

CABLIN[®] -VS II

Fully-shielded with mechanical lock, Suitable for high-data-rate transfer (20 Gbps/lane), 0.5 mm pitch, Horizontal mating type micro-coaxial connector



- ✓ ZenShield[®] fully-shielded with multi-point grounds to prevent EMI leakage
- ✓ Mechanical locking cover prevents incomplete mating and back-out/un-mating
- ✓ High-data-rate transfer, ideal for Thunderbolt[™] 3 (20 Gbps/lane) applications

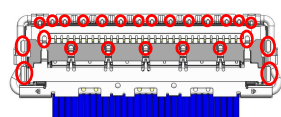
Pin counts:

Range	Up to 55
Available	20, 30, 40

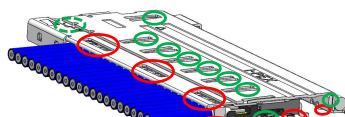
*Please inquire for pin counts not listed or outside of the pin count range.

Mating type		Horizontal
Wire (FPC) pitch (mm)		0.5
Board pitch (mm)		0.5
Mated size (mm)	Height	1.2 max. with cover
	Width Formula	6.85 + (0.5*?p)
	Depth	6.70
Wiping length (mm)		0.54
Applicable wire (AWG#)	Micro-coax for signals	45Ω : #36 or smaller
		50Ω : #38 or smaller
	Twincoax	#40
	Discrete	#32 or smaller
Contact point		Top
Performance (Reference only)		Thunderbolt 3 (20 Gbps/lane)
		PCIe Gen 4 (16 GT/s)
		USB 3.1 Gen 2 (10 Gbps)
		eDP HBR 3 (8.1 Gbps)

ZenShield[®] fully-shielded with multi-point grounds to prevent EMI leakage

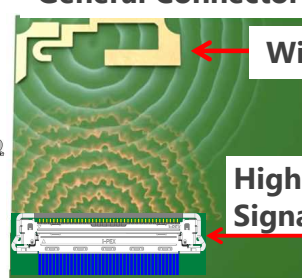


View From Back

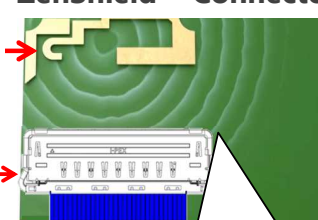


- Soldered contacts
- Mechanical contacts

General Connector

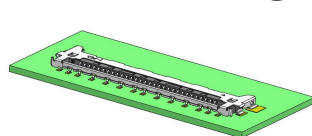


ZenShield[®] Connector

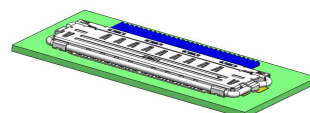
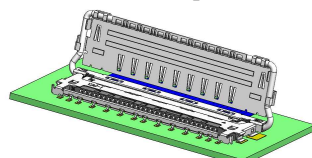


Connectors can be placed closer to antenna

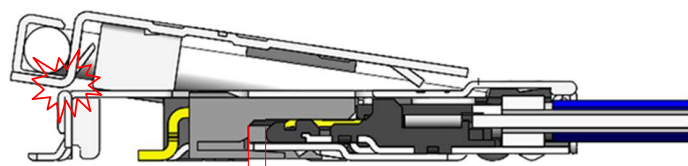
Mechanical locking cover prevents incomplete mating and back-out/un-mating



Unable to lock



can only be locked when mating is complete



incomplete mating



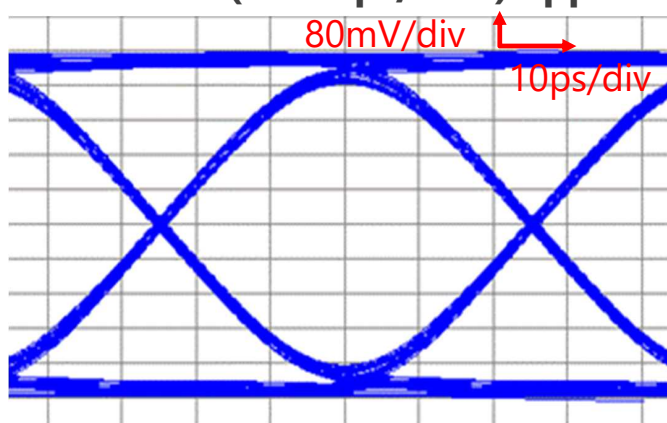
complete mating

High-data-rate transfer, ideal for Thunderbolt[™] 3 (20 Gbps/lane) applications

Thunderbolt 3 (20 Gbps/lane)

Eye pattern (Differential)
Bit rate : 20 Gbps
Rise time : 30ps (10-90%)
Input voltage : 800mVp-p

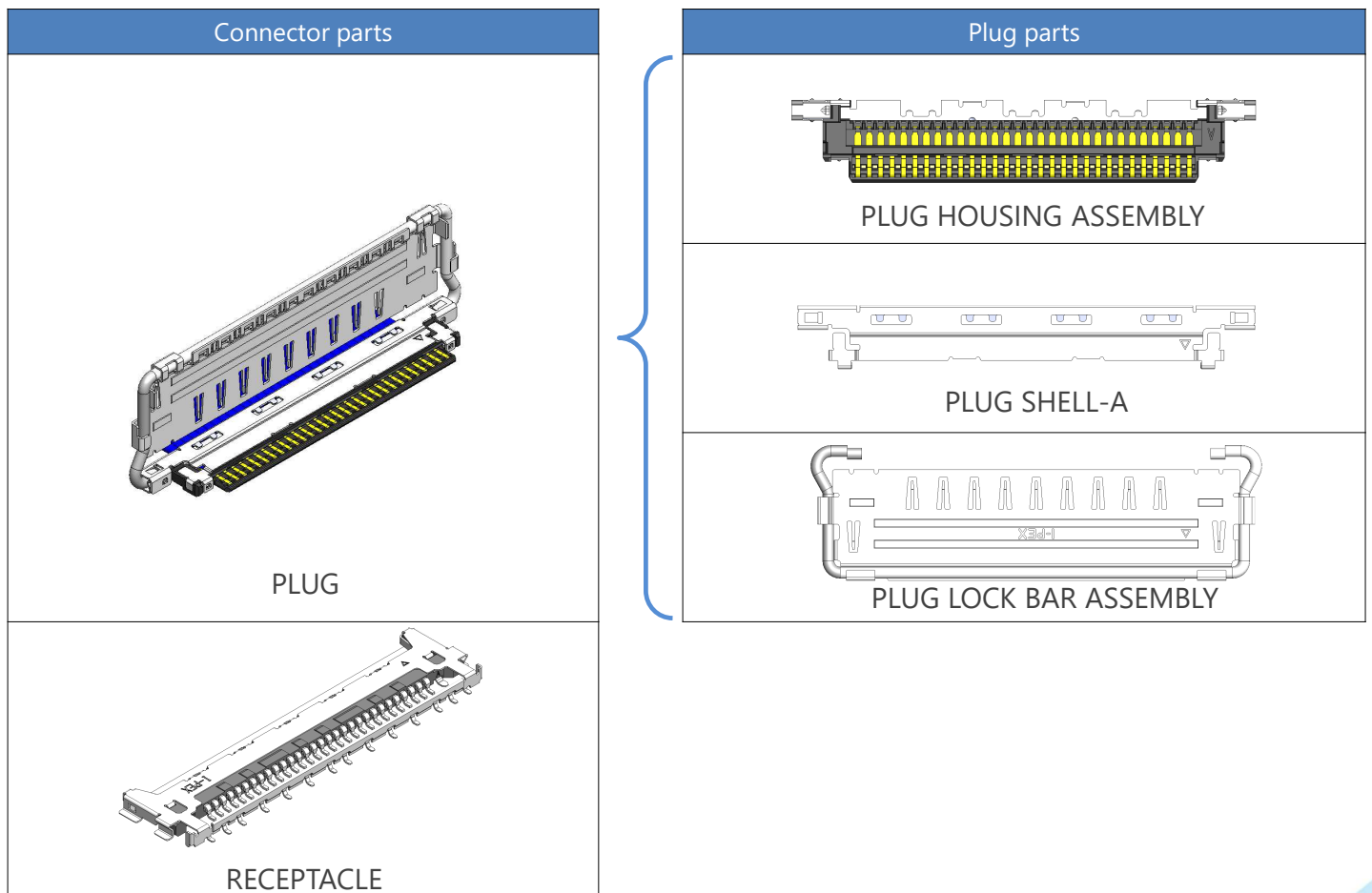
*Please contact I-PEX for more test details.



CABLINE[®]-VS II

Component Parts Detail

Component Parts:



Plug for Cable Assembly :

Recommended P/N		20846-0**T-01				
PART NO.	Pos.	A	B	C	D	E
20846-020T-0#	20	15.30	9.50	10.30	12.56	16.85
20846-030T-0#	30	20.30	14.50	15.30	17.56	21.85
20846-040T-0#	40	25.40	19.50	20.30	22.56	26.85

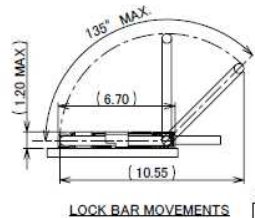
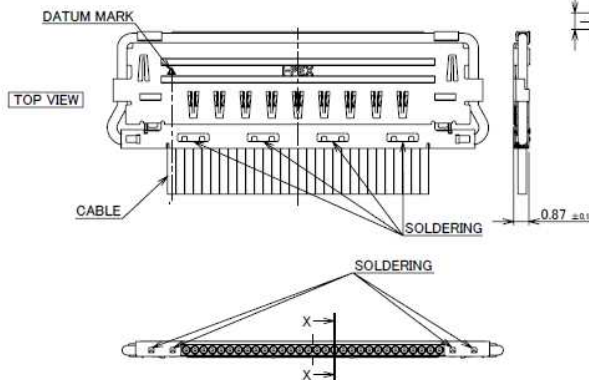
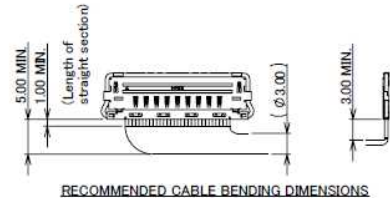
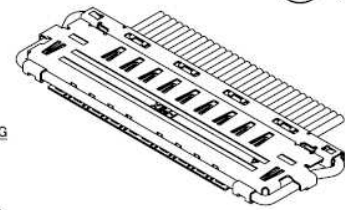
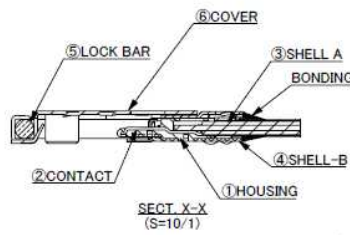
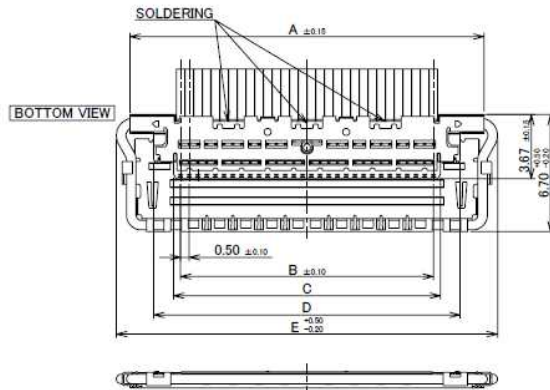


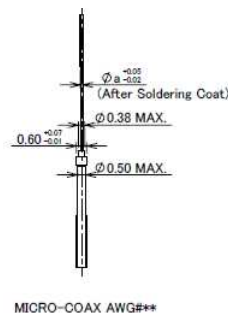
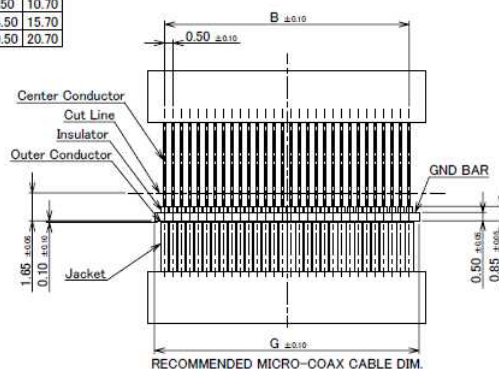
TABLE 1

PART NO.	CONTACT FINISH
20846-0**T-01	CONTACT & SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.
20846-0**T-02	CONTACT AREA : Au 0.38 μ m MIN. OVER Ni 1.27 μ m MIN. SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.

NO.	DISCRIPTION	MATERIAL	FINISH . REMARKS
6	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN.
5	LOCK BAR	SUS	-
4	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.00 μ m MIN.
3	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.00 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0, BLACK

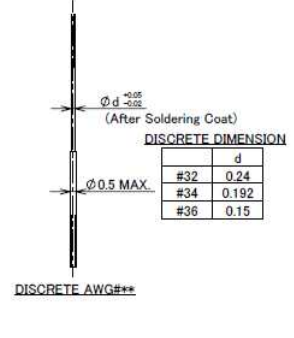
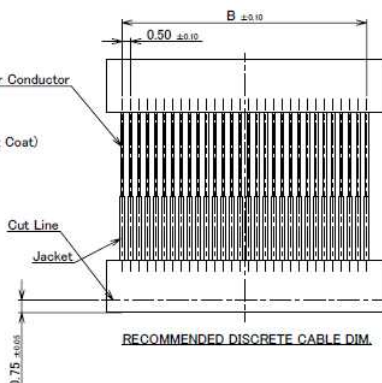
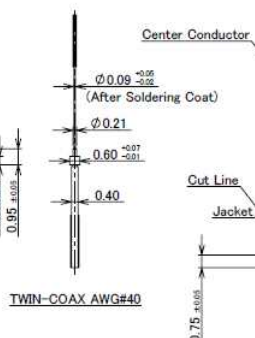
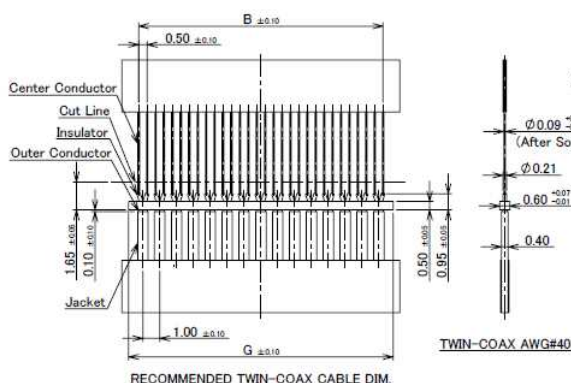
Rev.9

PART NO.	Pos.	B	G
20846-020T-0#	20	9.50	10.70
20846-030T-0#	30	14.50	15.70
20846-040T-0#	40	19.50	20.70



MICRO-COAX DIMENSION

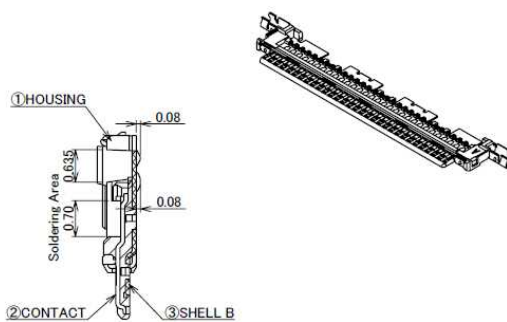
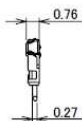
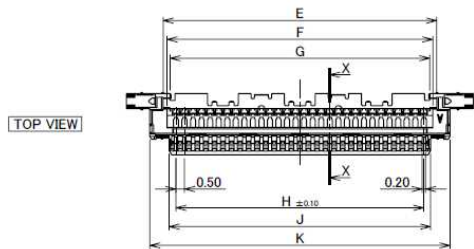
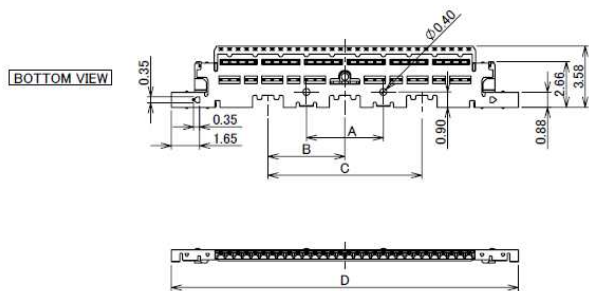
AWG	a
#36	0.15
#38	0.12
#40	0.09
#42	0.075
#44	0.063



Rev.9

Plug Housing Assembly :

Recommended P/N		20847-0**T-01									
PART NO.	Pos.	A	B	C	D	E	F	G	H	J	K
20847-020T-0#	20	-	-	5.00	15.30	11.00	10.55	10.20	9.50	10.30	12.56
20847-030T-0#	30	4.50	4.50	9.00	20.30	16.00	15.55	15.20	14.50	15.30	17.56
20847-040T-0#	40	9.00	4.50	13.50	25.40	21.00	20.55	20.20	19.50	20.30	22.56



SECT. X-X
(S=15/1)

NOTES.

NOTES.

1. THIS PART IS ASSEMBLED WITH SHELL A(P/N 3427-0**1) AND LOCK BAR ASS'Y(P/N 20848-0**T-01) AFTER SOLDERING THE CABLE, AND SHALL BE ASSIGNED AS P/N 20846-0**T-0#

TABLE.1

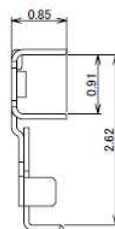
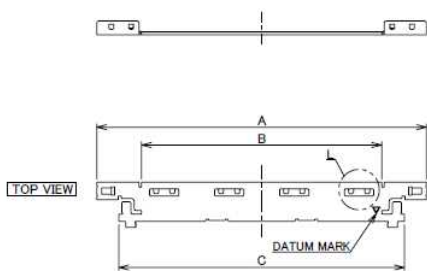
TABLE 1	
PART NO.	CONTACT FINISH
20847-0**T-01	<u>CONTACT & SOLDERING AREA</u> : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.
20847-0**T-02	<u>CONTACT AREA</u> : Au 0.38 μ m MIN. OVER Ni 1.27 μ m MIN. <u>SOLDERING AREA</u> : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.

3	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.00 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0, BLACK
NO	DISCRPTION	MATERIAL	FINISH ,REMARKS

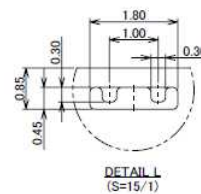
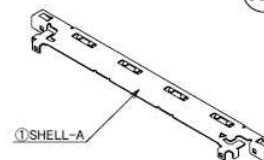
Rev.6

Plug Shell-A :

Recommended P/N		3427-0**1				
PART No.	Pos.	A	B	C	D	E
3427-0201	20	15.30	9.78	12.56	3.00	6.00
3427-0301	30	20.30	14.78	17.56	4.00	12.00
3427-0401	40	25.40	19.88	22.56	4.00	16.00



VIEW M
(S=20/1)



DETAIL 1
(S=15/1)

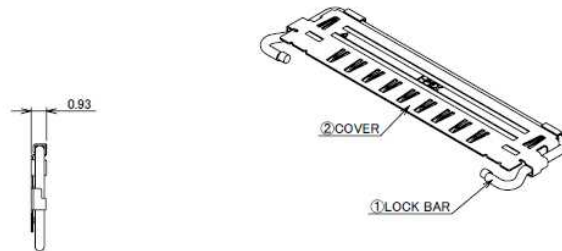
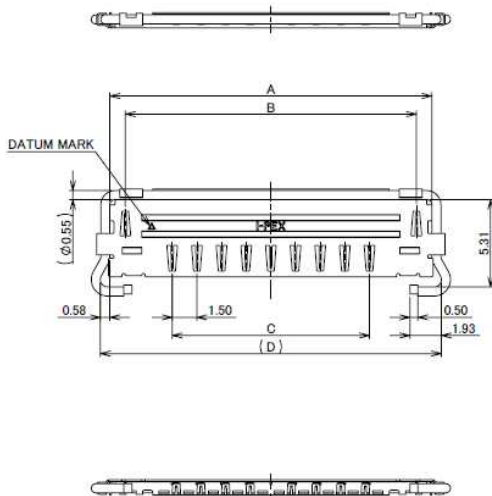
1	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.00 μ m MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.3

Plug Lock Bar Assembly :

Recommended P/N		20848-0**T-01				
PART NO.	Pos.	A	B	C	D	E
20848-020T-01	20	14.59	12.70	7.50	15.75	7.00
20848-030T-01	30	19.59	17.70	12.00	20.75	12.00
20848-040T-01	40	24.59	22.70	18.00	25.75	17.00

20848-0**T-01
— POS.



2	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN.
1	LOCK BAR	SUS ϕ 0.55	-
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.6

Receptacle Assembly :

Recommended P/N		20849-0**E-01			
PART NO.	Pos.	A	B	C	D
20849-020E-0#	20	11.30	9.50	14.33	15.10
20849-030E-0#	30	16.30	14.50	19.33	20.10
20849-040E-0#	40	21.30	19.50	24.33	25.10

P/N : 20849-0**E-0#
— POS.
SEE TABLE 1

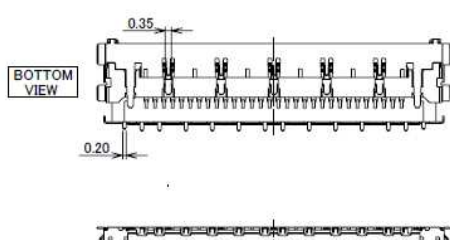
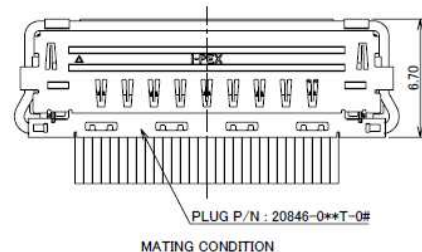
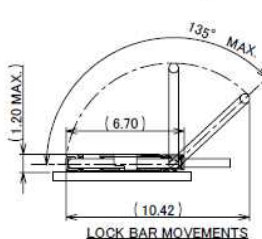
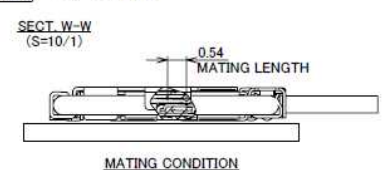
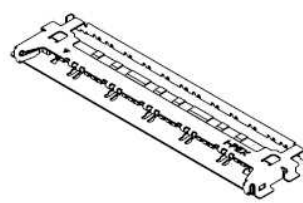
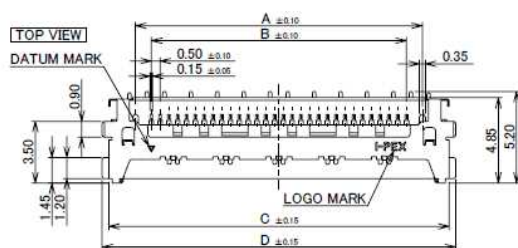
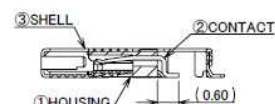


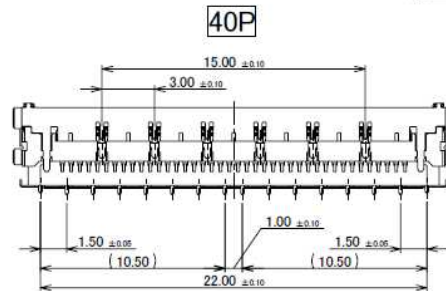
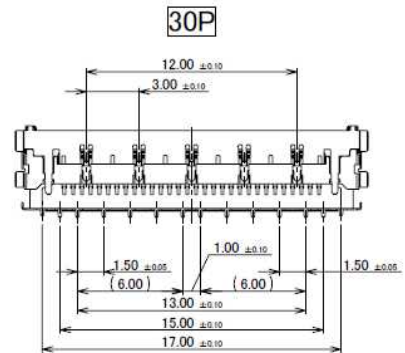
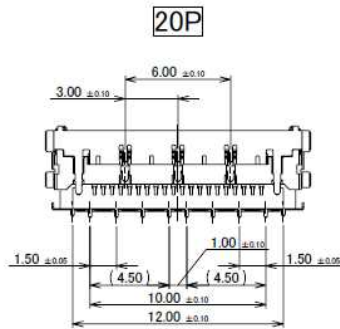
TABLE 1

TABLE 1			
PART NO.	CONTACT FINISH	SHELL FINISH	
20849-0**E-01	CONTACT & SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.	ALL OVER Ni 1.00 μm MIN.	
20849-0**E-02	CONTACT AREA : Au 0.38 μm MIN. OVER Ni 1.27 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.	SOLDERING AREA : Au 0.02 μm MIN.	
3	SHELL	PHOSPHOR BRONZE	SEE TABLE 1
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0, BLACK
NO.	DISCRIPTION	MATERIAL	FINISH ,REMARKS

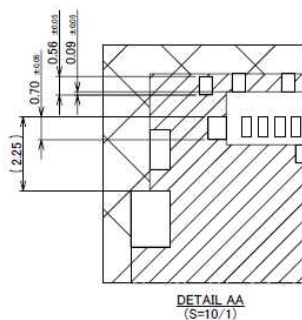
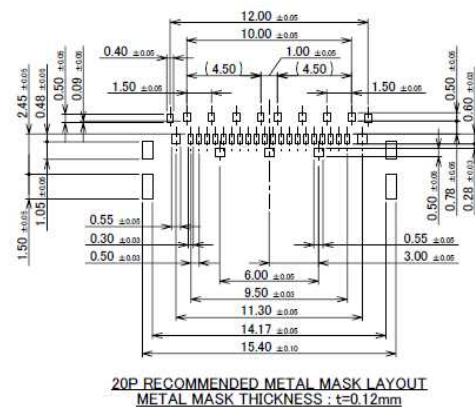
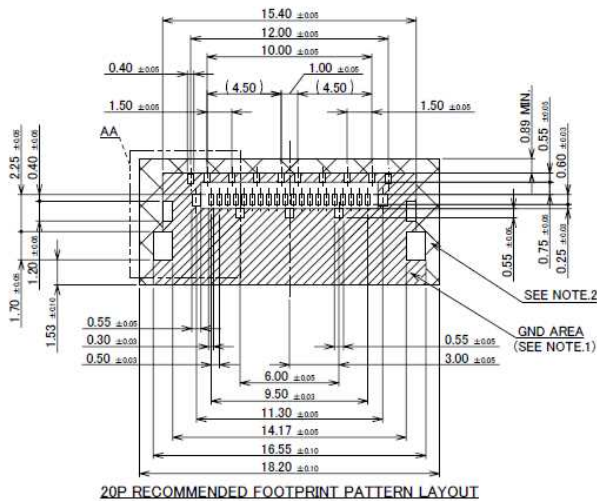
Rev.6

PART NO.	Pos.
20849-020E-0#	20
20849-030E-0#	30
20849-040E-0#	40

BOTTOM VIEW

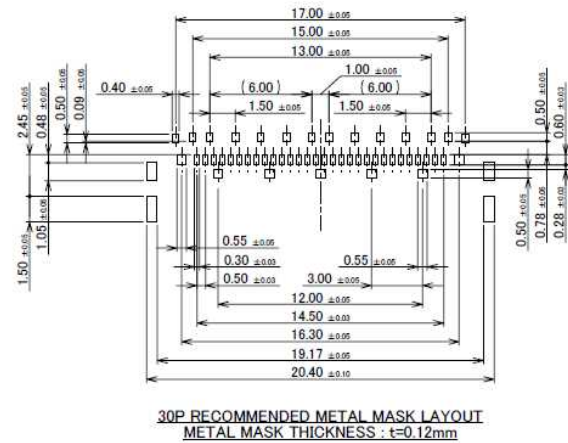
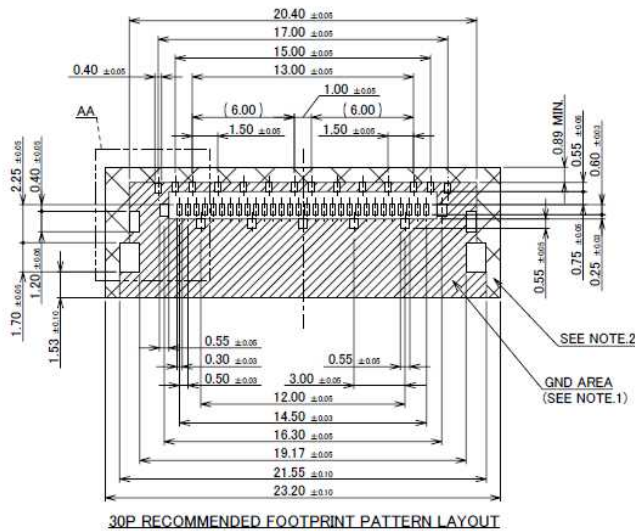


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- NOTES
1. SOLDER RESIST SHALL BE COATED IN CASE OF RUNNING TRACES ON THIS FOOT PRINT PATTERN PROHIBITION AREA.
 2. THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.

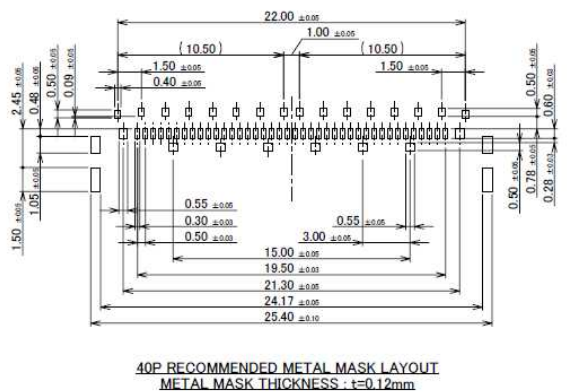
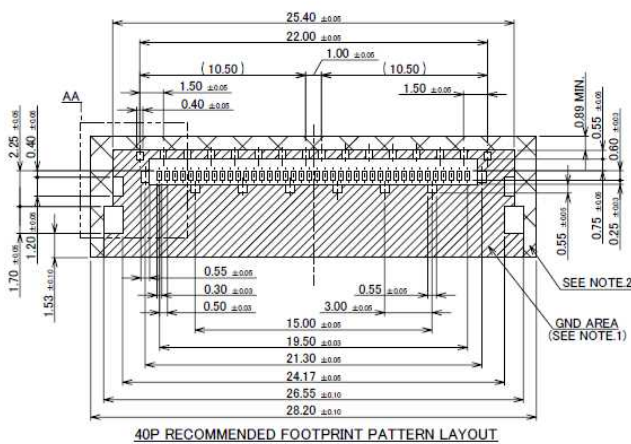
Rev.6



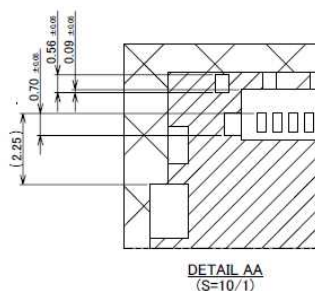
NOTES:
1. SOLDER RESIST SHALL BE COATED IN CASE OF RUNNING TRACES ON

(S=10/1)

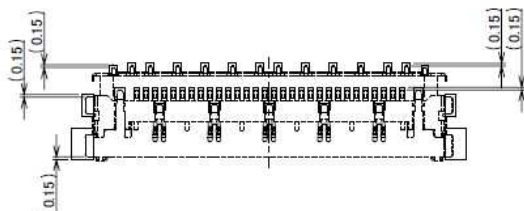
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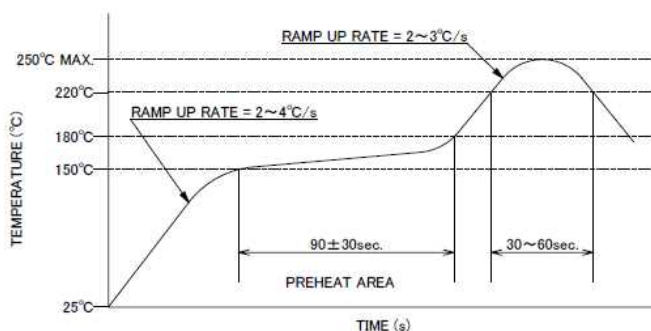
NOTES:
1. SOLDER RESIST SHALL BE COATED IN CASE OF RUNNING TRACES ON
THIS FOOT PRINT PATTERN PROHIBITION AREA
2. THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.



Rev.6



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

Rev.6

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO COAX : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE : AWG# 36 , 34 , 32 TWIN COAX : AWG# 40
RATING VOLTAGE	100V AC (PER CONTACT)
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] PER CONTACT/UP TO 40 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT/UP TO 40 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT/UP TO 40 CONTACTS 0.5A AC/DC [AWG#38] PER CONTACT/UP TO 23 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT/UP TO 10 CONTACTS 1.0A AC/DC [AWG#34] FOR POWER PER CONTACT/UP TO 9 CONTACTS 1.0A AC/DC [AWG#32] FOR POWER PER CONTACT/UP TO 9 CONTACTS ※TESTING BY A 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 : 140mohm MAX.(AWG#32) / AFTER TEST : <140mohm MAX. 180mohm MAX.(AWG#34) 275mohm MAX.(AWG#36) 360mohm MAX.(AWG#38) 600mohm MAX.(AWG#40) 700mohm MAX.(AWG#42) 1080mohm MAX.(AWG#44)
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : <140mohm MAX.
INSULATION RESISTANCE	INITIAL : 1000mohm MIN. / AFTER TEST : 500mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER 30 CYCLES)	20P : 9.70N MAX. 30P : 14.55N MAX. 40P : 19.40N MAX.
UNMATING FORCE (INITIAL / AFTER 30 CYCLES)	20P : 2.00N MIN. 30P : 3.00N MIN. 40P : 4.00N MIN.
CABLE RETENTION FORCE	20P : 9.80N MIN. 30P : 14.70N MIN. 40P : 19.60N MIN.
PRODUCT SPECIFICATION	PRS-2398
TEST REPORT	TR-17060 (20846-0**T-01) / TR-18048 (20846-0**T-02)
INSTRUCTION MANUAL	HIM-17015
ASSEMBLY MANUAL	ASM-17005
APPEARANCE CRITERIA No.	QLS-A***

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Contact your sales representative for more detailed information. [www.i-pex.com]