

REVISION FL

DO NOT SCALE FROM THIS PRINT

NOTES:

- ⊙ REPRESENTS A CRITICAL DIMENSION.
- PARTS MAY BE CUT TO POSITION.
- MAXIMUM CUT FLASH: .015[0.38]. LOOSE FLASH MUST BE REMOVED.
- MINIMUM PUSHOUT FORCE: 1.0 LB.
- MEASURED AT BEND RADIUS, NOT AT END OF PIN.
- TUBE ONLY -04 THROUGH -50 POSITIONS (SEE TABLE 2).
- SHEAR TAILS TO DIMENSION SHOWN.
- MAXIMUM BURR ALLOWANCE: .003 [0.08]
- GOLD PLATING TO BE ON POST, TIN PLATING TO BE ON TAIL.
- FILL WITH ALIGNMENT PIN HOLES TO TAIL SIDE.
- DUE TO THE HIGH AMOUNT OF INSERTION FORCE NEEDED, LOCKING CLIPS ARE NOT COMPATIBLE WITH AUTO PLACEMENT. SAMTEC RECOMMENDS MANUAL PLACEMENT FOR ALL ASSEMBLIES WITH LOCKING CLIPS.
- VOIDS MAY OR MAY NOT BE PRESENT ON POSITIONS 5 THRU 8 AND CAN BE MIXED WITHIN AN ORDER.
- ON LEAD STYLES -02 THROUGH -03 THE T-1S15-18-XXX CAN BE SUBSTITUTED FOR T-1S15-16-XXX.
- ON LEAD STYLES -01 AND -04, T-1S15-17 CAN BE SUBSTITUTED FOR T-1S15-15-XXX.
- NO TIN PLATING ALLOWED ON THE POST FOR LEAD STYLES -01, -02, -03 & -04 IN COMBINATION WITH THE T-1S15-XX-XXX TERMINAL.
- MAXIMUM HEIGHT VARIATION .005[0.13] BETWEEN ROWS.
- FR OPTIONS WILL BE SHIPPED AT THE MAX QUANTITY PER REEL, BASED ON OPTIONS SELECTED.

FTSH-1XX-XX-XXX-DV-XXX-XXX

No OF POSITIONS

-02 THRU -50 (PER ROW)

LEAD STYLE

- 01: .120 [3.05]
- 02: .075 [1.91]
- 03: .065 [1.65]
- 04: .150 [3.81]
- 05: .170 [4.32]
- 14: .150 [3.81] (NOT AVAILABLE WITH -SM, FM, LM PLATING OPTIONS)

PLATING SPECIFICATION

- L: 10μ" SELECTIVE GOLD IN CONTACT AREA, MATTE TIN ON TAIL
- F: 3μ" SELECTIVE GOLD IN CONTACT AREA, MATTE TIN ON TAIL
- S: 30μ" SELECTIVE GOLD IN CONTACT AREA, MATTE TIN ON TAIL
- H: 30μ" GOLD IN CONTACT AREA, 3μ" GOLD ON TAIL
- LM: 10μ" SELECTIVE GOLD IN CONTACT AREA, MATTE TIN ON TAIL
- FM: 3μ" SELECTIVE GOLD IN CONTACT AREA, MATTE TIN ON TAIL
- SM: 30μ" SELECTIVE GOLD IN CONTACT AREA, MATTE TIN ON TAIL
- LTL: 10μ" SELECTIVE GOLD IN CONTACT AREA, TIN/LEAD (90/10+/-5%) TAIL
- G: 10μ" GOLD IN CONTACT AREA, 3μ" GOLD ON TAIL
- STL: 30μ" SELECTIVE GOLD IN CONTACT AREA, TIN/LEAD (90/10 +/-5%) ON TAIL

OPTIONS

- P: PICK & PLACE PAD (4 POS MIN) (SEE FIG 11, SHT 4 & TABLE 5)
- TR: TAPE & REEL PACKAGING
- FR: FULL REEL QTY. TAPE AND REEL (SEE NOTE17)
- ES: END SHROUDS (SEE FIG 6, SHT 3) (MOLDED IN 5 POS MIN; -02 & -03 LEAD STYLE ONLY) (SNAP SHROUDS 9 POS MIN; -02 & -03 LEAD STYLE ONLY)
- EJ: EJECTOR SHROUDS: SEE FIG 4, SHT 2) (10 POS MIN; -01 LEAD STYLE ONLY)
- EJM: EJECTOR SHROUDS WITH MOLDED ALIGNMENT PIN (SEE FIG 5, SHT 2; 10 POS MIN; -01 LEAD STYLE ONLY) (NOT VALID WITH -A OPTION)
- EJC: EJECTOR SHROUDS WITH LOCKING CLIP (SEE FIG 5, SHT 2 & NOTE 11) (10 POS MIN; -01 LEAD STYLE ONLY; NOT VALID WITH -A OPTION)
- EC: LOCKING CLIP (SEE FIG 7, SHT 3 & NOTE 11) (9 POS MIN; -02 & -03 LEAD STYLE ONLY)
- EP: GUIDE POST (SEE FIG 8, SHT 3; 9 POS MIN; -02 & -03 LEAD STYLE ONLY) (USE ONLY WHEN MATING WITH CLP)
- EL: BOARD LOCK (SEE FIG 9, SHT 3) (9 POS MIN; -02 & -03 LEAD STYLE ONLY) (USE ONLY WHEN MATING WITH CLP)
- EPC: GUIDE POST & LOCKING CLIP (SEE FIG 10, SHT 3 & NOTE 11; USE ONLY WHEN MATING WITH CLP) (9 POS MIN; -02 & -03 LEAD STYLE ONLY; NOT VALID WITH -A OPTION)
- A: ALIGNMENT PIN (MOLDED OR STAKED; SEE FIG 3, SHT 2) (MOLDED: 3 POS MIN; STAKED: 6 POS MIN) (SAMTEC DISCRETION ON WHICH -A PIN USED)
- K: KEYING OPTION FOR MATING WITH FFSD (SEE TABLE 3, SHT 2; 05 THRU 25 AVAILABLE AS STANDARD) (POSITION 13, 17, 20 & 25 AVAILABLE WITH -EXX OPTION) (LEAD STYLE -01 ONLY, SEE FIG 2, SHT 2 & NOTE 12) (ALIGNMENT PIN AVAILABLE WITH -K OPTION BUT MUST BE MOLDED) (MUST USE FTSH-50-CN-XX-X OR FTSH-50-CN-XX-X)
- \* -M: METAL PICK & PLACE PAD (5 POS MIN; USE MPP-22-5) (SEE FIG 12, SHT 4; NOT AVAILABLE WITH -K OPTION)

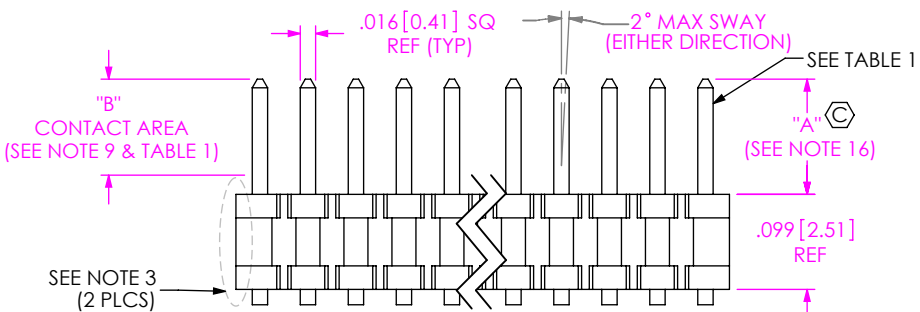
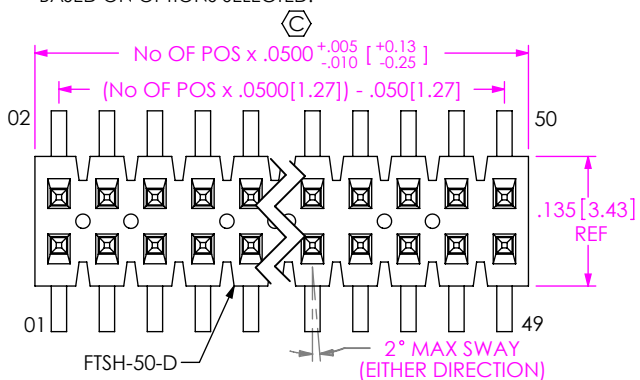
POLARIZING OPTION

XXX INDICATES POSITION TO BE OMITTED (NOT AVAILABLE WITH EXX OPTIONS) (ONLY AVAILABLE WITH -F, -FM, -L, -LM PLATING OPTIONS)

TAIL OPTION

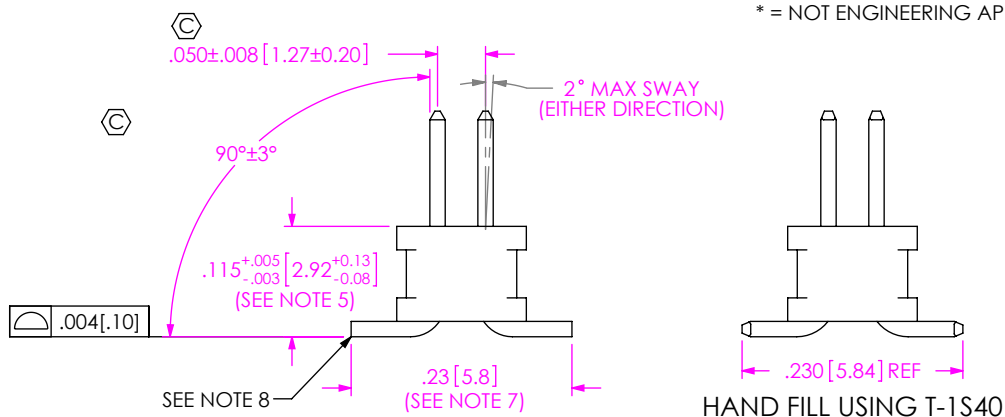
-DV: DOUBLE VERTICAL

\* = NOT ENGINEERING APPROVED



PATENT NUMBERS  
5713755 / 5961339

FIG 1  
FTSH-1XX-XX-XXX-DV SHOWN



HAND FILL USING T-1S40

TABLE 1

LEAD STYLE	"A"	"B" REF	AUTOMATED BKT	"C" (OAL)	HAND FILL	"C" (OAL)	MICRO HEADER
-01	.120 [3.05]	.070 [1.78]	*** T-1S15-15-XXX	.675 [17.15]	T-1S40-03-XX-2	.309 [7.85]	T-1S40-03-XX-3
-02	.075 [1.91]	.050 [1.27]	* T-1S15-16-XXX	.675 [17.15]	* T-1S15-18-XXX	.800 [20.32]	NOT AVAILABLE
-03	.065 [1.65]	.050 [1.27]	* T-1S15-16-XXX	.675 [17.15]	* T-1S15-18-XXX	.800 [20.32]	NOT AVAILABLE
-04	.150 [3.81]	.070 [1.78]	** T-1S15-15-XXX	.675 [17.15]	** T-1S15-17-XXX	.800 [20.32]	NOT AVAILABLE
-05	.170 [4.32]	.070 [1.78]	T-1S15-03-XXX	.800 [20.32]	T-1S15-03-XXX	.800 [20.32]	NOT AVAILABLE
-14	.150 [3.81]	.135 [3.43]	T-1S15-63-XXX	.800 [20.32]	T-1S15-63-XXX	.800 [20.32]	NOT AVAILABLE

\* = SEE NOTE 13

\*\*\* = SEE NOTE 14

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

DECIMALS ANGLES  
.XX: ±.01 [.3] 1°  
.XXX: ±.005 [.13]  
.XXXX: ±.0010 [.025]

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MATERIAL: DO NOT SCALE DRAWING  
INSULATOR: LCP UL 94 VO  
TERMINAL: PHOSPHOR BRONZE

SHEET SCALE: 5:1

DESCRIPTION:  
.050 x .050 CL DOUBLE VERTICAL SMT TERMINAL STRIP

DWG. NO.

FTSH-1XX-XX-XXX-DV-XXX-XXX

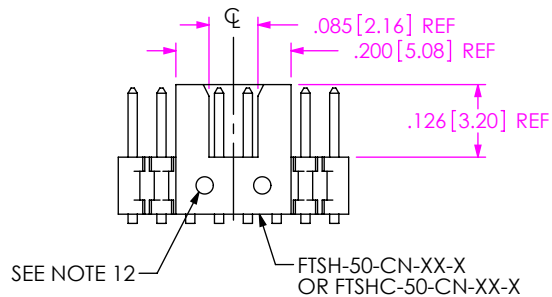
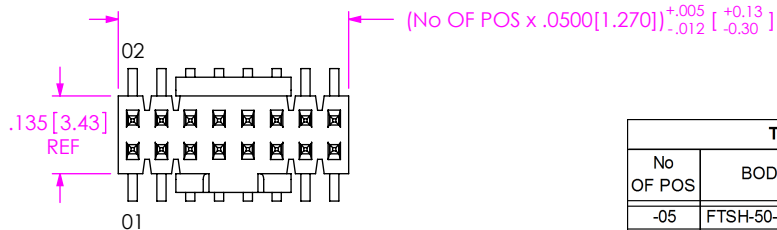
BY: PURVIS

10/12/1995

SHEET 1 OF 5

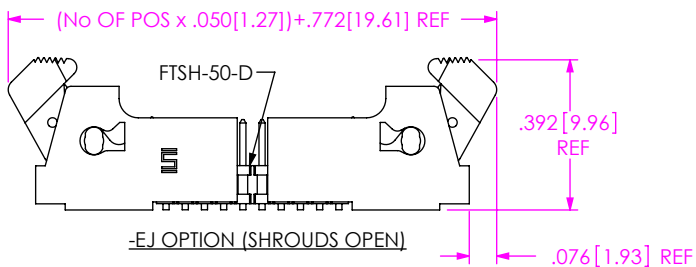
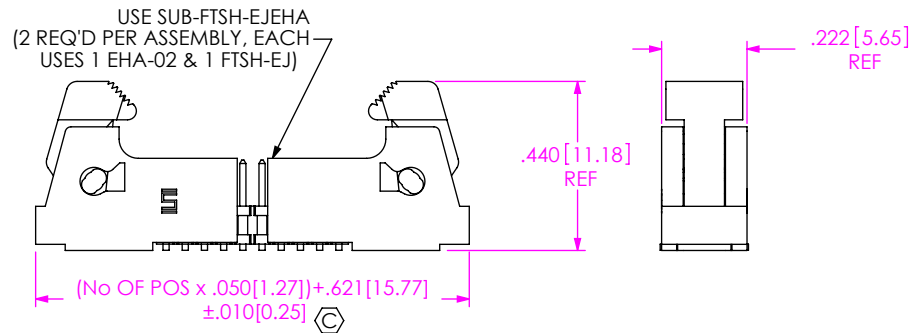


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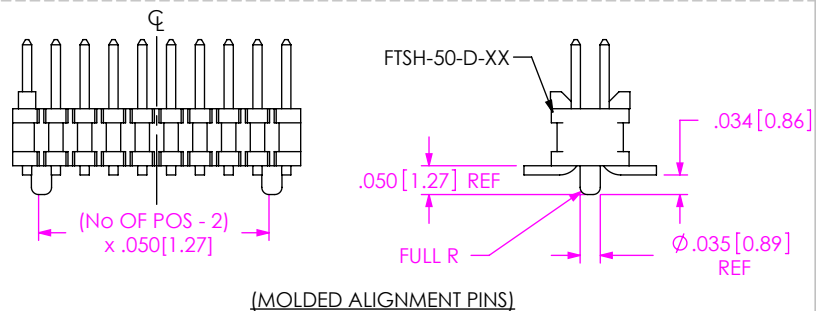
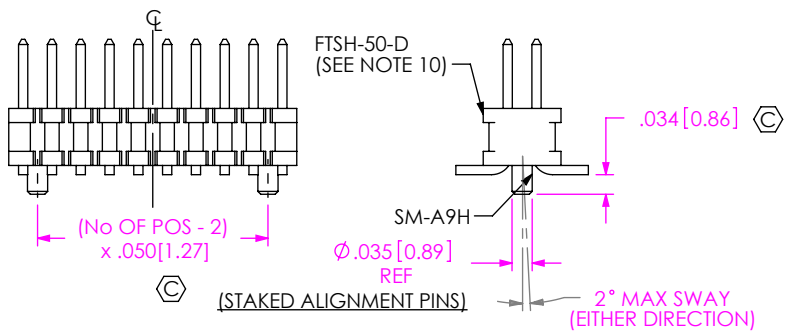


**FIG 2**  
-K OPTION  
(LEAD STYLE -01 ONLY)  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)  
(POSITION 13, 17, 20 & 25 AVAILABLE WITH  
-EXX OPTION)

TABLE 3		
No OF POS	BODY	No OF PARTS PER FULL STRIP
-05	FTSH-50-CN-05	10
-06	FTSH-50-CN-06	8
-07	FTSH-50-CN-07	7
-08	FTSH-50-CN-08	6
-09	FTSH-50-CN-09	5
-10	FTSH-50-CN-10	5
-11	FTSH-50-CN-11	4
-12	FTSH-50-CN-12	4
-13	FTSH-50-CN-13	3
-14	FTSH-50-CN-14	3
-15	FTSH-50-CN-15	3
-16	FTSH-50-CN-16	3
-17	FTSH-50-CN-17	2
-18	FTSH-50-CN-18	2
-19	FTSH-50-CN-19	2
-20	FTSH-50-CN-20	2
-21	FTSH-50-CN-21	2
-22	FTSH-50-CN-22	2
-23	FTSH-50-CN-23	2
-24	FTSH-50-CN-24	2
-25	FTSH-50-CN-25	2

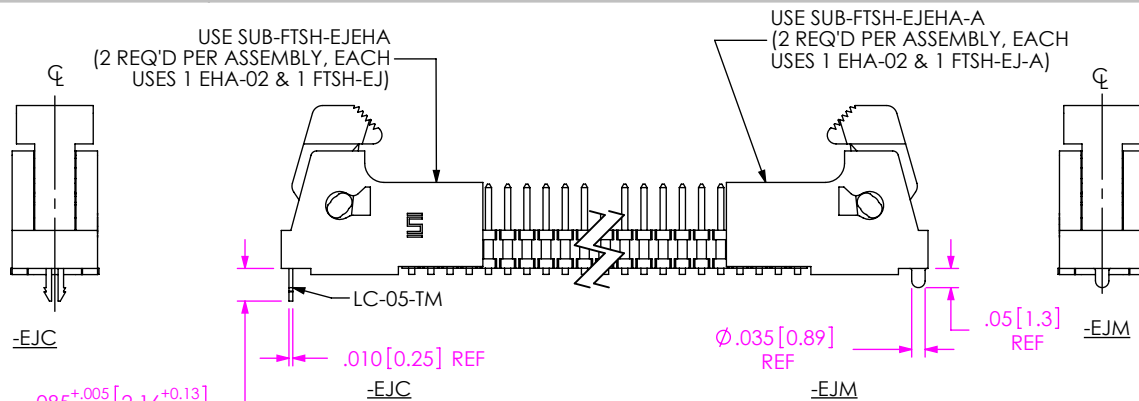


**FIG 4**  
-EJ OPTION  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)  
(-01 LEAD STYLE ONLY)



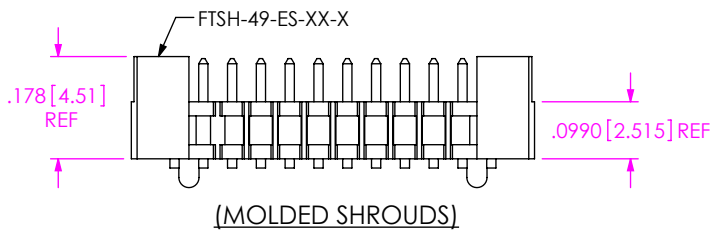
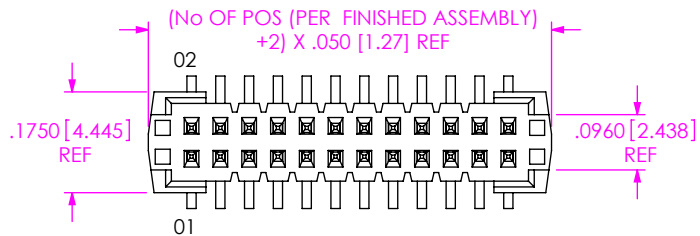
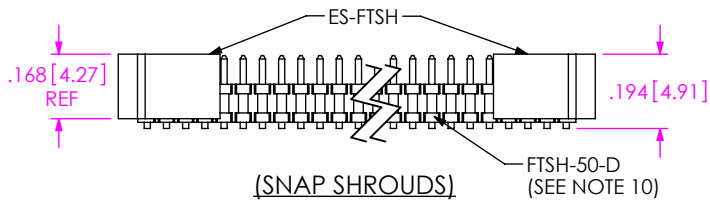
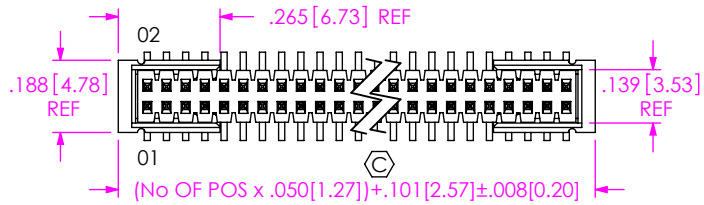
**FIG 3**  
-A OPTION  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)  
(6 POSITION MINIMUM FOR STAKED ALIGNMENT PINS)  
(3 POSITION MINIMUM FOR MOLDED ALIGNMENT PINS)

F:\DWG\MISC\MKTG\FTSH-1XX-XX-XXX-DV-XXX-XXX-MKT.SLDRW

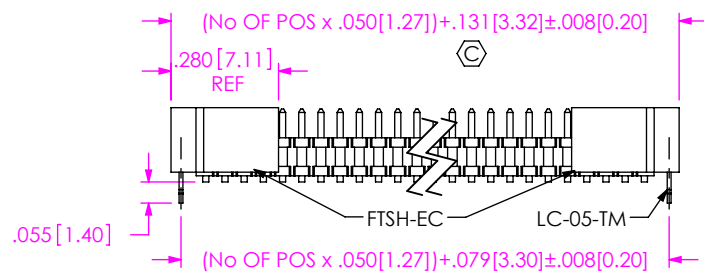


**FIG 5**  
-EJC & -EJM OPTIONS  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 4)  
(-01 LEAD STYLE ONLY)

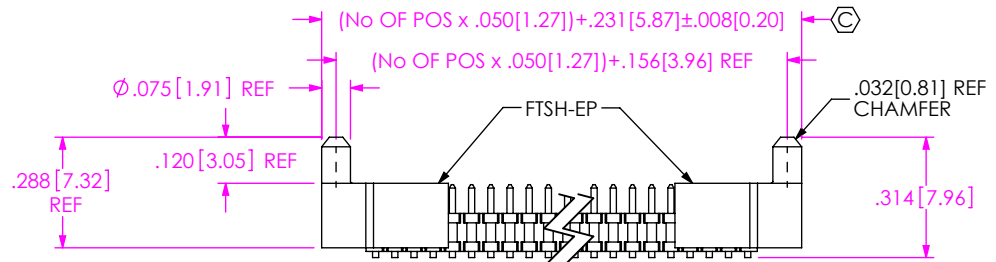
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		<p>DESCRIPTION: .050 x .050 CL DOUBLE VERTICAL SMT TERMINAL STRIP</p>
		<p>DWG. NO. <b>FTSH-1XX-XX-XXX-DV-XXX-XXX</b></p>
<p>BY: PURVIS 10/12/1995</p>	<p>SHEET 2 OF 5</p>	



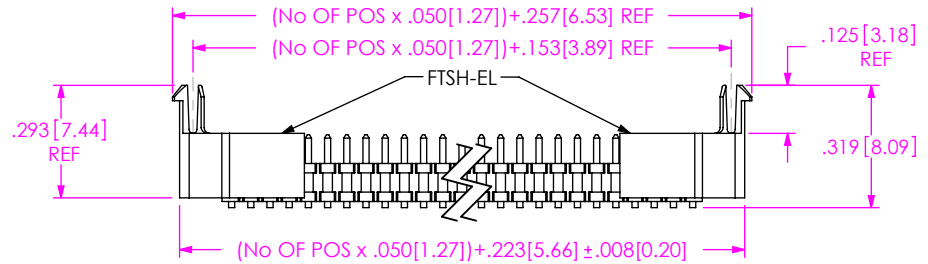
**FIG 6**  
-ES OPTION  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)  
(USE -02 OR -03 LEAD STYLE ONLY)  
(9 POS MIN FOR SNAP SHROUDS)  
(5 POS MIN FOR MOLDED SHROUDS)



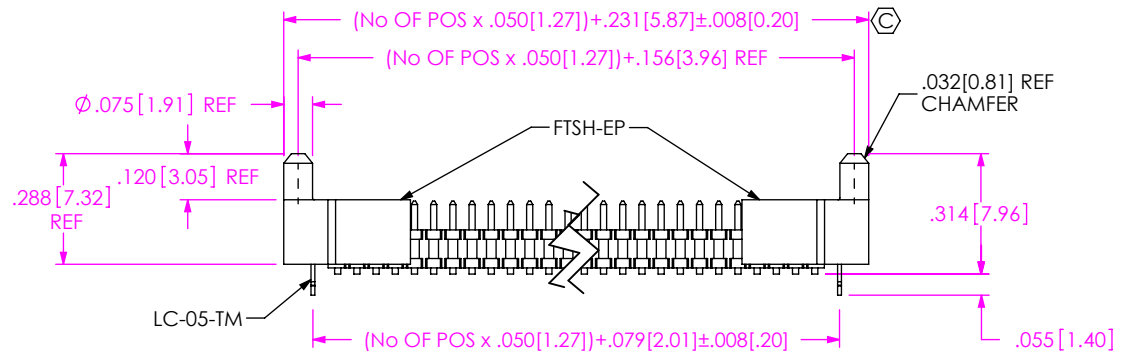
**FIG 7**  
-EC OPTION  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 6)



**FIG 8**  
-EP OPTION  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 6)  
(USE ONLY WHEN MATING WITH CLP)



**FIG 9**  
-EL OPTION  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 6)  
(USE ONLY WHEN MATING WITH CLP)



**FIG 10**  
-EPC OPTION  
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 6)  
(USE ONLY WHEN MATING WITH CLP)

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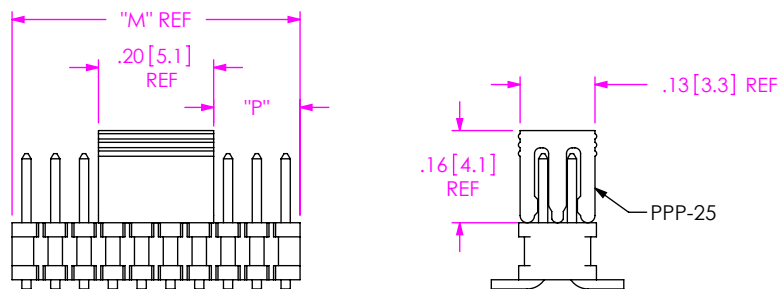


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.050 x .050 CL DOUBLE VERTICAL SMT TERMINAL STRIP

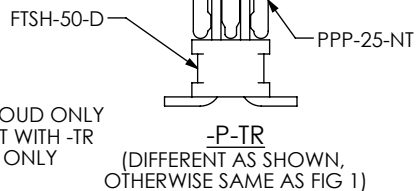
DWG. NO.  
**FTSH-1XX-XX-XXX-DV-XXX-XXX**

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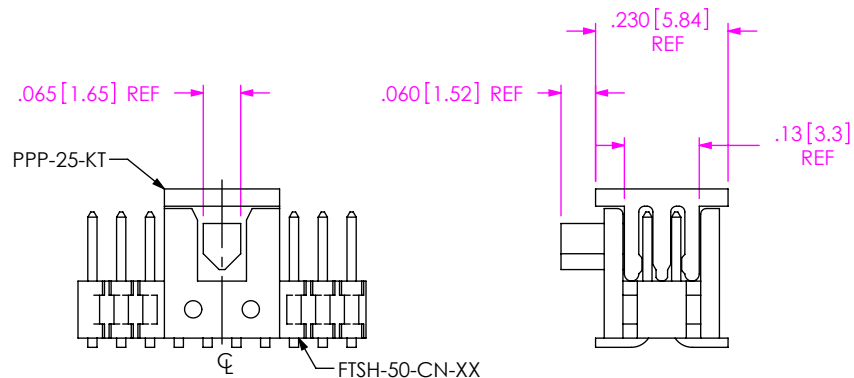
"M" REF = OVERALL LENGTH  
 "P" =  $\{ ("M" - .200 [5.08]) / 2 \} \pm .020 [ .51]$

**FIG 11**  
 -P OPTION  
 (DIFFERENT AS SHOWN,  
 OTHERWISE SAME AS FIG 1)



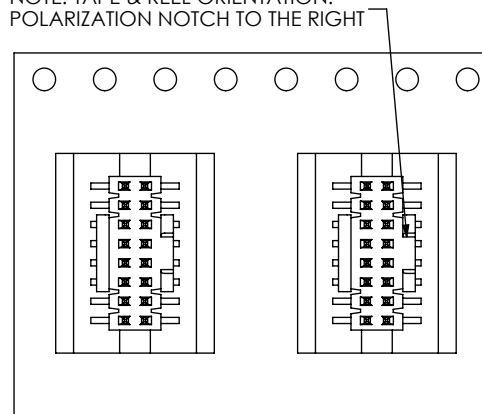
\*MOLDED SHROUD ONLY  
 \*\* USE PPP-25-NT WITH -TR  
 PACKAGING ONLY

TABLE 5		
OPTION(S)	PAD	MIN. POS
NONE, -A	PPP-25**	4
-EJ, -EJC, -EJM	PPP-41	10
-ES, -EC, -EP, -EL	PPP-25**	9
-EPC	PPP-25**	5*
-K	PPP-25-KT	5
-K-EJ	PPP-25-KT	10

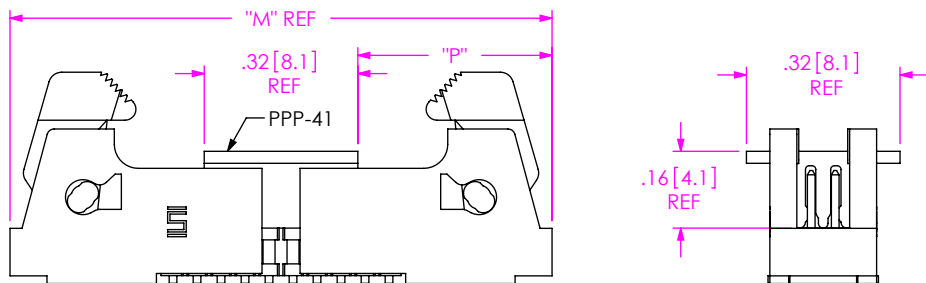


**-K-P-TR/FR**  
 (DIFFERENT AS SHOWN,  
 OTHERWISE SAME AS FIG 2)

NOTE: TAPE & REEL ORIENTATION:  
 POLARIZATION NOTCH TO THE RIGHT



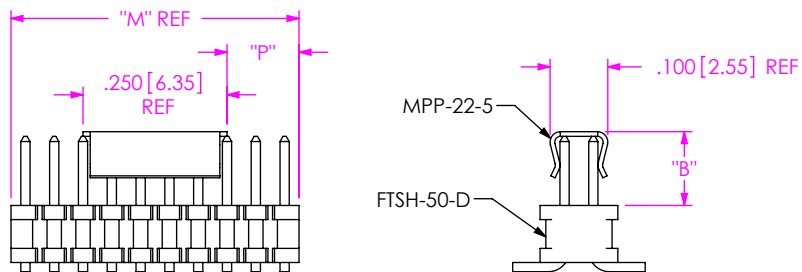
**TAPE & REEL VIEW**  
 USER DIRECTION OF UN-REELING →  
 POCKET NOT DETAILED



"M" REF = OVERALL LENGTH  
 "P" =  $\{ ("M" - .32 [8.1]) / 2 \} \pm .020 [ .51]$

**-EJ-P & -EJX -P**  
 (DIFFERENT AS SHOWN,  
 OTHERWISE SAME AS FIGS 4 & 5)

TABLE 4		
LEAD STYLE	"B" REF	
-01	.125	[3.18]
-02	.080	[2.03]
-03	.070	[1.78]
-04	.155	[3.94]
-14	.155	[3.94]



"M" REF = OVERALL LENGTH  
 "P" =  $\{ ("M" - .250 [6.35]) / 2 \} \pm .020 [0.51]$

**FIG 12**  
 \*-M: METAL PICK & PLACE PAD  
 (DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)  
 (NOT AVAILABLE WITH -K OPTION) (5 POS MIN)  
 \* = NOT ENGINEERING APPROVED

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DESCRIPTION:  
 .050 x .050 CL DOUBLE VERTICAL SMT TERMINAL STRIP

DWG. NO.  
**FTSH-1XX-XX-XXX-DV-XXX-XXX**

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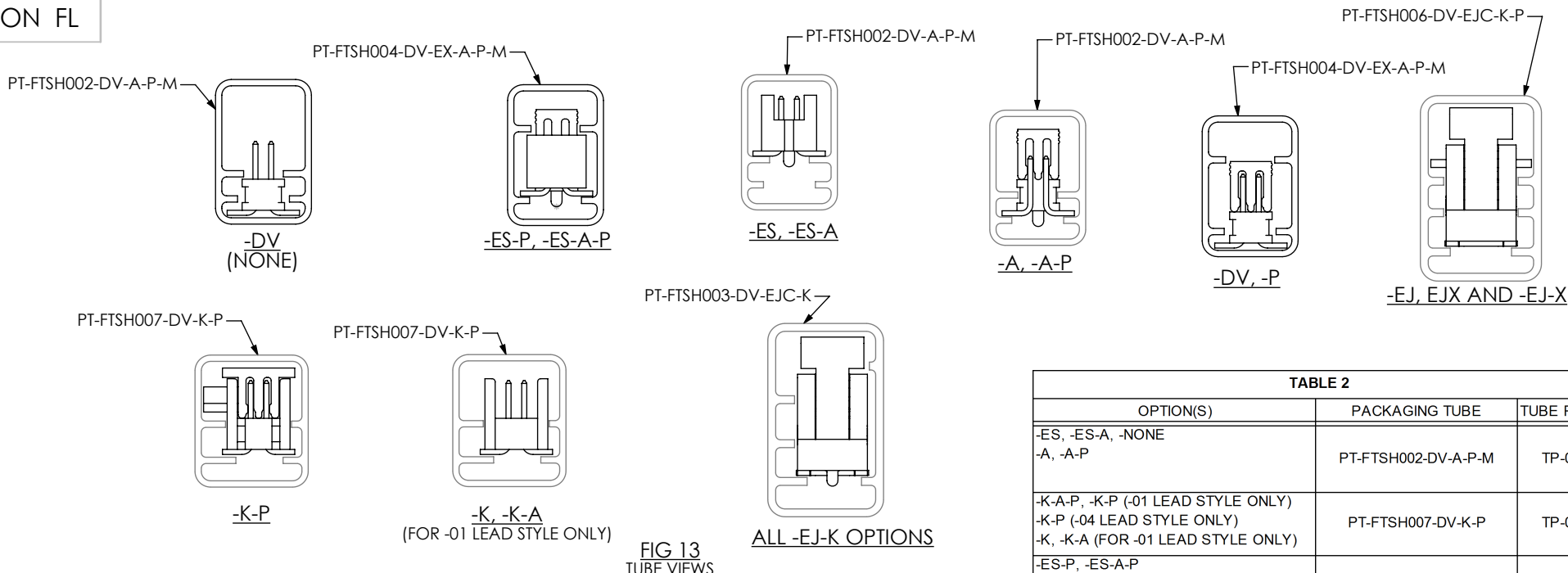
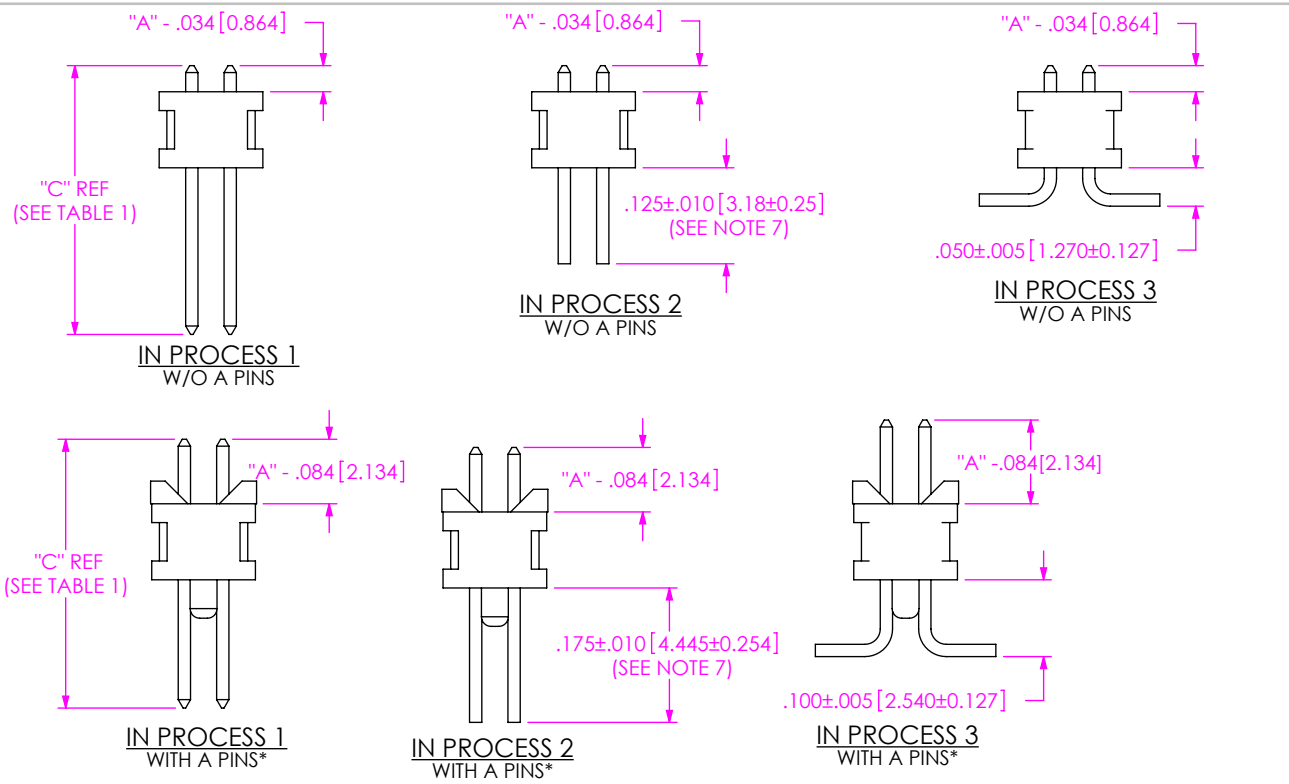


FIG 13 TUBE VIEWS

TABLE 2		
OPTION(S)	PACKAGING TUBE	TUBE PLUG
-ES, -ES-A, -NONE -A, -A-P	PT-FTSH002-DV-A-P-M	TP-03
-K-A-P, -K-P (-01 LEAD STYLE ONLY) -K-P (-04 LEAD STYLE ONLY) -K, -K-A (FOR -01 LEAD STYLE ONLY)	PT-FTSH007-DV-K-P	TP-09
-ES-P, -ES-A-P -EC, -EC-P, -EL-P -EP, -EP-A, EP-P, -EP-A-P -EPC, -EPC-D, -EPC-P -EL, -EL-A, -EL-A-P -P (ALL LEAD STYLES)	PT-FTSH004-DV-EX-A-P-M	TP-03
-EJ-K, -EJ-K-P -EJ-K-A, -EJ-K-A-P	PT-FTSH003-DV-EJC-K	TP-03
-EJ, -EJ-P, -EJ-A-P, -EJ-A, -EJM, -EJC	PT-FTSH006-DV-EJC-K-P	TP-03



IN-PROCESS VIEWS ARE FOR HANDFILL ONLY

\* = FOR -01, -04, -05 AND -14 LEAD STYLES ONLY

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.050 x .050 CL DOUBLE VERTICAL SMT TERMINAL STRIP  
DWG. NO.  
**FTSH-1XX-XX-XXX-DV-XXX-XXX**  
BY: PURVIS 10/12/1995 SHEET 5 OF 5