

**Pb** THIS PRODUCT MANUFACTURED WITH LEAD-FREE PROCESSING

DESIGNED AND DIMENSIONED IN MILLIMETERS[INCHES]  
ALL DIMENSIONS REFERENCE EXCEPT AS SHOWN

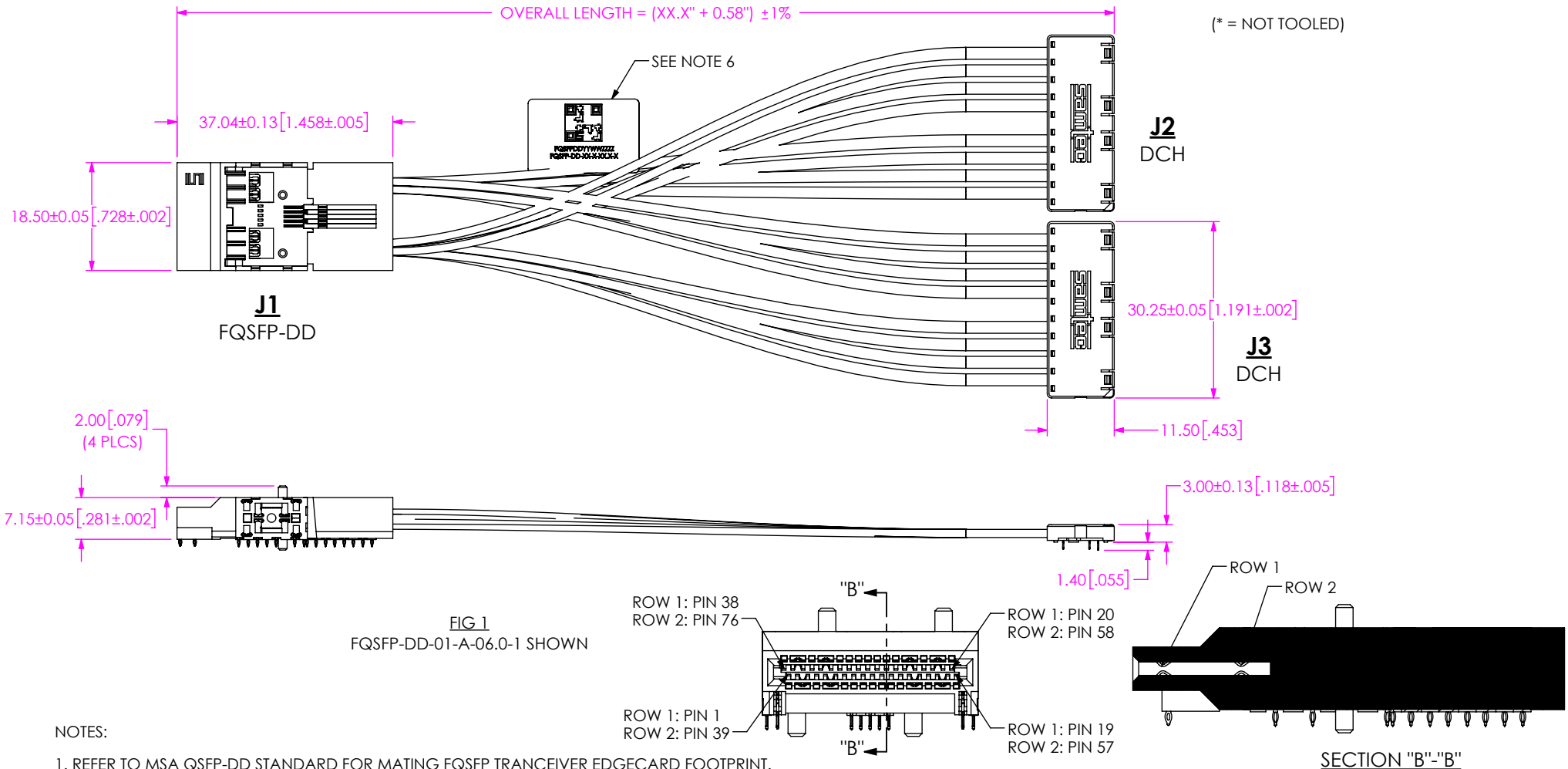
FQSFP-DD-XX-X-XX.X-X

CABLE AWG/OHM/PAIRS  
-01: 34100- 16 PAIRS (TwinAx)  
\*03: 3492- 16 PAIRS (TwinAx)  
\*04: 3492- 16 PAIRS (ThinAx)

FOOTPRINT  
-A: PRIMARY  
-B: SECONDARY  
(BELLY TO BELLY ONLY)

END 2  
-1: QTY 2 DCH-08  
(AVAILABLE WITH EXISTING CUSTOMERS ONLY)  
-2: QTY 1 FEDP-16  
-3: QTY 1 ARC6-16  
CABLE LENGTH (IN)  
04.0 MIN

(\* = NOT TOOLED)



NOTES:

- REFER TO MSA QSFP-DD STANDARD FOR MATING FQSFP TRANCEIVER EDGE CARD FOOTPRINT.
- REFER TO FQSFP-DD-XX-X-XX.X-X-FOOTPRINT FOR END 1 FOOTPRINT.
- REFER TO DCH-XX-XX.X-X-XX-X-X-FOOTPRINT FOR END 2 OPTION 1 FOOTPRINT.
- REFER TO QSFP-DD-X-X-X-XX-F FOR FQSFP-DD CAGE
- REFER TO HS-QSFP-DD-XX-X FOR FQSFP-DD HEAT SINK
- HRDL-11 TO BE CENTERED ON CABLE AS SHOWN. LABEL TO CONTAIN:  
TOP SIDE - QR CODE  
LINE 1 - SERIAL NUMBER "FQSFPDDYYWWZZZ"  
LINE 2 - PART NUMBER "FQSFP-DD-XX-X-XX.X-X"
- END 2 OPTION 2 TO MATE WITH FCDP CONNECTOR SERIES, AVAILABLE FOR DUAL VERTICAL AND RIGHT ANGLE APPLICATIONS. PLEASE CONTACT A SAMTEC SALES REPRESENTATIVE FOR MORE INFORMATION.
- END 2 OPTION 3 TO MATE WITH ARF6 CONNECTOR SERIES, AVAILABLE FOR DUAL VERTICAL AND RIGHT ANGLE APPLICATIONS. PLEASE CONTACT A SAMTEC SALES REPRESENTATIVE FOR MORE INFORMATION.
- FQSFP-DD END PACKAGED IN PROTECTIVE CAP (SEE FIG 16, SHT 11).

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DO NOT SCALE DRAWING  
SHEET SCALE: 1:1

MATERIAL:  
INSULATOR: LCP  
WELD TAB: COPPER ALLOY  
PLATING: 30µ" SELECTIVE GOLD IN CONTACT AREA  
STAMPING: CU NI SI ALLOY  
STRAIN RELIEF: NYLON

**samtec**  
520 PARK EAST BLVD, NEW ALBANY, IN 47150  
PHONE: 812-944-6733 FAX: 812-948-5047  
e-Mail info@SAMTEC.com code 55322

DESCRIPTION: FQSFP-DD ASSEMBLY

DWG. NO. FQSFP-DD-XX-X-XX.X-X

BY: L ARNS 6/1/17 SHEET 1 OF 11

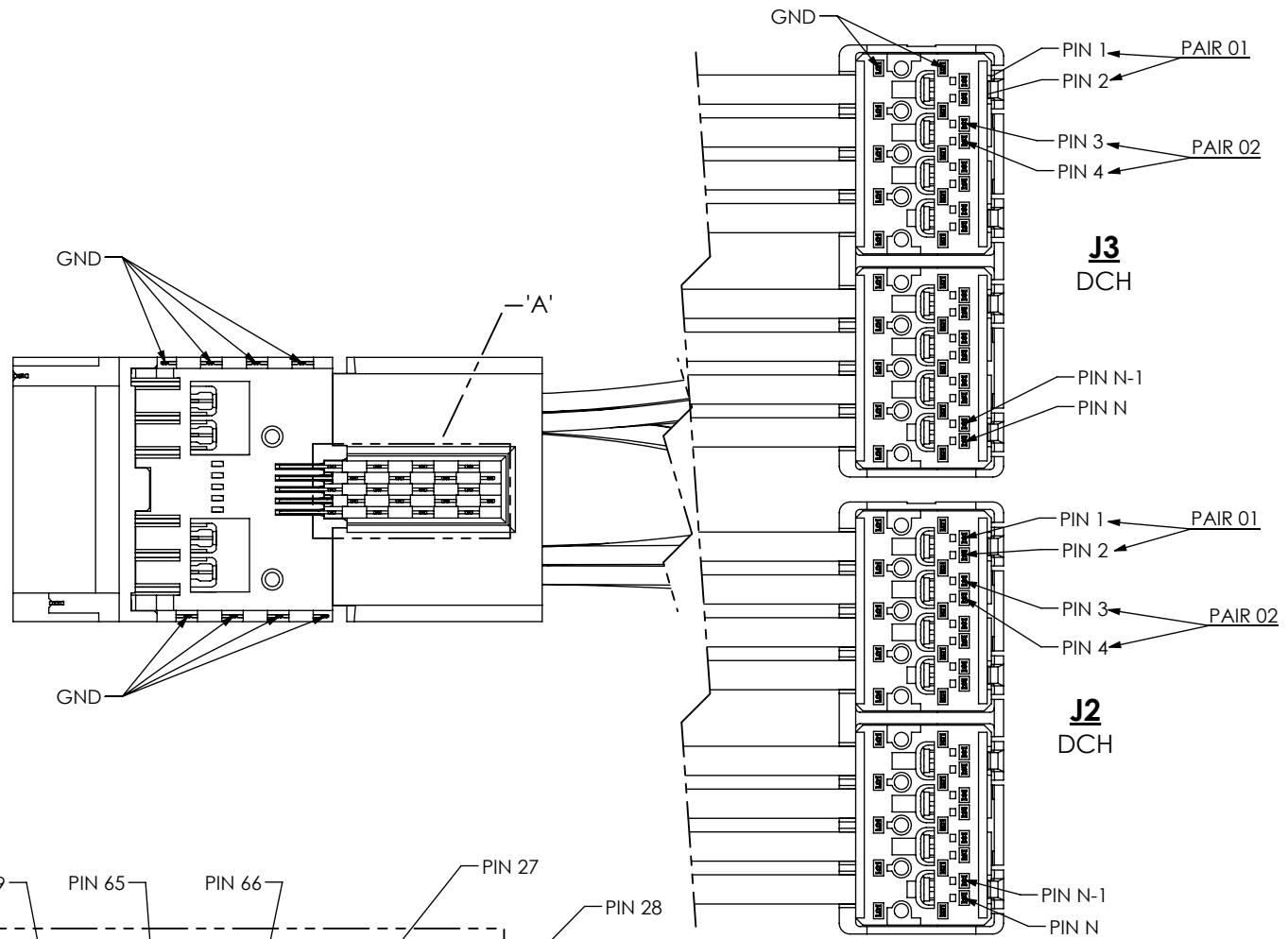
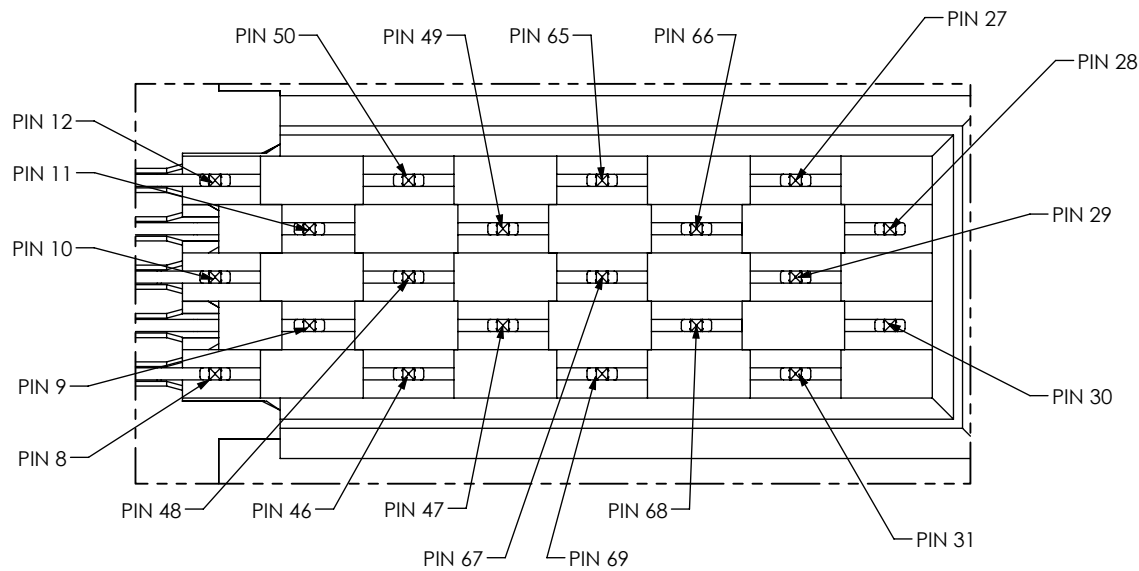


FIG 2  
FQSFP-DD-01-A-06.0-1 SHOWN



DETAIL 'A'  
SCALE 8 : 1

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DO NOT SCALE DRAWING

SHEET SCALE: 1:2

DESCRIPTION:  
 FQSFP-DD ASSEMBLY  
 DWG. NO.  
 FQSFP-DD-XX-X-XX.X-X

BY: L ARNS 6/1/17 SHEET 2 OF 11

**TABLE 1**

**SIGNAL MAPPING FQSFP-DD TO DCH (END OPTION 1)**

J1	MSA def	J2 DCH	J3 DCH	J1	MSA def	J2 DCH	J3 DCH	J1	MSA def	J2 DCH	J3 DCH	J1	MSA def	J2 DCH	J3 DCH
1	GND1			20	GND2			39	GND1			58	GND2		
2	TX2n	4		21	RX2n	13		40	TX6n	8		59	RX6n	9	
3	TX2p	3		22	RX2p	14		41	TX6p	7		60	RX6p	10	
4	GND1			23	GND2			42	GND1			61	GND2		
5	TX4n	2		24	RX4n	15		43	TX8n	6		62	RX8n	11	
6	TX4p	1		25	RX4p	16		44	TX8p	5		63	RX8p	12	
7	GND1			26	GND2			45	GND1			64	GND2		
8	ModselL	NC	NC	27	ModPrsL	NC	NC	46	Reserved	NC	NC	65	NC	NC	NC
9	ResetL	NC	NC	28	IntL	NC	NC	47	VS1	NC	NC	66	Reserved	NC	NC
10	VccRx	NC	NC	29	VccTx	NC	NC	48	VccRx1	NC	NC	67	VccTx1	NC	NC
11	SCL	NC	NC	30	Vcc1	NC	NC	49	VS2	NC	NC	68	Vcc2	NC	NC
12	SDA	NC	NC	31	InitMode	NC	NC	50	VS3	NC	NC	69	Reserved	NC	NC
13	GND2			32	GND1			51	GND2			70	GND1		
14	RX3p		4	33	TX3p		13	52	RX7p		8	71	TX7p		9
15	RX3n		3	34	TX3n		14	53	RX7n		7	72	TX7n		10
16	GND2			35	GND1			54	GND2			73	GND1		
17	RX1p		2	36	TX1p		15	55	RX5p		6	74	TX5p		11
18	RX1n		1	37	TX1n		16	56	RX5n		5	75	TX5n		12
19	GND2			38	GND1			57	GND2			76	GND1		

WITHIN THIS CABLE ASSEMBLY, POSITIONS LABELED WITH A SPECIFIC GND# ARE COMMON AND TIED TO TWINAX SHIELD

SAMTEC RECOMMENDS IMPLEMENTING A COMMON GND REFERENCE TYING ALL GND#'s TOGETHER

ALL NC NETS DO NOT TRANSMIT THROUGH CABLE, THEY WILL ROUTE THROUGH CUSTOMER PCB

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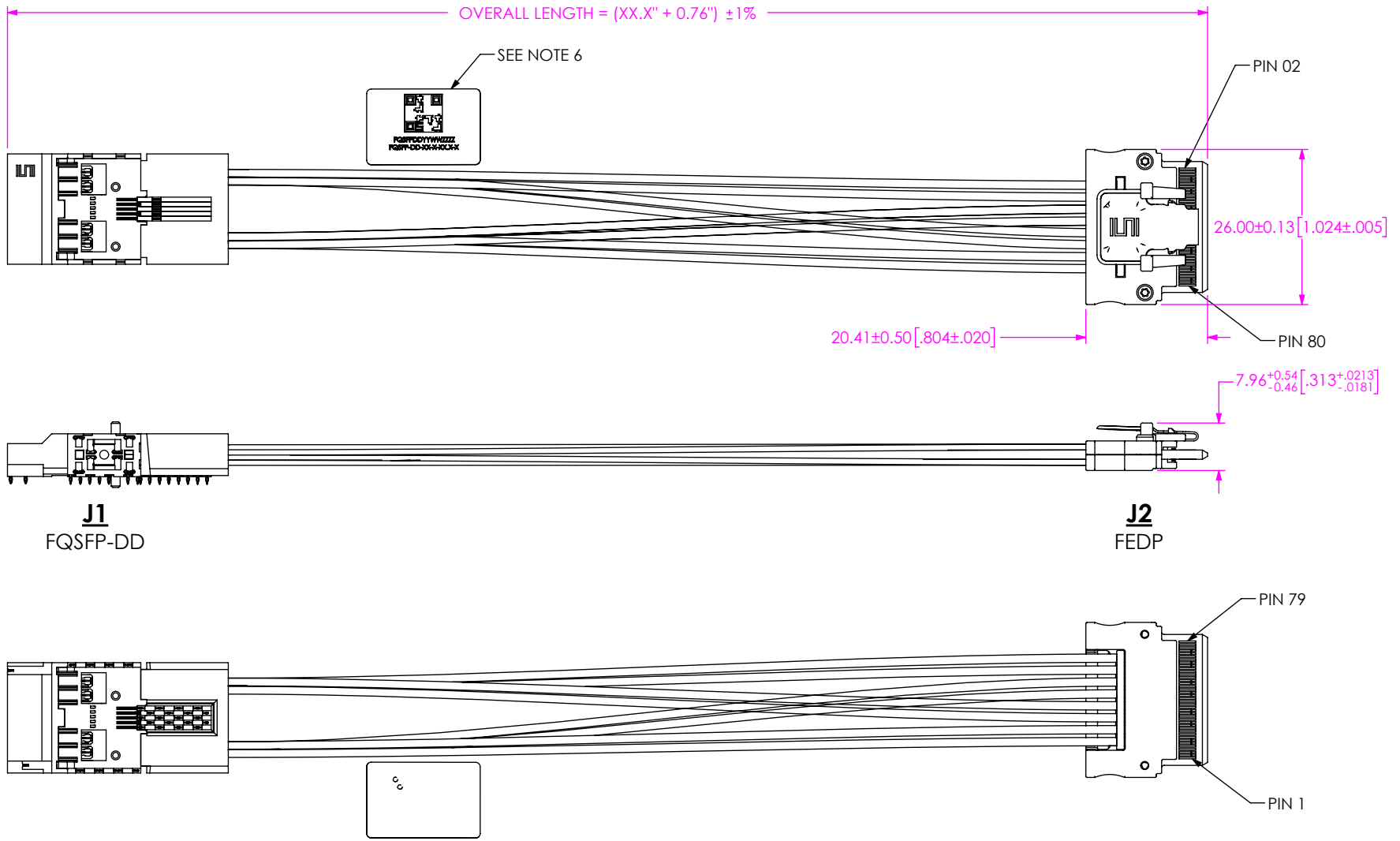
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SHEET SCALE: 3:1

DESCRIPTION:  
 FQSFP-DD ASSEMBLY

DWG. NO.  
 FQSFP-DD-XX-X-XX.X-X

BY: L ARNS 6/1/17 SHEET 3 OF 11



**FIG 3**  
FQSFP-DD-01-A-06.0-2 SHOWN  
(SAME AS FIG 2, EXCEPT AS SHOWN)

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SHEET SCALE: 1:2

DESCRIPTION:  
FQSFP-DD ASSEMBLY

DWG. NO.  
FQSFP-DD-XX-X-XX.X-X

BY: L ARNS 6/1/17

SHEET 4 OF 11

TABLE 2											
SIGNAL MAPPING FQSFP-DD TO FEDP											
J1	MSA def	J2 FEDP	J1	MSA def	J2 FEDP	J1	MSA def	J2 FEDP	J1	MSA def	J2 FEDP
1	GND	GND	20	GND	GND	39	GND	GND	58	GND	GND
2	TX2n	3	21	RX2n	38	40	TX6n	43	59	RX6n	78
3	TX2p	5	22	RX2p	36	41	TX6p	45	60	RX6p	76
4	GND	GND	23	GND	GND	42	GND	GND	61	GND	GND
5	TX4n	11	24	RX4n	30	43	TX8n	51	62	RX8n	70
6	TX4p	13	25	RX4p	28	44	TX8p	53	63	RX8p	68
7	GND	GND	26	GND	GND	45	GND	GND	64	GND	GND
8	ModselL	NC	27	ModPrsL	NC	46	Reserved	NC	65	NC	NC
9	ResetL	NC	28	IntL	NC	47	VS1	NC	66	Reserved	NC
10	VccRx	NC	29	VccTx	NC	48	VccRx1	NC	67	VccTx1	NC
11	SCL	NC	30	Vcc1	NC	49	VS2	NC	68	Vcc2	NC
12	SDA	NC	31	InitMode	NC	50	VS3	NC	69	Reserved	NC
13	GND	GND	32	GND	GND	51	GND	GND	70	GND	GND
14	RX3p	23	33	TX3p	18	52	RX7p	63	71	TX7p	58
15	RX3n	25	34	TX3n	16	53	RX7n	65	72	TX7n	56
16	GND	GND	35	GND	GND	54	GND	GND	73	GND	GND
17	RX1p	31	36	TX1p	10	55	RX5p	71	74	TX5p	50
18	RX1n	33	37	TX1n	8	56	RX5n	73	75	TX5n	48
19	GND	GND	38	GND	GND	57	GND	GND	76	GND	GND
ALL GROUNDS COMMON AND TIED TO CABLE SHIELD											
ALL NC NETS DO NOT TRANSMIT THROUGH CABLE, THEY WILL ROUTE THROUGH CUSTOMER PCB											

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 SHEET SCALE: 3:1

DESCRIPTION:  
 FQSFP-DD ASSEMBLY  
 DWG. NO.  
 FQSFP-DD-XX-X-XX.X-X  
 BY: L ARNS 6/1/17 SHEET 5 OF 11

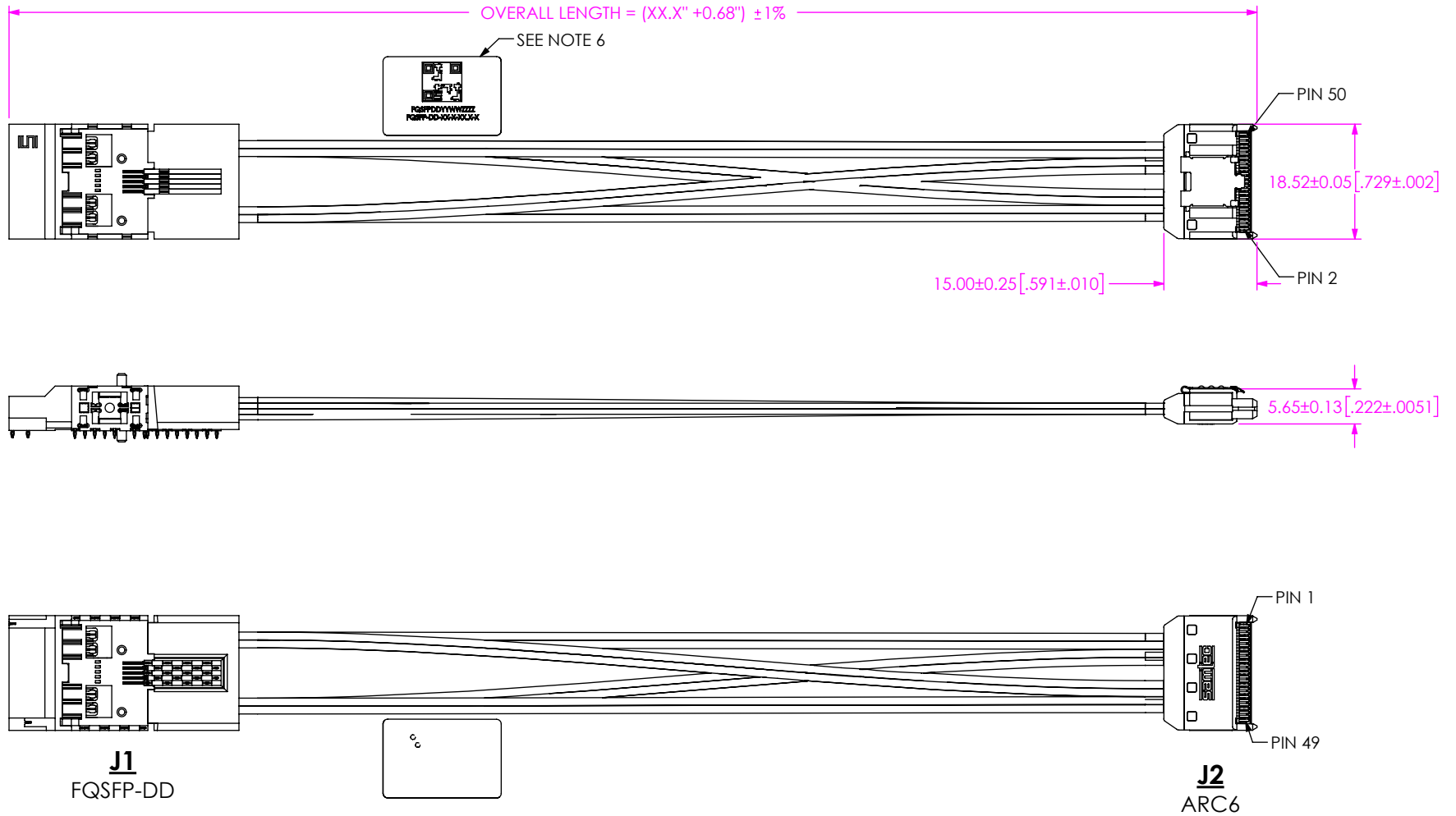


FIG 4  
FQSFP-DD-01-A-06.0-3 SHOWN  
(SAME AS FIG 2, EXCEPT AS SHOWN)

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DO NOT SCALE DRAWING  
SHEET SCALE: 1:2

DESCRIPTION:  
FQSFP-DD ASSEMBLY  
DWG. NO.  
FQSFP-DD-XX-X-XX.X-X

BY: L ARNS 6/1/17 SHEET 6 OF 11

TABLE 3											
SIGNAL MAPPING FQSFP-DD TO ARC6											
J1	MSA def	J2 ARC6	J1	MSA def	J2 ARC6	J1	MSA def	J2 ARC6	J1	MSA def	J2 ARC6
1	GND1	GND1	20	GND2	GND2	39	GND1	GND1	58	GND2	GND2
2	TX2n	47	21	RX2n	46	40	TX6n	35	59	RX6n	34
3	TX2p	45	22	RX2p	48	41	TX6p	33	60	RX6p	36
4	GND1	GND1	23	GND2	GND2	42	GND1	GND1	61	GND2	GND2
5	TX4n	41	24	RX4n	40	43	TX8n	29	62	RX8n	28
6	TX4p	39	25	RX4p	42	44	TX8p	27	63	RX8p	30
7	GND1	GND1	26	GND2	GND2	45	GND1	GND1	64	GND2	GND2
8	ModselL	NC	27	ModPrsL	NC	46	Reserved	NC	65	NC	NC
9	ResetL	NC	28	IntL	NC	47	VS1	NC	66	Reserved	NC
10	VccRx	NC	29	VccTx	NC	48	VccRx1	NC	67	VccTx1	NC
11	SCL	NC	30	Vcc1	NC	49	VS2	NC	68	Vcc2	NC
12	SDA	NC	31	InitMode	NC	50	VS3	NC	69	Reserved	NC
13	GND2	GND2	32	GND1	GND1	51	GND2	GND2	70	GND1	GND1
14	RX3p	12	33	TX3p	9	52	RX7p	24	71	TX7p	21
15	RX3n	10	34	TX3n	11	53	RX7n	22	72	TX7n	23
16	GND2	GND2	35	GND1	GND1	54	GND2	GND2	73	GND1	GND1
17	RX1p	6	36	TX1p	3	55	RX5p	18	74	TX5p	15
18	RX1n	4	37	TX1n	5	56	RX5n	16	75	TX5n	17
19	GND2	GND2	38	GND1	GND1	57	GND2	GND2	76	GND1	GND1
WITHIN THIS CABLE ASSEMBLY, POSITIONS LABELED WITH A SPECIFIC GND# ARE COMMON AND TIED TO TWINAX SHIELD											
SAMTEC RECOMMENDS IMPLEMENTING A COMMON GND REFERENCE TYING ALL GND#'s TOGETHER											
ALL NC NETS DO NOT TRANSMIT THROUGH CABLE, THEY WILL ROUTE THROUGH CUSTOMER PCB											

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DESCRIPTION:  
 FQSFP-DD ASSEMBLY  
 DWG. NO.  
 FQSFP-DD-XX-X-XX.X-X  
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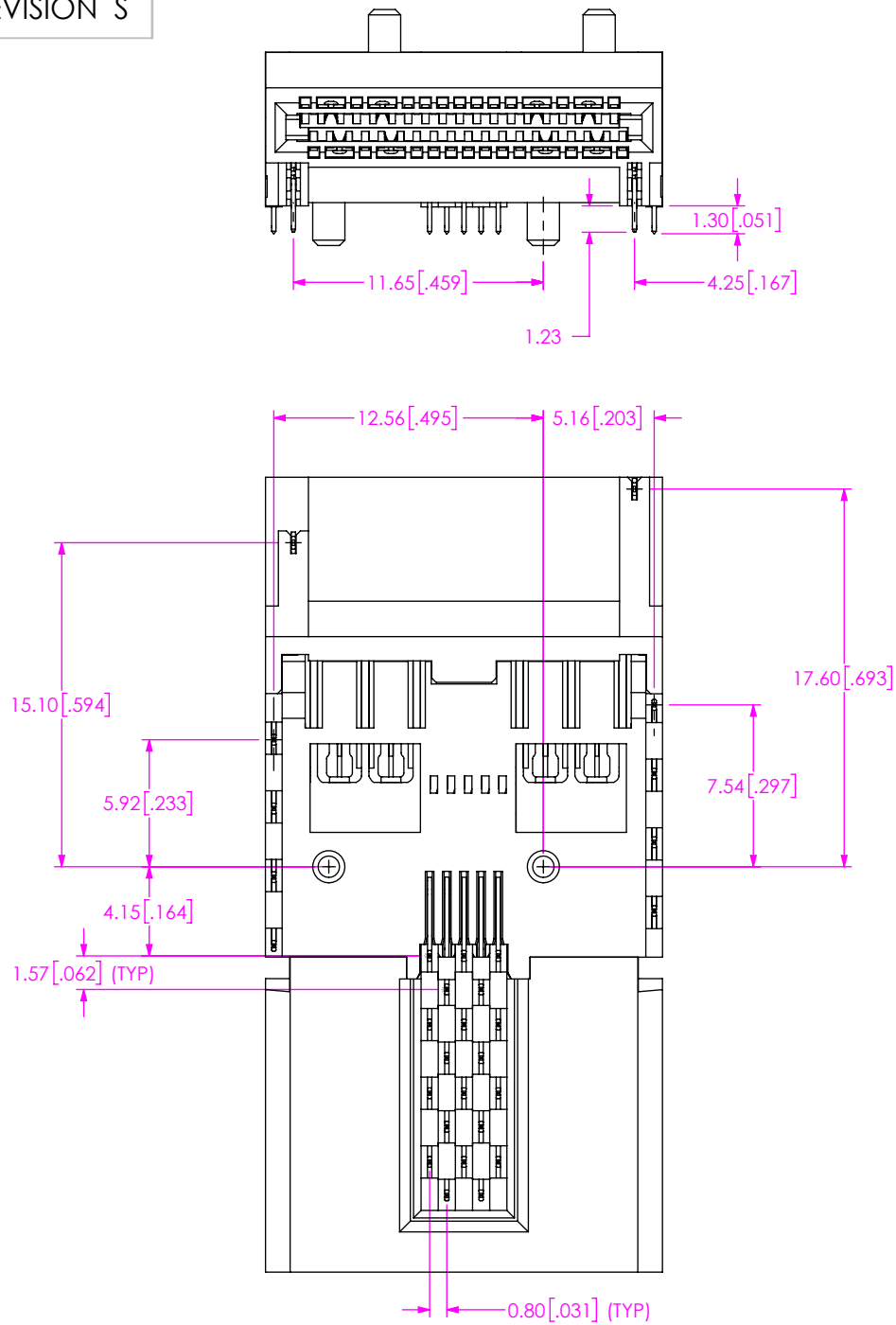


FIG 6  
FQSFP-DD-01-A-XX.X-X BOTTOM SHOWN

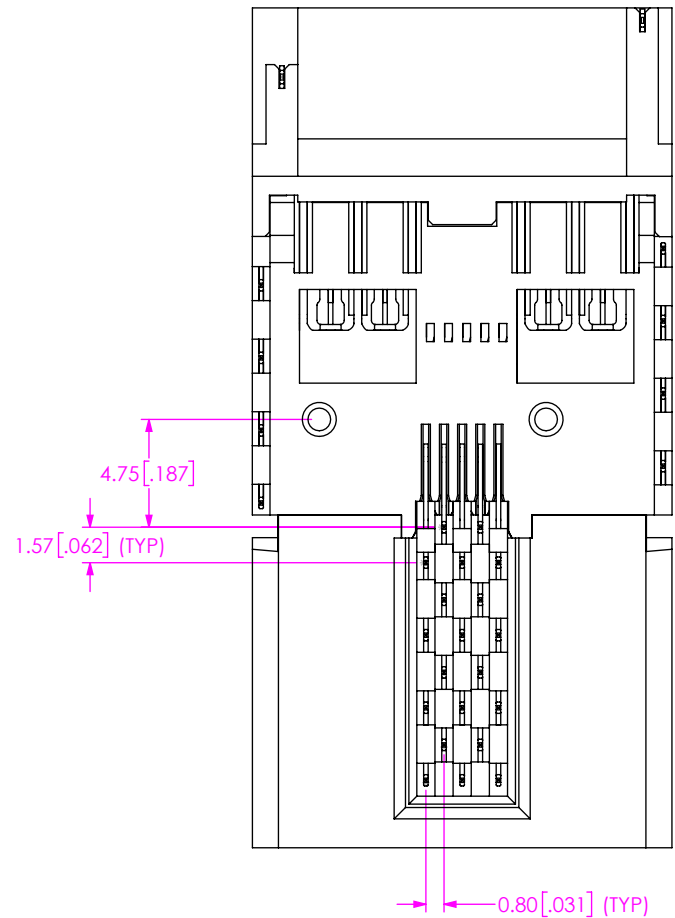


FIG 7  
FQSFP-DD-01-B-XX.X-X BOTTOM SHOWN

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SHEET SCALE: 1:2

DESCRIPTION:  
FQSFP-DD ASSEMBLY

DWG. NO.  
FQSFP-DD-XX-X-XX.X-X

BY: L ARNS 6/1/17 SHEET 8 OF 11



TABLE 1	
No OF PORTS	"A"
-1	20.00 [.787]
-2	39.00 [1.535]
-3	58.00 [2.283]
-4	77.00 [3.031]
-5	96.00 [3.780]
-6	115.00 [4.528]

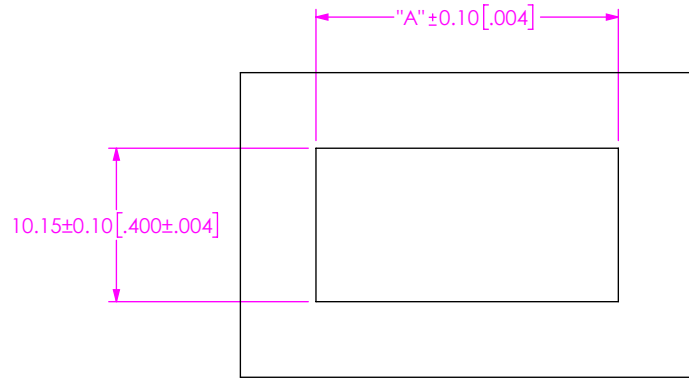


FIG 8  
RECOMMENDED PANEL OPENING FOR QSFP-DD-X-X-X-XX-F

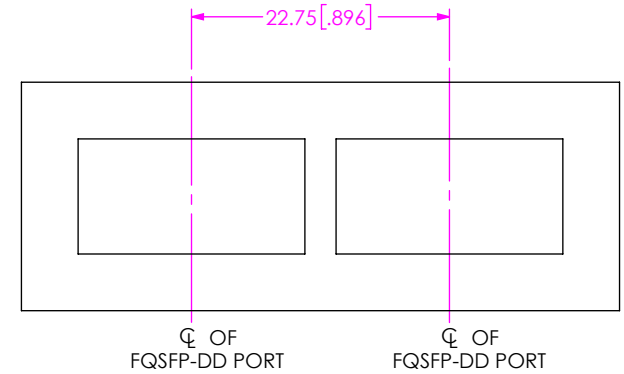


FIG 14  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 8)

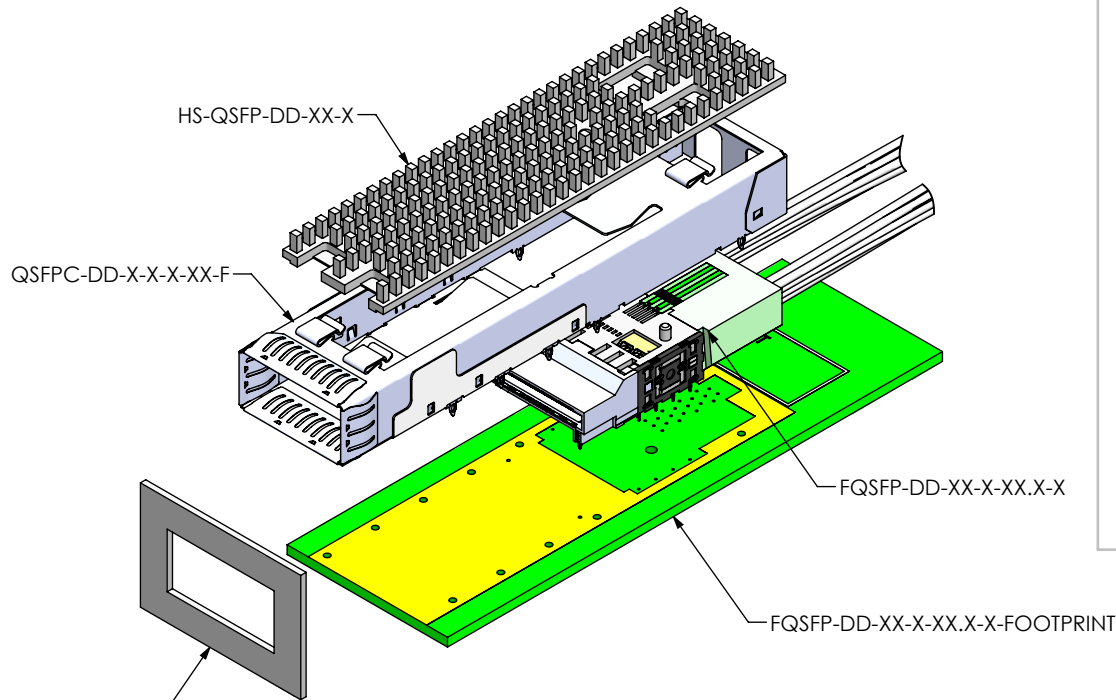


FIG 9  
EXPLODED VIEW

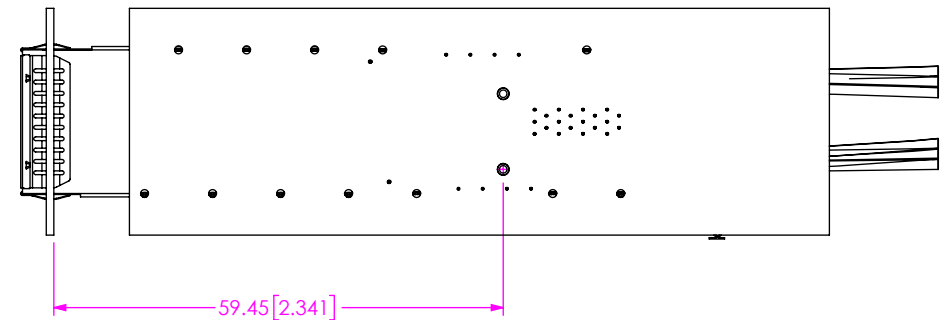


FIG 15  
APPLICATION VIEW

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SHEET SCALE: 2:1

DESCRIPTION:  
FQSFP-DD ASSEMBLY  
DWG. NO.  
FQSFP-DD-XX-X-XX.X-X

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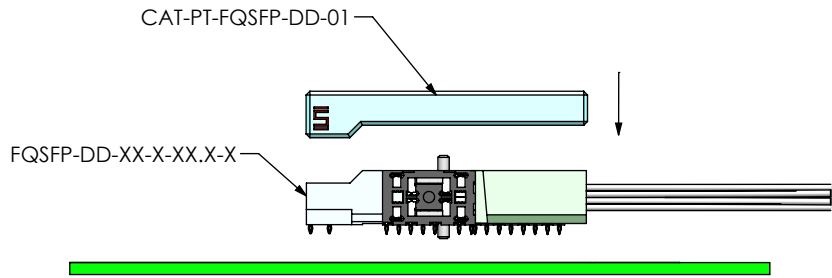


FIG 10  
CONNECTOR PRESS

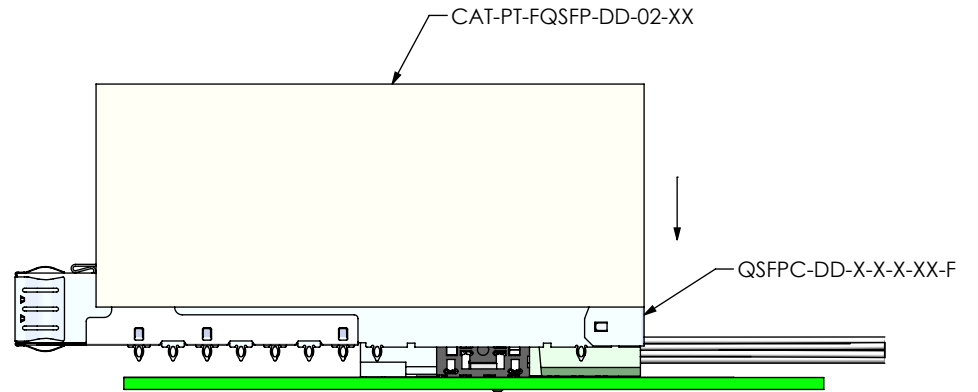


FIG 11  
CAGE PRESS

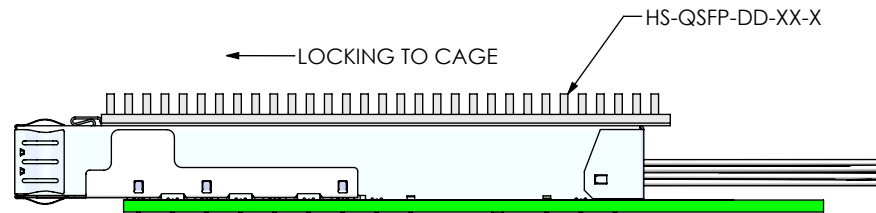


FIG 12  
HEAT SINK LOCK

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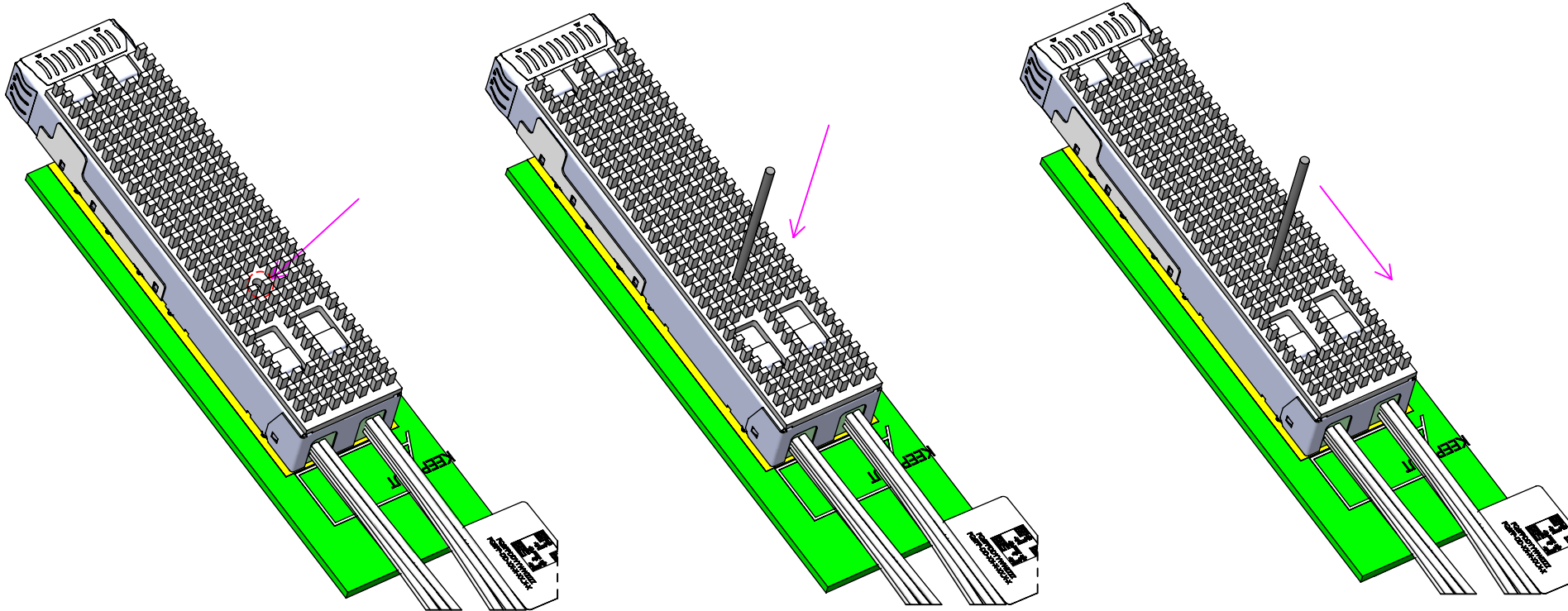
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SHEET SCALE: 1:5

DESCRIPTION:  
FQSFP-DD ASSEMBLY

DWG. NO.  
FQSFP-DD-XX-X-XX.X-X

BY: L ARNS 6/1/17 SHEET 10 OF 11

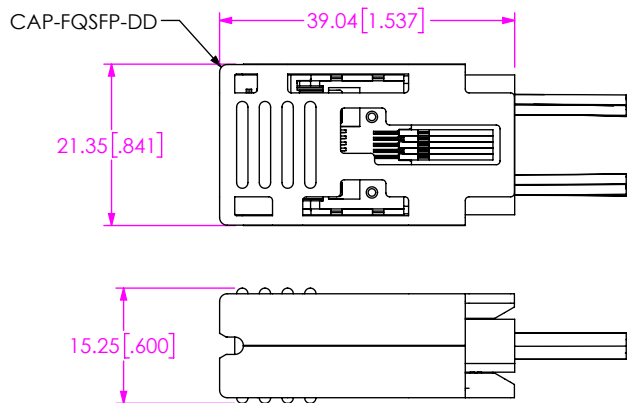


**STEP 1**  
LOCATE HEATSINK LATCH HOLE

**STEP 2**  
INSERT PIN TO RELEASE LATCH

**STEP 3**  
SLIDE HEATSINK REARWARD TO REMOVE

**FIG 13**  
HEAT SINK REMOVAL



**FIG 16**  
CAP VIEW FOR J1 END

F:\DWG\MISC\Mktg\FQSFP-DD-XX-X-XX.X-X-MKT.SLDDRW

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DO NOT SCALE DRAWING

SHEET SCALE: 1:5

DESCRIPTION:  
FQSFP-DD ASSEMBLY  
DWG. NO.  
FQSFP-DD-XX-X-XX.X-X

BY: L ARNS 6/1/17 SHEET 11 OF 11