050 | 50 | 20.00 | 40.00 | 30.24 | 45.00 |



| NO. | DISCRIPTION | MATERIAL | FINISH , REMARKS |
|-----|-------------|-----------------|---|
| 1 | SHELL-A | PHOSPHOR BRONZE | Sn(NO POLISH) 2.00 μm MIN. OVER Ni 1.00 μm MIN. |

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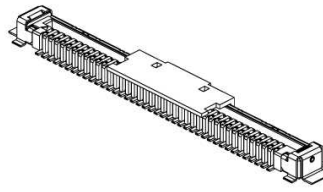
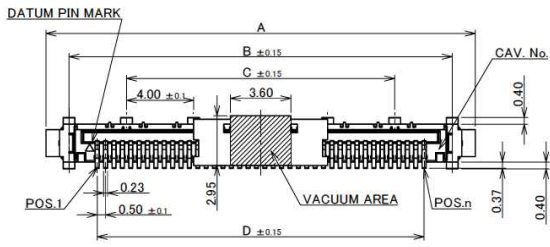
Receptacle Assembly :

| Recommended P/N | | 20439-0**E-01 | | | | |
|-----------------|------|---------------|-------|-------|-------|-------|
| PART NO. | Pos. | A | B | C | D | E |
| 20439-030E-** | 30 | 20.60 | 17.86 | 12.00 | 14.50 | 16.00 |
| 20439-040E-** | 40 | 25.60 | 22.86 | 16.00 | 19.50 | 21.00 |
| 20439-050E-** | 50 | 30.60 | 27.86 | 20.00 | 24.50 | 26.00 |

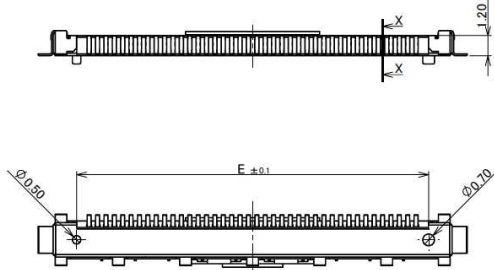
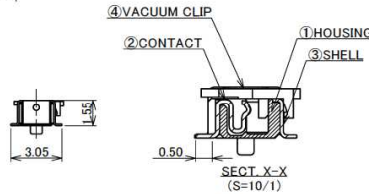
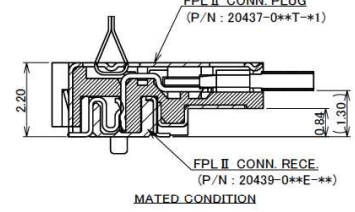


| PART NO. | CONTACT FINISH (MATING SIDE) |
|---------------|------------------------------|
| 20439-0**E-0* | Au 0.1 μm MIN. |
| 20439-0**E-1* | Au 0.3 μm MIN. |

| PART NO. | BOSS | VACUUM CLIP |
|---------------|---------|-------------|
| 20439-0**E-#1 | WITHOUT | WITH |
| 20439-0**E-#2 | WITH | WITH |
| 20439-0**E-#3 | WITHOUT | WITHOUT |
| 20439-0**E-#4 | WITH | WITHOUT |



| MATING COMBINATION TABLE | | |
|--------------------------|---------------|----------------|
| Pos. | PLUG PART NO. | RECE. PART NO. |
| 30P | 20437-030T-#1 | 20439-030E-** |
| 40P | 20437-040T-#1 | 20439-040E-** |
| 50P | 20437-050T-#1 | 20439-050E-** |

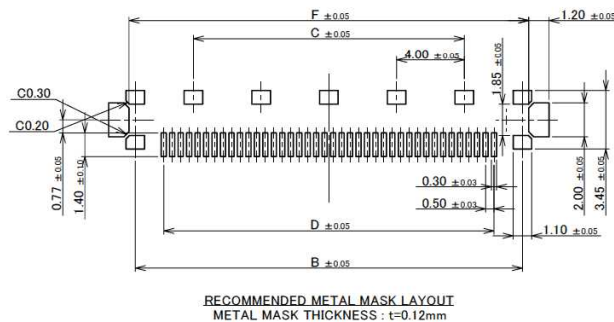
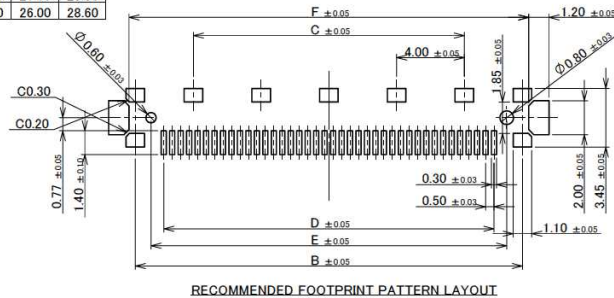


| NO. | DISCRIPTION | MATERIAL | FINISH , REMARKS |
|-----|-------------|-----------------|---|
| 4 | VACUUM CLIP | LCP | UL94V-0, BEIGE |
| 3 | SHELL | PHOSPHOR BRONZE | Sn(NO POLISH) 0.50 μm MIN. OVER Ni 1.00 μm MIN. |
| 2 | CONTACT | PHOSPHOR BRONZE | PART NO. 20439-0**E-0* MATING AREA : Au 0.10 μm MIN. OVER Ni 1.00 μm MIN. OTHER AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN. |
| | | | PART NO. 20439-0**E-1* MATING AREA : Au 0.30 μm MIN. OVER Ni 1.00 μm MIN. OTHER AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN. |
| 1 | HOUSING | LCP | UL94V-0, BLACK |

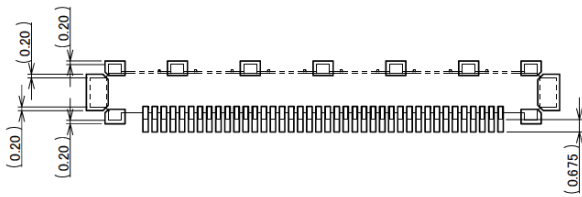
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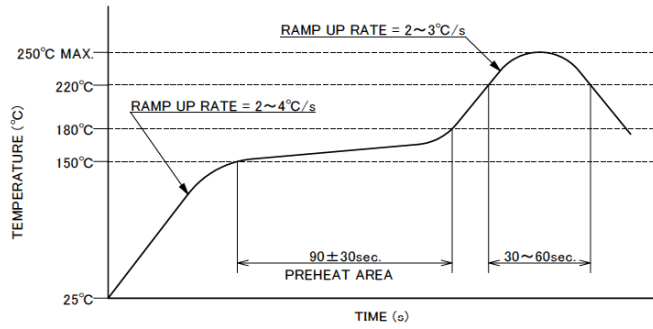
| PART NO. | Pos. | B | C | D | E | F |
|---------------|------|-------|-------|-------|-------|-------|
| 20439-030E-** | 30 | 17.86 | 12.00 | 14.50 | 16.00 | 18.60 |
| 20439-040E-** | 40 | 22.86 | 16.00 | 19.50 | 21.00 | 23.60 |
| 20439-050E-** | 50 | 27.86 | 20.00 | 24.50 | 26.00 | 28.60 |



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CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

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| ITEMS | SPECIFICATION |
|---------------------------------------|--|
| APPLICABLE CABLE | MICRO COAX : AWG# 40, 38, 36, 34, 32 DISCRETE : AWG# 36, 34, 32 TWINCOAX : AWG# 40 |
| RATING VOLTAGE | 100V AC (PER A CONTACT) |
| RATING AMPERAGE (FOR CONTACT) | 0.3A AC/DC [AWG#40] AVAILABLE TO 50 Pin 0.6A AC/DC [AWG#38] AVAILABLE TO 6 Pin 0.8A AC/DC [AWG#36] AVAILABLE TO 4 Pin 1.0A AC/DC [AWG#34, 32] AVAILABLE TO 7 Pin TESTING BY REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION. |
| OPERATING TEMPERATURE | 233~358K(-40°C~+85°C) |
| OPERATING HUMIDITY | 85% MAX.(NON-CONDENSING) |
| CONTACT RESISTANCE | INITIAL : 145mohm MAX.(AWG#32) / AFTER TEST : \triangle 140mohm MAX. 185mohm MAX.(AWG#34) 210mohm MAX.(AWG#36) 335mohm MAX.(AWG#38) 575mohm MAX.(AWG#40) |
| GROUND SHELL RESISTANCE | INITIAL : 50mohm MAX. / AFTER TEST : \triangle 140mohm MAX. |
| INSULATION RESISTANCE | INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN. |
| DIELECTRIC WITHSTANDING VOLTAGE | AC250V 1min |
| DURABILITY | 30 CYCLES |
| MATING FORCE (INITIAL / AFTER TEST) | 30P : 50.0N MAX. / 40P : 60.0N MAX. / 50P : 70.0N MAX. |
| UNMATING FORCE (INITIAL / AFTER TEST) | 30P : 5.0N MIN. / 40P : 6.0N MIN. / 50P : 7.0N MIN. |
| CABLE RETENTION FORCE | 30.0N MIN. |
| COPLANARITY | 0.10 MAX. |
| PRODUCT SPECIFICATION | PRS-1383 |
| TEST REPORT | TR-07048 |
| PACKING STANDARD | PLUG HOUSING ASS'Y : 300-584 / PLUG SHELL-A : 300-585 |
| INSTRUCTION MANUAL | HIM-09007 |
| ASSEMBLY MANUAL | ASM-07005 |

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