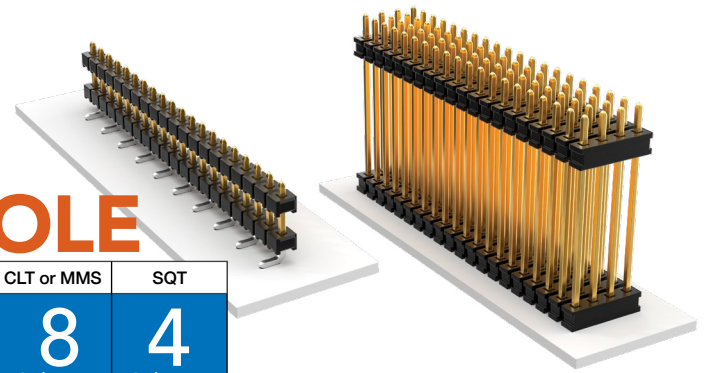


# SMT & THROUGH-HOLE BOARD STACKERS

(2.00 mm) .0787" PITCH • TW SERIES

| CLT or MMS | SQT     |
|------------|---------|
| 8          | 4       |
| G b p s    | G b p s |



## TW

### Board Mates:

CLT, SQT, SQW, ESQT,  
TLE, SMM, MMS

### Cable Mates:

TCSD

## SPECIFICATIONS

### Insulator Material:

Black Liquid Crystal Polymer  
**Terminal Material:**  
Phosphor Bronze

### Plating:

Sn or Au over  
50  $\mu$ " (1.27  $\mu$ m) Ni

### Current Rating:

TW-SM = 4.9 A per pin  
(2 pins powered)

TW-TH = 5.2 A per pin  
(2 pins powered)

### Operating Temp Range:

-55 °C to +105 °C with Tin;  
-55 °C to +125 °C with Gold

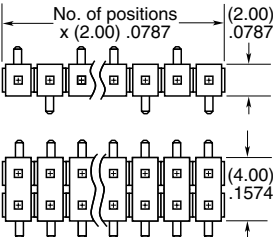
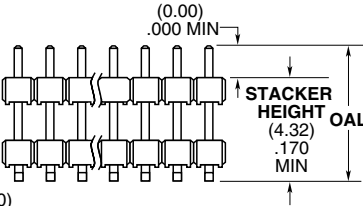
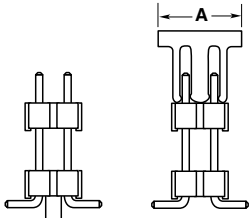
## PROCESSING

### Lead-Free Solderable:

Yes

### SMT Lead Coplanarity:

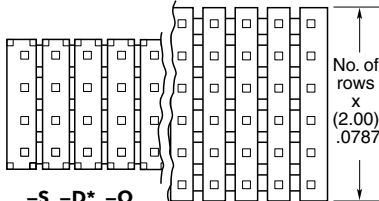
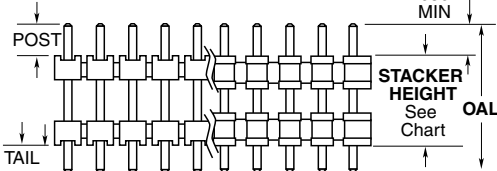
(0.15 mm) .006" max\*  
\*(.004" stencil solution  
may be available; contact  
IPG@samtec.com)

| TW                                                                                | NO. PINS PER ROW | LEAD STYLE                                                                         | PLATING OPTION                                                                                                                        | ROW OPTION                                                                                                                                                                                                                                                                                                        | STACKER HEIGHT                                                                                             | SM               | OTHER OPTION                                                                                                                                                                                                                  |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
|-----------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-----|--------------|-----|--------------|-----|--------------|-----|--------------|-----|-------------|---------------------------------------------------------------------------------------------------------------------------------------|--|------------|---|----|-------------|----|-------------|
|                                                                                   | 02 thru 36       | Specify LEAD STYLE from chart                                                      | -F<br>= Gold flash on post, Matte Tin on tail<br><br>-L<br>= 10 μ" (0.25 μm) Gold on post, Matte Tin on tail<br><br>-T<br>= Matte Tin | -S<br>= Single Row<br><br>-D<br>= Double Row                                                                                                                                                                                                                                                                      | - "XXX"<br>= Stacker Height in inches (0.13 mm) .005" increments<br><br>Example:<br>-250 = (6.35 mm) .250" |                  | - "XXX"<br>= Polarized Position<br><br>-A<br>= Alignment Pin (Metal or plastic at Samtec discretion) (4.83 mm) .190" min. board space (-D only)<br><br>-P<br>= Pick & Place Pad (1.91 mm) .075" min. post height (04-36 only) |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
|  |                  |  |                                                                                                                                       | <table><tr><th>LEAD STYLE</th><th>OAL</th></tr><tr><td>-02</td><td>(7.85) .309</td></tr><tr><td>-03</td><td>(11.86) .467</td></tr><tr><td>-04</td><td>(12.37) .487</td></tr><tr><td>-06</td><td>(15.37) .605</td></tr><tr><td>-07</td><td>(17.35) .683</td></tr><tr><td>-09</td><td>(9.86) .388</td></tr></table> |                                                                                                            | LEAD STYLE       | OAL                                                                                                                                                                                                                           | -02 | (7.85) .309 | -03 | (11.86) .467 | -04 | (12.37) .487 | -06 | (15.37) .605 | -07 | (17.35) .683 | -09 | (9.86) .388 | <table><tr><th>ROW OPTION</th><th>A</th></tr><tr><td>-S</td><td>(5.08) .200</td></tr><tr><td>-D</td><td>(6.35) .250</td></tr></table> |  | ROW OPTION | A | -S | (5.08) .200 | -D | (6.35) .250 |
| LEAD STYLE                                                                        | OAL              |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| -02                                                                               | (7.85) .309      |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| -03                                                                               | (11.86) .467     |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| -04                                                                               | (12.37) .487     |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| -06                                                                               | (15.37) .605     |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| -07                                                                               | (17.35) .683     |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| -09                                                                               | (9.86) .388      |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| ROW OPTION                                                                        | A                |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| -S                                                                                | (5.08) .200      |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
| -D                                                                                | (6.35) .250      |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                   |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
|                                                                                   |                  |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                               |                                                                                                            |                  |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |
|                                                                                   |                  |                                                                                    |                                                                                                                                       | <b>-A OPTION</b>                                                                                                                                                                                                                                                                                                  |                                                                                                            | <b>-P OPTION</b> |                                                                                                                                                                                                                               |     |             |     |              |     |              |     |              |     |              |     |             |                                                                                                                                       |  |            |   |    |             |    |             |

Specify "T" for Tape & Reel

Specify "F" for Full Reel Tape & Reel (must order max. quantity per reel; contact Samtec for quantity breaks)

(-07 lead style N/A)  
(-06 lead style with -P option N/A as standard)

| TW                                                                                  | NO. PINS PER ROW | LEAD STYLE                                                                          | PLATING OPTION                                                                                                                        | ROW OPTION                                                                                                                                                                  | STACKER HEIGHT                                                                                          | TAIL SPEC                                                                                                                                                                    |                |             |                 |            |                 |  |  |
|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|-----------------|------------|-----------------|--|--|
|                                                                                     | 02 thru 50       | Specify LEAD STYLE from chart                                                       | -F<br>= Gold flash on post, Matte Tin on tail<br><br>-L<br>= 10 μ" (0.25 μm) Gold on post, Matte Tin on tail<br><br>-T<br>= Matte Tin | -S<br>= Single Row<br><br>-D<br>= Double Row<br><br>-T<br>= Triple Row<br><br>-Q<br>= Four Row<br><br>-5<br>= Five Row<br><br>-6<br>= Six Row                               | - "XXX"<br>= Stacker Height in inches (0.13 mm) .005" increments<br><br>Example: -250 = (6.35 mm) .250" | - "XXX"<br>= Tail Length in inches (0.13 mm) .005" increments<br><br>Example: -150 = (3.81 mm) .150"<br><br>- "XXX"<br>= Polarized Position (Specify position to be removed) |                |             |                 |            |                 |  |  |
|  |                  |  |                                                                                                                                       |                                                                                                                                                                             |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |  |  |
| -S, -D*, -Q                                                                         |                  | -T, -5, -6                                                                          |                                                                                                                                       |                                                                                                                                                                             |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |  |  |
|                                                                                     |                  |                                                                                     |                                                                                                                                       | <table><tr><th>ROW OPTION</th><th>STACKER HEIGHT</th></tr><tr><td>-S, -D*, -Q</td><td>(3.05) .120 MIN</td></tr><tr><td>-T, -5, -6</td><td>(4.06) .160 MIN</td></tr></table> |                                                                                                         | ROW OPTION                                                                                                                                                                   | STACKER HEIGHT | -S, -D*, -Q | (3.05) .120 MIN | -T, -5, -6 | (4.06) .160 MIN |  |  |
| ROW OPTION                                                                          | STACKER HEIGHT   |                                                                                     |                                                                                                                                       |                                                                                                                                                                             |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |  |  |
| -S, -D*, -Q                                                                         | (3.05) .120 MIN  |                                                                                     |                                                                                                                                       |                                                                                                                                                                             |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |  |  |
| -T, -5, -6                                                                          | (4.06) .160 MIN  |                                                                                     |                                                                                                                                       |                                                                                                                                                                             |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |  |  |
|                                                                                     |                  |                                                                                     |                                                                                                                                       | *-D with stacker height greater than (4.06 mm) .160" will not have standoffs.                                                                                               |                                                                                                         | *Style -08 & -12 = S & D only                                                                                                                                                |                |             |                 |            |                 |  |  |

## Notes:

For added mechanical stability, Samtec recommends mechanical board spacers be used in applications with gold or selective gold plated connectors. Contact ipg@samtec.com for more information.

This Series is non-standard, non-returnable.

samtec.com?TW-SM or samtec.com?TW-TH

F-221 (Rev 19MAR21)

Unless otherwise approved in writing by Samtec, all parts and components are designed and built according to Samtec's specifications which are subject to change without notice.

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