

DO NOT SCALE FROM THIS PRINT

TABLE 1

LEAD STYLE	TERMINAL	MAX "A" ("B" IS .000 [.00] MIN)	"C" OVERALL PIN LENGTH
-02	T-1S13-02-XXX-2	.309 [7.85]	.377 [9.6]
-03	T-1S13-03-XXX-2	.467 [11.86]	.535 [13.6]
-04	T-1S13-06-XXX-2	.487 [12.37]	.555 [14.1]
-06	T-1S13-10-XXX-2	.605 [15.37]	.673 [17.1]
-07	T-1S13-11-XXX-2	.683 [17.35]	.751 [19.1]
-09	T-1S13-13-XXX-2	.388 [9.86]	.456 [11.6]

NOTES:

- MAX. PIN ROTATION IN BODY: 2°
- PUSHOUT FORCE SHALL BE 1 LB MIN.
- Ⓢ REPRESENTS A CRITICAL DIMENSION
- ALL DIMENSIONS IN BRACKETS [ ] TO BE MILLIMETERS.
- HEIGHT VARIATION BETWEEN ANY TWO PINS SHALL BE .010 MAX
- TUBE POSITIONS -04 THROUGH -36 ONLY; BULK PACKAGE -02 & -03. TUBE PLUG MUST BE ALLIGNED WITH INSULATOR. (SEE DETAIL ON PAGE 2)
- MOLDED OR STAKED ALIGNMENT PIN AT SAMTEC'S DISCRETION.
- SPACE OPTION FROM .170 TO .209 REQUIRES AN ADDITIONAL REPRESS.
- NOTE DELETED.
- M OPTION AVAILABLE ON -D ROW ONLY. -P OPTION AVAILABLE ON POSITIONS 4-36 ONLY. -P OPTION AVAILABLE ON 4-36 POSITION ONLY.
- DUE TO THE HIGH AMOUNT OF INSERTION FORCE NEEDED, THE -LC OPTION IS NOT COMPATIBLE WITH AUTO PLACEMENT. SAMTEC RECOMMENDS MANUAL PLACEMENT FOR ALL ASSEMBLIES WITH THE -LC OPTION.
- S-A FOR EXISTING BUSINESS ONLY, NEW DESIGNS WILL BE AN SP.
- MAX CUT FLASH: .020 [0.51]
- ORDERS WILL BE PACKAGED ACCORDING TO THE SAMTEC PACKAGING EFFICIENCY STANDARDS (SPES) FOUND ON WWW.SAMTEC.COM
- ATTACH LABEL TO EACH REEL

TW-XX-XX-XXX-X-XXX-SM-XXX-XX-X-XX

**PACKAGING**  
 -BLANK: TUBES (SEE NOTE 6)  
 -TR: TAPE & REEL (SEE NOTE 14 & 15)  
 (-07 LEAD STYLE NOT AVAILABLE IN T & R)  
 (SEE SHEET 3 FOR -S-TR OPTION ORIENTATION VIEW)  
 (.475 MAX "A" WHEN COMBINED WITH -P OPTION)  
 -FR: FULL REEL QTY TAPE & REEL (SEE NOTE 14 & 15)  
 (-07 LEAD STYLE NOT AVAILABLE IN T & R)  
 (SEE SHEET 3 FOR -S-TR OPTION ORIENTATION VIEW)  
 (.475 MAX "A" WHEN COMBINED WITH -P OPTION)

**PICK & PLACE OPTION**  
 -P: PICK & PLACE PAD (SEE NOTE 10)  
 (-D ROW: USE PPP-10)  
 (-S ROW: USE PPP-11)  
 NOTE: "B" = .075 [1.91] MIN FOR THIS OPTION (SEE FIG 6)  
 -M: PICK & PLACE PAD (SEE NOTE 10)  
 (-D ROW: USE PPP-10)  
 NOTE: "B" MUST BE .075 OR GREATER FOR THIS OPTION.  
 (SEE FIG 5)

**OPTION 1**  
 -LC: LOCKING CLIP (SEE FIG 2, SHEET 2)(SEE NOTE 11)  
 (-D ROW: USE 2TS-XX-D)  
 (-S ROW: USE 2TS-XX-SV)  
 (.190 MIN BOARD SPACE)  
 \*-A: MOLDED ALIGNMENT PIN (SEE FIG 3, SHEET 2 & NOTE 7)  
 (AVAILABLE IN 2-36 POSITIONS)  
 (2 POSITIONS WILL ONLY HAVE ONE ALIGNMENT PIN)  
 (-D ROW: USE 2TS-XX-DV-A)  
 (-S ROW: USE 2TS-XX-SV-A)  
 (\*=SEE NOTE 12)  
 (BOTTOM BODY ONLY, USE TMM-50-X FOR TOP)  
 STAKED ALIGNMENT PIN (SEE FIG 4, SHEET 2 & NOTE 7)  
 (-D ROW ONLY: USE TMM-50-D, 4 POS MIN)  
 (.190 MIN BOARD SPACE FOR BOTH)

**OPTION 2**  
 -XXX: POLARIZED POSITION  
 (SPECIFY OMITTED PIN)

**SURFACE MOUNT**  
**SPACE OPTION**  
 (SEE NOTE 8)  
 XXX="A" (SEE TABLE 1, .170 [4.32] MIN)

**No. OF POSITIONS**  
 EXPRESSED IN # OF POS  
 (-02 THRU -36)  
 "XX"= No Of POS x .07874 [2.00]

**LEAD STYLE**  
 (SEE TABLE 1)

**PLATING**  
 -G: 20µ" GOLD IN CONTACT AREA, 3µ" GOLD ON TAIL  
 (USE T-1S13-XX-G-2)  
 -T: MATTE TIN CONTACT AND TAIL (USE T-1S13-XX-T-2)  
 -S: 30µ" GOLD IN CONTACT AREA, MATTE TIN ON TAIL  
 (USE T-1S13-XX-S-2)  
 -E: 50µ" GOLD IN CONTACT AREA, 3µ" GOLD ON TAIL  
 (USE T-1S13-XX-E-2)  
 -L: 10µ" GOLD IN CONTACT AREA, MATTE TIN ON TAIL  
 (USE T-1S13-XX-L-2)  
 -F: 3µ" GOLD IN CONTACT AREA, MATTE TIN ON TAIL  
 (USE T-1S13-XX-F-2)  
 -P: 2µ" - 5µ" GOLD IN CONTACT AREA, MATTE TIN ON TAIL  
 (USE T-1S13-XX-P-2)  
 -TL: TIN/LEAD (90%/10 +/-5%) CONTACT AND TAIL  
 (USE T-1S13-XX-TL-2)  
 -STL: 30µ" GOLD IN CONTACT AREA, TIN/LEAD (90%/10 +/-5%) TAIL  
 -LTL: 10µ" GOLD IN CONTACT AREA, (90%/10 +/-5%) TAIL  
 (USE T-1S13-XX-LTL-2)  
 -H: 30µ" GOLD IN CONTACT AREA, 3µ" GOLD ON TAIL  
 (USE T-1S13-XX-H-2)  
 -SM: 30µ" GOLD IN CONTACT AREA, MATTE TIN ON TAIL  
 (USE T-1S13-XX-S-2)  
 -TM: MATTE TIN CONTACT AND TAIL (USE T-1S13-XX-T-2)  
 -LM: 10µ" GOLD IN CONTACT AREA, MATTE TIN ON TAIL  
 (USE T-1S13-XX-L-2)  
 -FM: 3µ" GOLD IN CONTACT AREA, MATTE TIN ON TAIL  
 (USE T-1S13-XX-F-2)

**ROW OPTION**  
 -S: SINGLE ROW (USE TMM-50-S)  
 -D: DOUBLE ROW (USE TMM-50-D)

TABLE 2 (SEE NOTE 6)

LEAD STYLE	OPTIONS	TUBE	PLUGS
-02, -04, -07, -09	-D, -D-LC, -D-A	PT-TW001-D-SM	TP-38
-03	-D, -D-LC, -D-A	PT-TW001-D-SM	TP-38
ALL	-S, -S-LC, -S-A	PT-TW002-S-SM	TP-38
-02,-09	-D-A-P, -D-LC-P, -D-P, -D-LC-M, -D-A-M, -D-M	PT-TW001-D-SM	TP-38
-03,-04	-D-A-P, -D-LC-P, -D-P, -D-LC-M, -D-A-M, -D-M	PT-TW001-D-SM	TP-38
-07	-D-A-P, -D-LC-P, -D-P, -D-LC-M, -D-A-M, -D-M	PT-TW001-D-SM	TP-38
-02,-09	-S-LC-P, *-S-A-P	PT-TW002-S-SM	TP-38
-03,-04	-S-LC-P, *-S-A-P, -S-P	PT-TW002-S-SM	TP-38
-07	-S-LC-P, *-S-A-P, -S-P	PT-TW002-S-SM	TP-38
-06	-D-LC	PT-TW001-D-SM	TP-38
-06	NONE, -A, -D	PT-TW001-D-SM	TP-38
-06	-D-A-P, -D-LC-P, -D-P, -D-LC-M, -D-A-M	PT-TW001-D-SM	TP-38
-06	-S-LC-P, -S-A-P, -S-P	PT-TW002-S-SM	TP-38
-06	-D-M	PT-1-24-16-29	TP-38

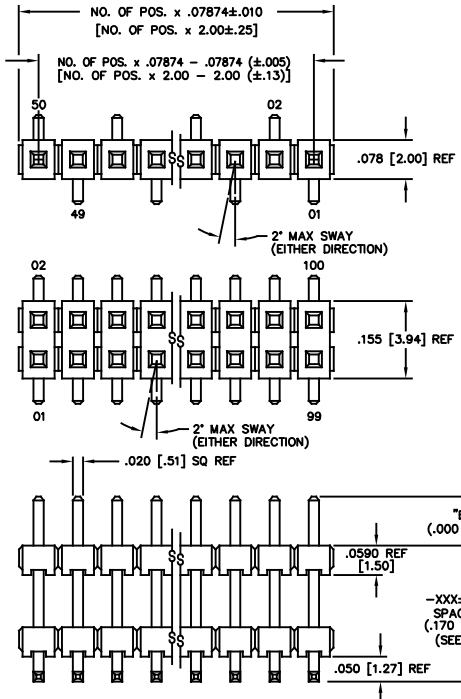
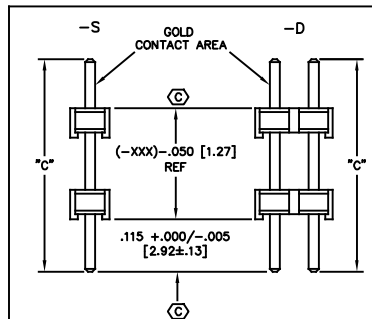


FIG 1



**PATENT NUMBERS**  
 5713755 / 5961339

IN-PROCESS

**\*PROPRIETARY NOTE\***  
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MATERIAL: INSULATOR: LIQUID CRYSTAL POLYMER COLOR: BLACK	TERMINALS: PHOSPHOR BRONZE	DESIGN/ASSEMBLY/DM TW-SM
<b>samtec</b>		
520 PARK EAST BLVD. NEW ALBANY, INDIANA 47150 PHONE (812) 944-6733 P.O. BOX 1147 CODE 55322		
MADE BY: BRYANT 3-8-93		TW-XX-XX-XXX-X-XXX-SM-XXX-XX-X-XX