



- ✓ High-data-rate transfer, ideal for Thunderbolt™ 3 (20 Gbps/lane) applications
- Mechanical locking bar prevents incomplete mating and back-out/un-mating
- Multiple connector options with I-PEX VS series

	Mating type		Horizontal
	Wire (FPC) pitch (mm)		0.5
	Board pitch (mm)		0.5
	Mated	Height	1.0 +/- 0.1
	size	Width Formula	7.55 + (0.5*?p)
	(mm)	Depth	5.80
	Wiping length (mm)		0.61
	Applicable wire (AWG#)	Micro-coax for signals	45Ω : #36 or smaller
			50Ω : #38 or smaller
		Twincoax	#40
		Discrete	#32 or smaller
	Contact point		Тор
			Thunderbolt 3 (20 Gbps/lane)
	Performance		PCle Gen 4 (16 GT/s)
	(Refe	rence only)	USB 3.1 Gen 2 (10 Gbps)
			eDP HBR 3 (8.1 Gbps)

Pin counts:		
Range	10 - 50	
Available	20, 30, 40, 50	

^{*}Please inquire for pin counts not listed or outside of the pin count range

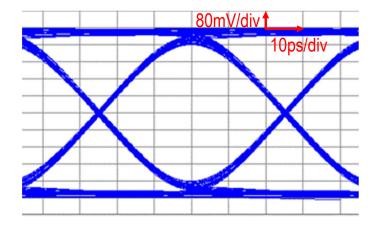
High-Data-Rate Transfer, Ideal for Thunderbolt 3 (20 Gbps/lane) Applications

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 Connectors for more test details.



Mechanical Locking Bar Prevents Incomplete Mating and Back-out/Un-mating



Multiple Connector Options with I-PEX VS Series

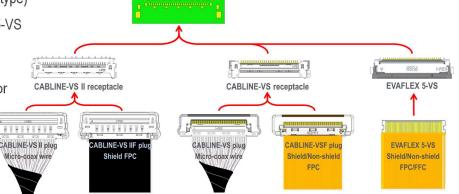
I-PEX VS series (0.5 mm pitch, horizontal mating type) CABLINE-VS, VS II receptacles and EVAFLEX® 5-VS can be mounted to the same PCB layout.

Incomplete mating

CABLINE-VS Receptacle:

Has #1 share in the Notebook PC panel connector

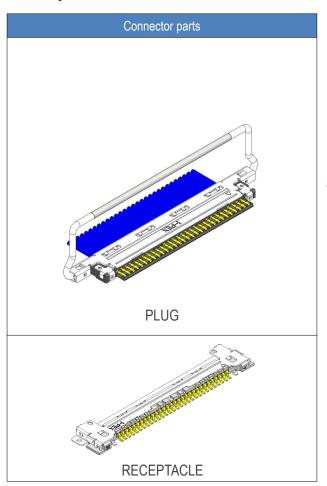
market as VESA standard connector.

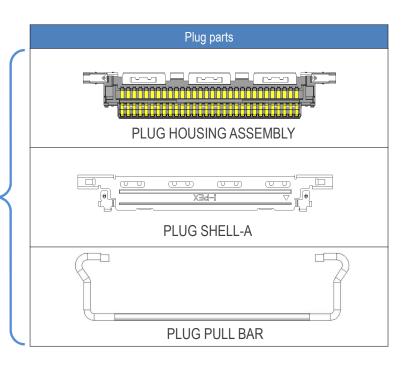


Complete mating

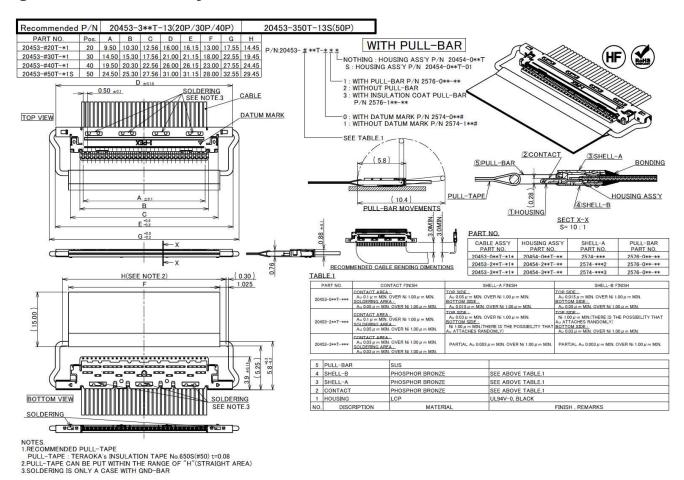
CABLINE®-VS Component Parts Detail

Component Parts:

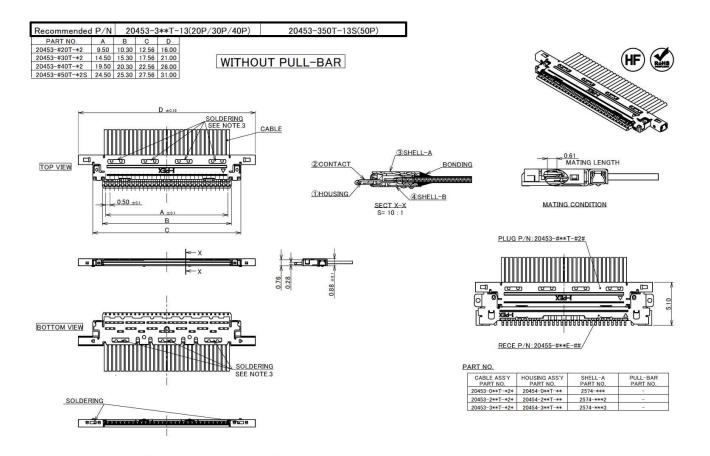


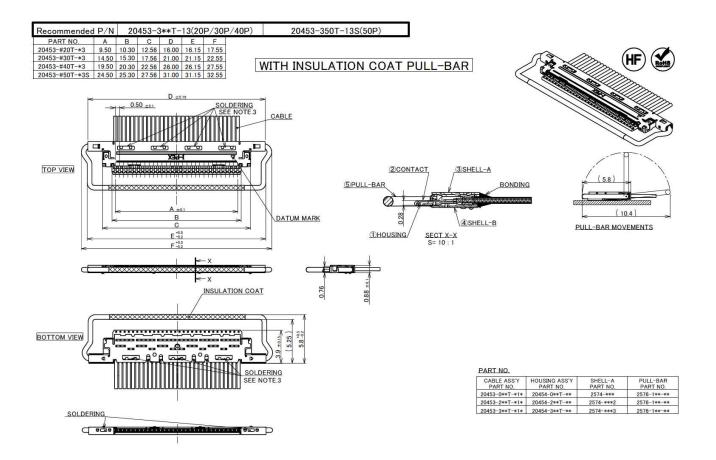


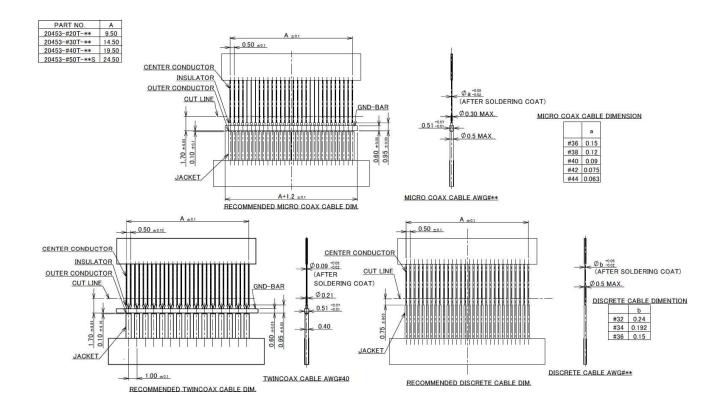
Plug for Cable Assembly:

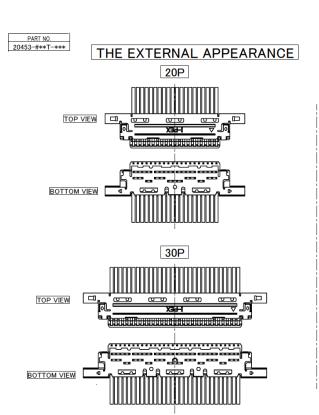


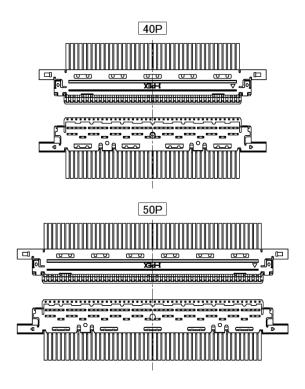
QKE-DFFDE06-02 REV.1



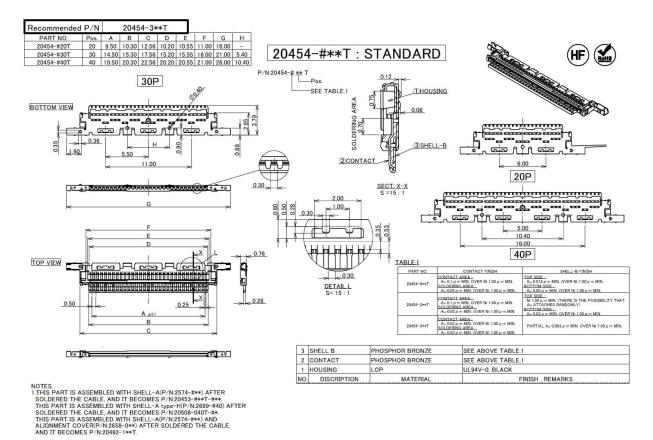


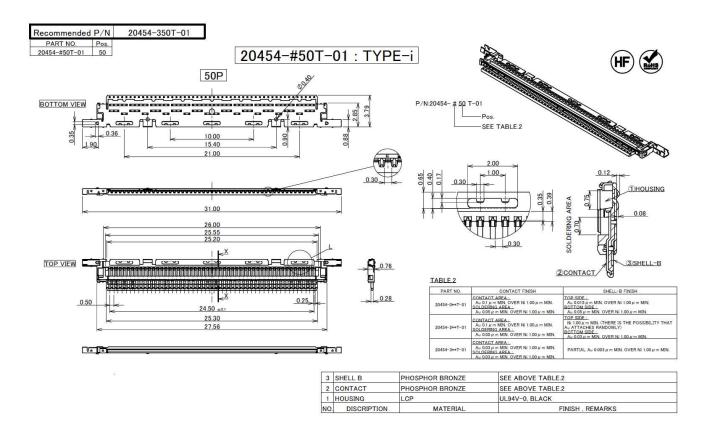




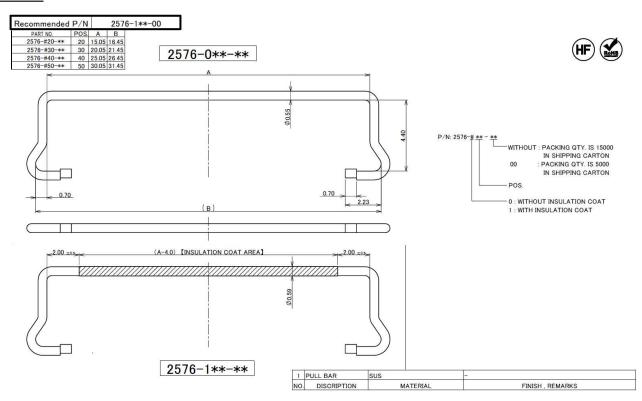


Plug Housing Assembly:

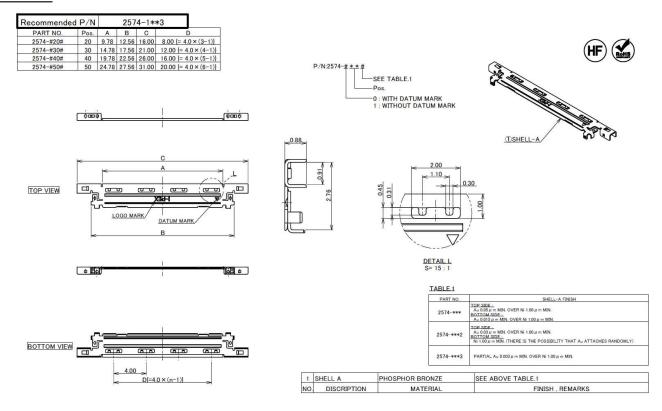




Pull Bar:

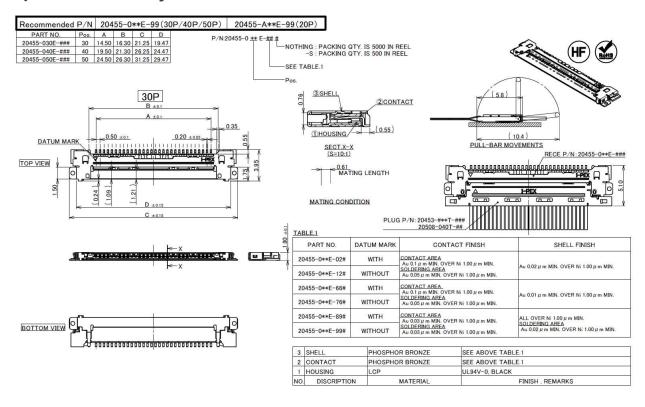


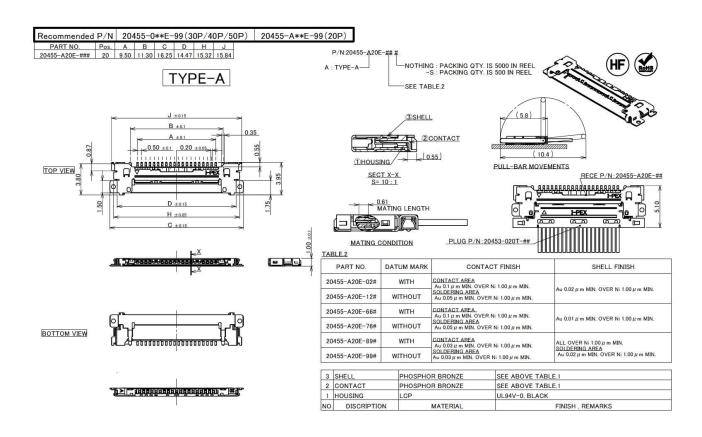
Shell-A:

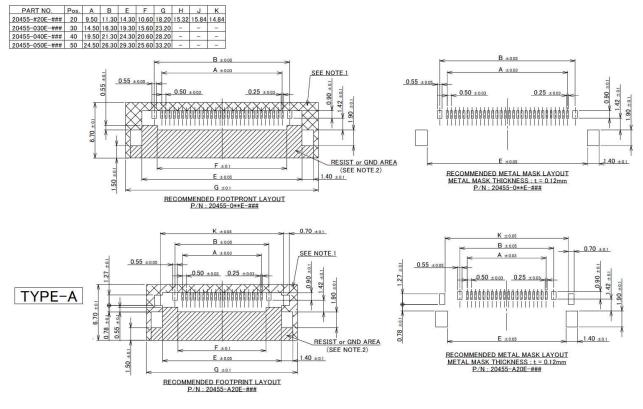


QKE-DFFDE06-02 REV.11

Receptacle Assembly:



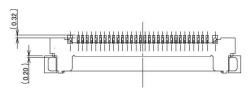




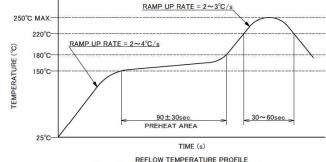
NOTES.

1. IN CASE OF PLUG WITH PULL-BAR.
THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.

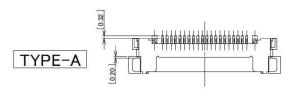
2. SOLDER RESIST SHALL BE APPLIED TO PREVENT SHORT CIRCUITS WHEN PLACING SIGNAL LINES ON GROUND AREA.



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN P/N: 20455-0**E-###



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



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN P/N: 20455-A20E-###

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO COAX : AWG# 44, 42, 40, 38, 36 DISCRETE : AWG# 36, 32 TWINCOAX : AWG# 40
RATING VOLTAGE	100V AC (PER CONTACT)
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] PER CONTACT/UP TO 50 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT/UP TO 50 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT/UP TO 50 CONTACTS 0.5A AC/DC [AWG#36] PER CONTACT/UP TO 10 CONTACTS 0.5A AC/DC [AWG#36] PER CONTACT/UP TO 10 CONTACTS 1.0A AC/DC [AWG#36] PER CONTACT/UP TO 10 CONTACTS 1.0A AC/DC [AWG#34] PER CONTACT/UP TO 6 CONTACTS 1.0A AC/DC [AWG#32] PER CONTACT/UP TO 6 CONTACTS TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERTURE RISE MAY AFFECTED BY ACTUAL SITUALION.
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% R.H. MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL: 140mohm MAX.(AWG#32) / AFTER TEST:
GROUND SHELL RESISTANCE	INITIAL: 50mohm MAX. / AFTER TEST: △40mohm MAX.
INSULATION RESISTANCE	INITIAL: 1000Mohm MIN. / AFTER TEST: 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER TEST)	20P : 9.45N MAX. 30P : 12.15N MAX. 40P : 16.20N MAX. 50P : 20.25N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	20P : 2.0N MIN. 30P : 3.0N MIN. 40P : 4.0N MIN. 50P : 5.0N MIN.
CABLE RETENTION FORCE	20P : 9.80N MIN. 30P : 14.70N MIN. 40P : 19.60N MIN. 50P : 24.50N MIN.
PRODUCT SPECIFICATION	PRS-1427
TEST REPORT	TR-08047 (20453-0**T-###) / TR-13084 (20453-2**T-###) / TR-16002 (20453-3**T-###)
INSTRUCTION MANUAL	HIM-08004
ASSEMBLY MANUAL	ASM-08003



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