

CABLIN[®]-CA II PLUS

Fully-shielded with mechanical lock, High-data-rate transfer (20 Gbps/lane), 0.4 mm pitch, Horizontal mating type micro-coaxial connector



Product Specifications:

Mating type	Horizontal	
Board Pitch (mm)	0.4	
Wiping Length (mm)	0.54	
Mated size (mm)	Height	1.2 max. with cover
	Width	Formula: 6.95 + (0.4*?p)
	Depth	6.7
Pin Counts	Range	Up to 60
	Available	60

Applicable Cable Size:

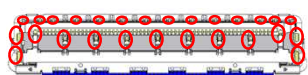
Maximum O.D. (mm)	0.4
Micro-Coaxial for Signal (AWG)	45 ohm: #38 or smaller
	50 ohm: #40 or smaller
Twin Coaxial (AWG)	#40
Discrete (AWG)	#34 or smaller

Applicable Standards (Reference Only):

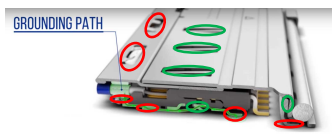
Thunderbolt 3 (20 Gbps/lane), PCIe[®] Gen 4 (16 GT/s), USB[®] 3.1 Gen 2 (10 Gbps), eDP HBR 3 (8.1 Gbps)

* Please inquire for pin counts not listed or outside of the pin count range.
 *20, 30, 40, 50p are also available with CABLINE[®]-CA II (narrow space type).

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

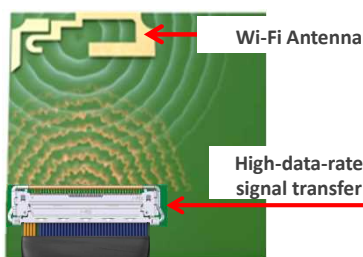


View From Back

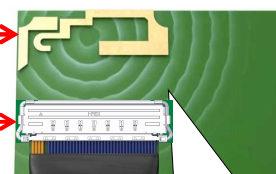


○ Soldered contacts
 ○ Mechanical contacts

General Connector

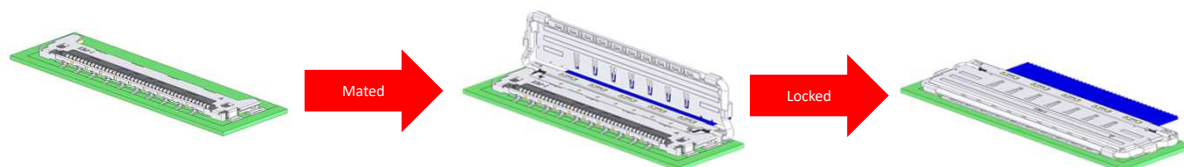


ZenShield[®] Connector



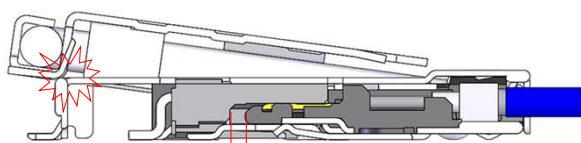
Connectors can be placed closer to antenna

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

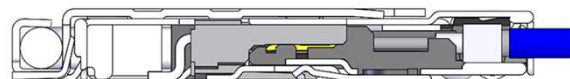


Unable to lock

can only be locked when mating is complete



incomplete mating



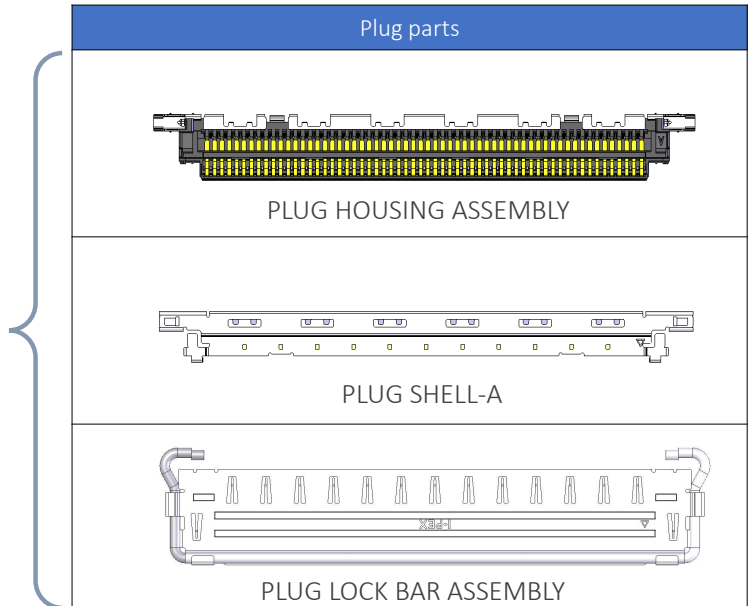
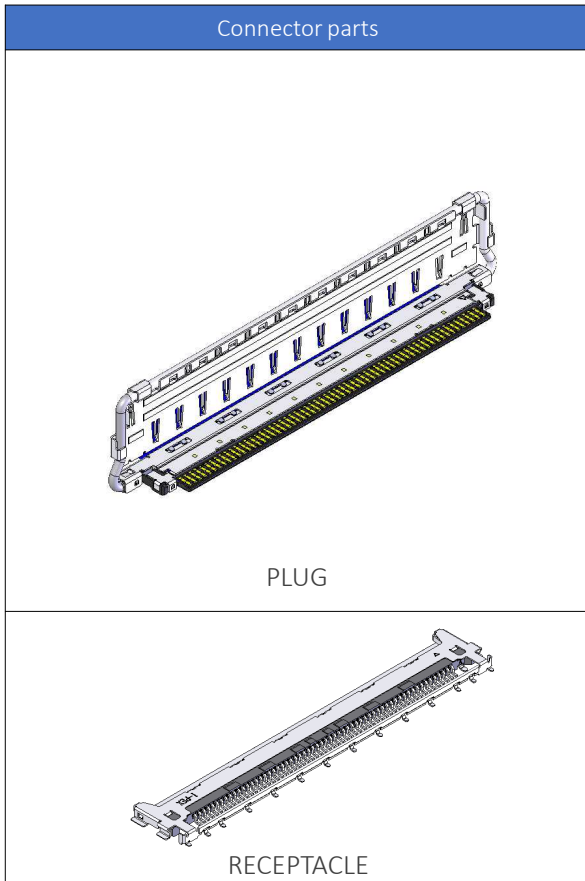
complete mating

► **Wider space for vias on PCB (for Non-Via-In-Pad type PCB trace design)**

CABLIN [®] -CA II (Narrow Space Type) 40p	CABLIN [®] -CA II PLUS (Wider Space Type) 60p
<p>0.25 +/- 0.05 mm</p>	<p>0.75 +/- 0.05 mm</p> <p>Wider space for via design</p>
<p>Ground Signal Ground Via Contact Pad PCB</p>	<p>Ground Signal Ground Via Contact Pad PCB</p>

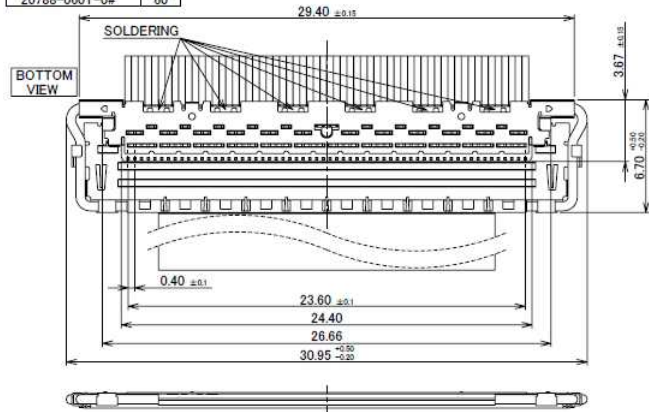
Component Parts Details

Component Parts

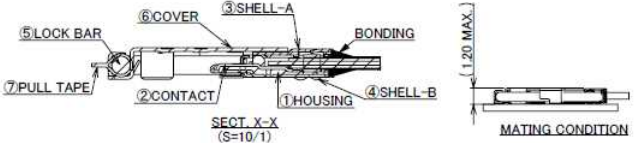
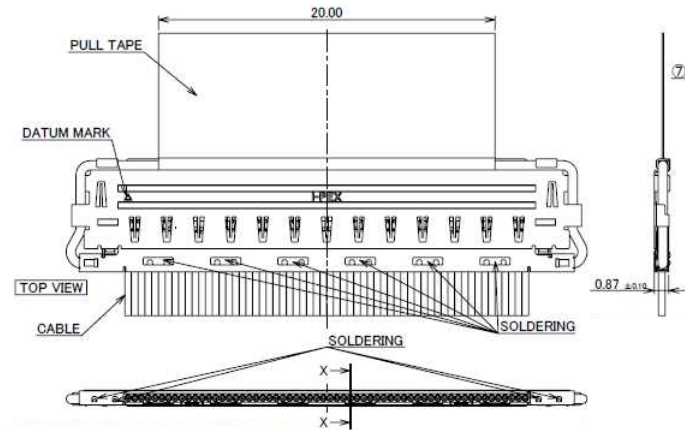
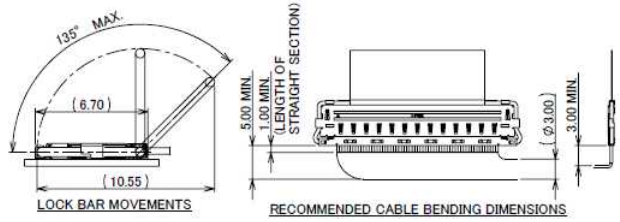
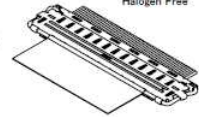


Plug for Cable Assembly

Recommended P/N		20788-0**T-01
PART NO.	Pos.	
20788-060T-0#	60	



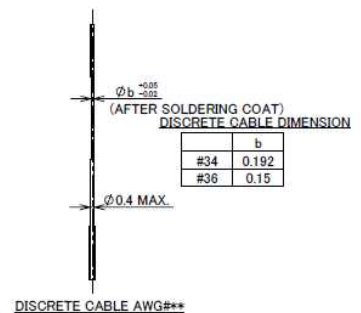
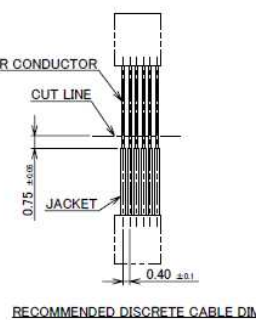
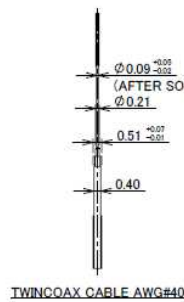
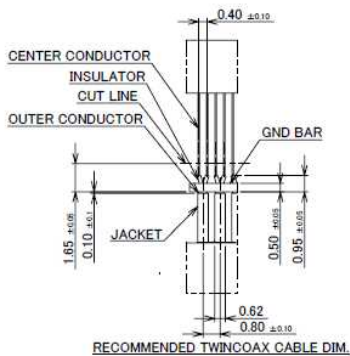
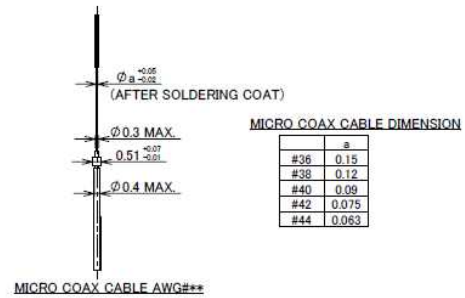
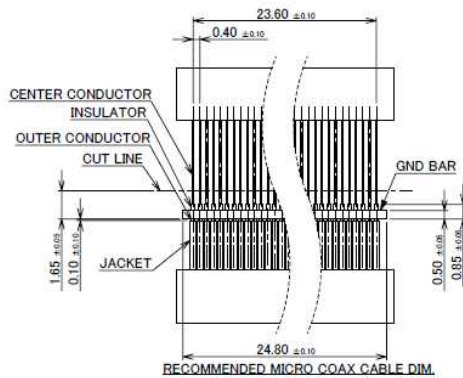
P/N : 20788-0**T-0#
 1 : WITHOUT PULL TAPE
 2 : WITH PULL TAPE
 Pos.



NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
7	PULL TAPE	POLYESTER FILM	-
6	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
5	LOCK BAR	SUS φ0.55	-
4	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
3	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

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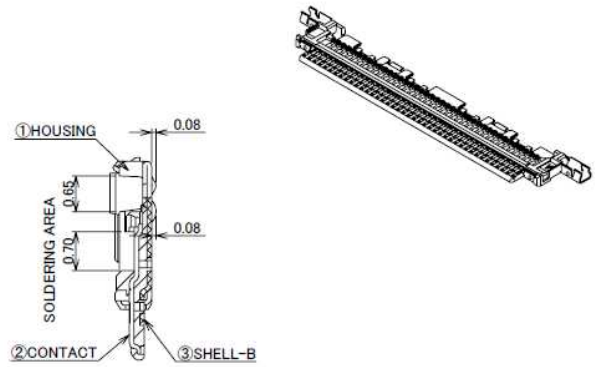
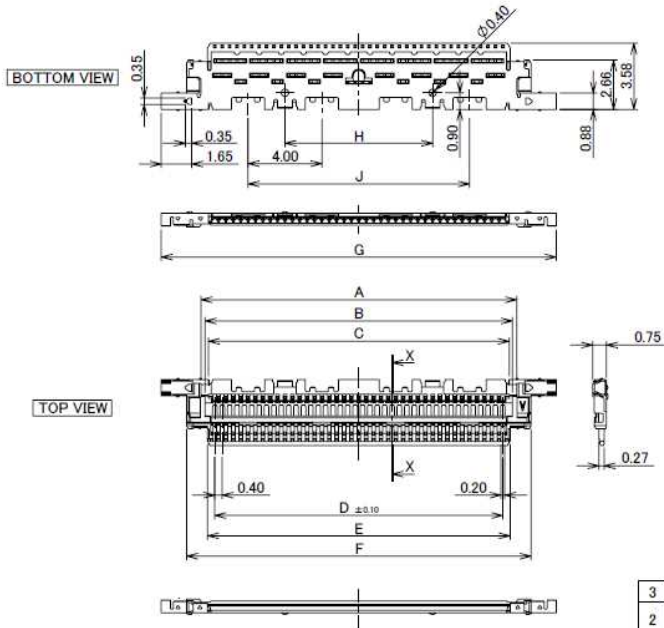
PART NO.	Pos.
20788-060T-##	60



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Plug Housing Assembly

Recommended P/N		20680-0**T-01									
PART NO.	Pos.	A	B	C	D	E	F	G	H	J	
20680-020T-01	20	9.10	8.65	8.30	7.60	8.40	10.66	13.40	-	5.00	
20680-030T-01	30	13.10	12.65	12.30	11.60	12.40	14.66	17.40	4.00	8.00	
20680-040T-01	40	17.10	16.65	16.30	15.60	16.40	18.66	21.40	8.00	12.00	
20680-050T-01	50	21.10	20.65	20.30	19.60	20.40	22.66	25.40	12.00	16.00	
20680-060T-01	60	25.10	24.65	24.30	23.60	24.40	26.66	29.40	16.00	20.00	



NOTES.

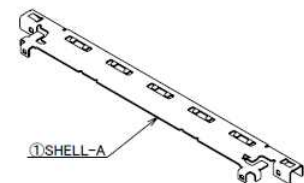
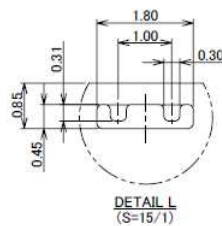
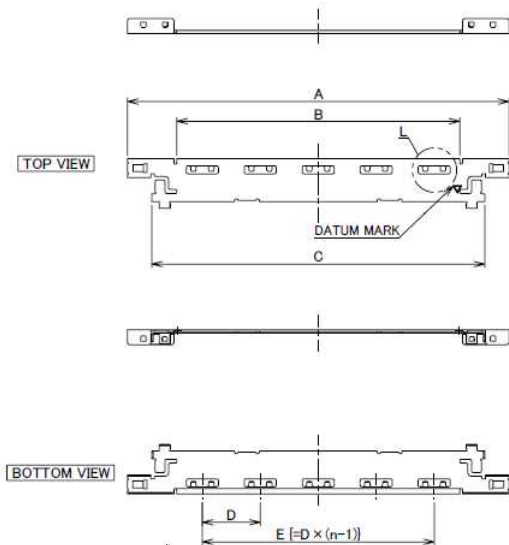
- THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASS'Y(P/N 20681-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20679-0**T-01
- THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASS'Y(P/N 20789-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20788-0**T-01

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

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Plug Shell-A

Recommended P/N		3204-0**1				
PART NO.	Pos.	A	B	C	D	E
3204-0201	20	13.40	7.88	10.66	2.50	5.00
3204-0301	30	17.40	11.88	14.66	3.00	9.00
3204-0401	40	21.40	15.88	18.66	3.25	13.00
3204-0501	50	25.40	19.88	22.66	3.40	17.00
3204-0601	60	29.40	23.88	26.66	4.00	20.00

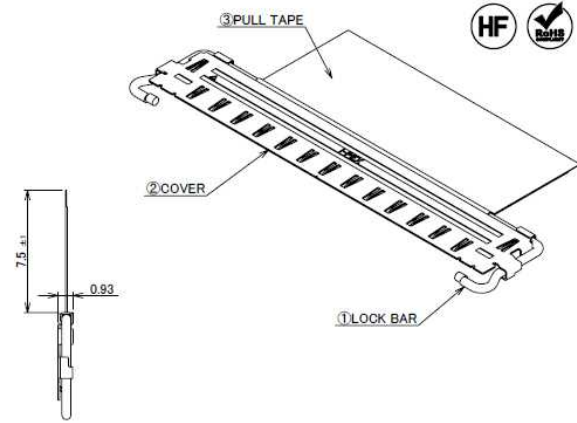
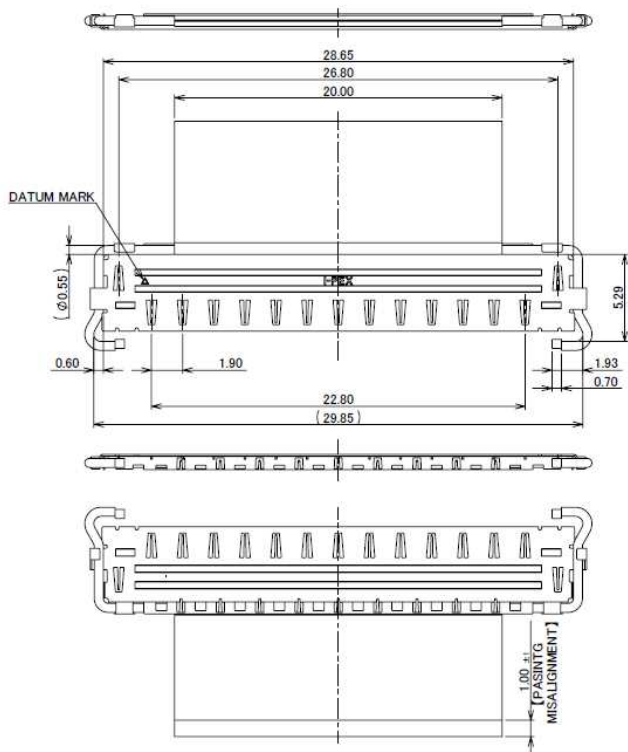


NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
1	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.

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Lock Bar Assembly

Recommended P/N		20789-0**T-01
PART NO.	Pos.	PULL TAPE
20789-060T-01	60	WITHOUT
20789-060T-02	60	WITH

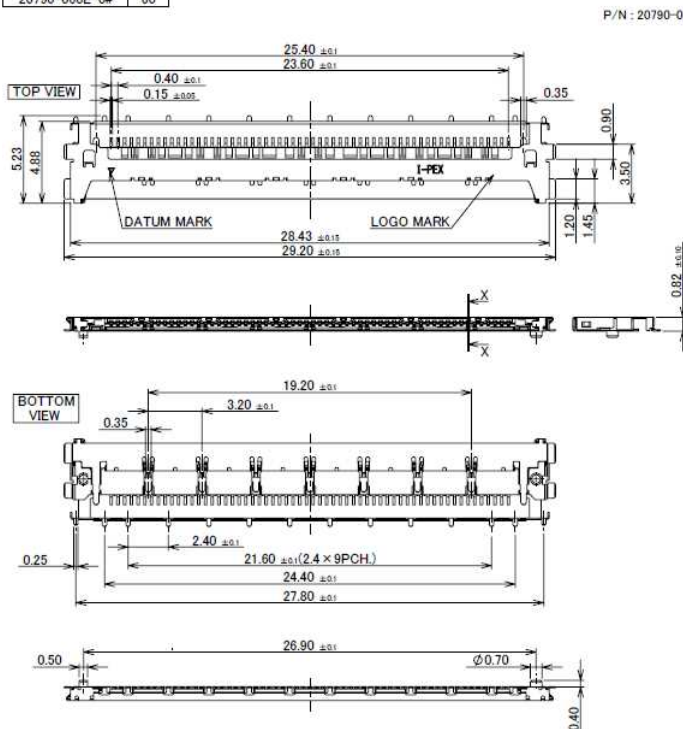


3	PULL TAPE	POLYESTER FILM	-
2	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
1	LOCK BAR	SUS φ0.55	-
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

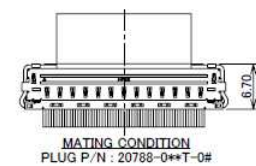
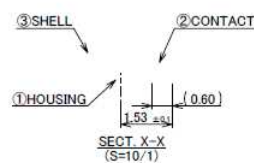
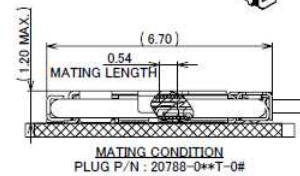
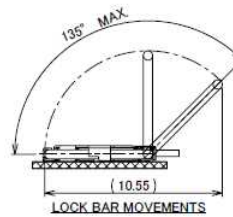
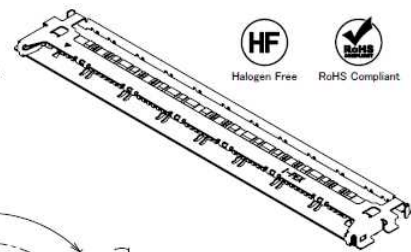
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Receptacle Assembly

Recommended P/N		20790-0**E-02
PART NO.	Pos.	
20790-060E-0#	60	



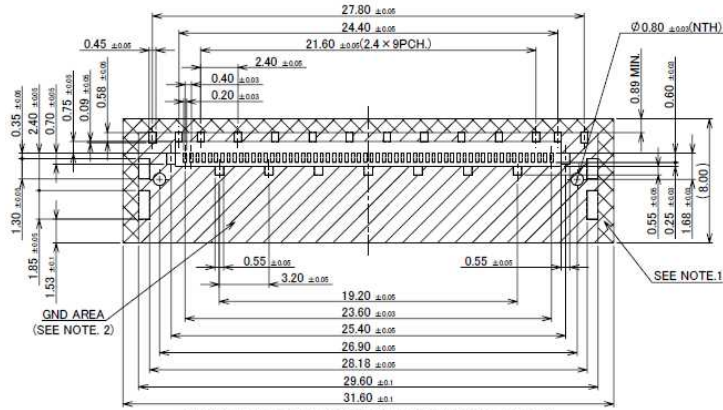
P/N : 20790-0**E-0#
 1 : WITH BOSS
 2 : WITHOUT BOSS
 Pos.



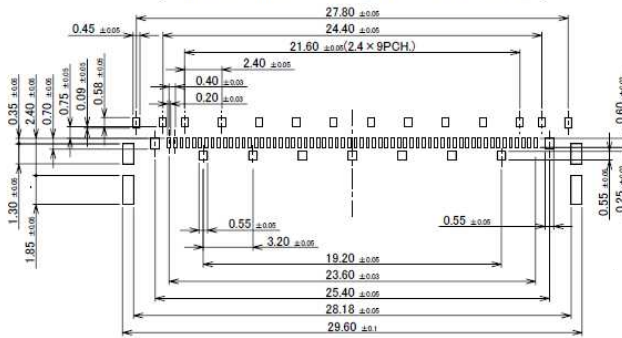
3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 .BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

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Receptacle Assembly

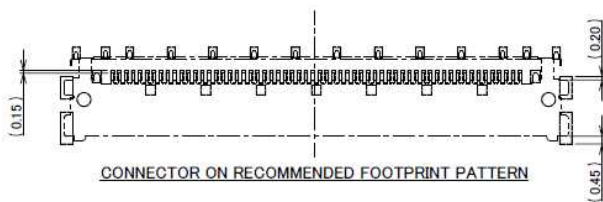


RECOMMENDED FOOTPRINT PATTERN LAYOUT

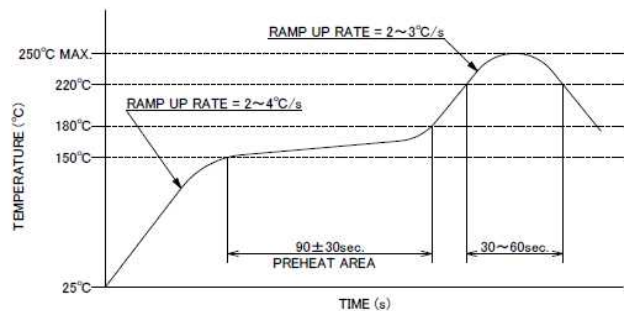


RECOMMENDED METAL MASK LAYOUT
METAL MASK THICKNESS : t=0.12mm

- NOTES:
1. THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.
2. SOLDER RESIST SHALL BE APPLIED TO PREVENT SHORT CIRCUITS WHEN PLACING SIGNAL LINES ON GROUND AREA.



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

Rev.11

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ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO COAX : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE : AWG# 36 , 34 TWINCOAX : AWG#40
RATING VOLTAGE	100V AC (PER CONTACT)
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] PER CONTACT / UP TO 60 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT / UP TO 60 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT / UP TO 60 CONTACTS 0.5A AC/DC [AWG#38] PER CONTACT / UP TO 18 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT / UP TO 8 CONTACTS 1.0A AC/DC [AWG#34] PER CONTACT / UP TO 6 CONTACTS ※ TESTING BY REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION
OPERATING TEMPERATURE	248~378K(-40°C~105°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : $\leq 140\text{mohm}$ MAX. 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 : $\leq 140\text{mohm}$ MAX.
INSULATION RESISTANCE	INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER 30 CYCLES)	29.10N MAX.
UN-MATING FORCE (INITIAL / AFTER 30 CYCLES)	6.0N MIN.
CABLE RETENTION FORCE	29.40N MIN.
PRODUCT SPECIFICATION	PRS-2261
TEST REPORT	TR-16075
INSTRUCTION MANUAL	HIM-16028
ASSEMBLY MANUAL	ASM-16004
APPEARANCE CRITERIA NO.	QLS-A***

Rev.8

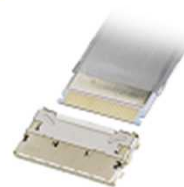
Board to Board



High-Density



Autolocking FPC/FFC



High-Density



FPC/FFC



Micro-Coaxial / Discrete Cable



High-Speed



RF



High-Frequency



Optical Module



High-Speed



Effector



Power



High-Power



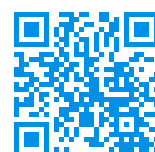
I/O (Input/Output)



Quick charge



Inquiry



Custom Connectors Available



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Contact your sales representative or more detailed information.

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