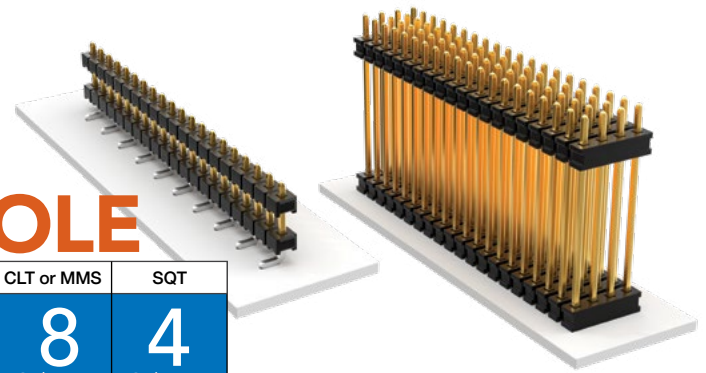


# SMT & THROUGH-HOLE BOARD STACKERS

(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 $\mu$ " (0.25 $\mu$ m) 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: -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)<br><br>- "X"R<br>Specify "T" for Tape & Reel<br>Specify "F" for Full Reel Tape & Reel (must order max. quantity per reel; contact Samtec for quantity breaks)<br>(-07 lead style N/A)<br>(-06 lead style with -P option N/A as standard) |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
|            |                  |                               |                                                                                                                                                 | <table border="1"> <thead> <tr> <th>ROW OPTION</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>-S</td> <td>(5.08) .200</td> </tr> <tr> <td>-D</td> <td>(6.35) .250</td> </tr> </tbody> </table> |                                                                                                         | ROW OPTION | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -S | (5.08) .200 | -D | (6.35) .250 | <table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>A</th> </tr> </thead> <tbody> <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> </tbody> </table> |  | LEAD STYLE | A | -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      |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
| LEAD STYLE | A                |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
| -02        | (7.85) .309      |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
| -03        | (11.86) .467     |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
| -04        | (12.37) .487     |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
| -06        | (15.37) .605     |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
| -07        | (17.35) .683     |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
| -09        | (9.86) .388      |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |
|            |                  |                               |                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |             |    |             |                                                                                                                                                                                                                                                                                                                                                                                           |  |            |   |     |             |     |              |     |              |     |              |     |              |     |             |

| 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 $\mu$ " (0.25 $\mu$ m) 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) |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
|             |                  |                               |                                                                                                                                                 | <table border="1"> <thead> <tr> <th>ROW OPTION</th> <th>STACKER HEIGHT</th> </tr> </thead> <tbody> <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> </tbody> </table> |                                                                                                         | ROW OPTION                                                                                                                                                                   | STACKER HEIGHT | -S, -D*, -Q | (3.05) .120 MIN | -T, -5, -6 | (4.06) .160 MIN | <table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>OAL</th> </tr> </thead> <tbody> <tr> <td>-01</td> <td>(8.20) .323</td> </tr> <tr> <td>-02</td> <td>(9.60) .377</td> </tr> <tr> <td>-03</td> <td>(13.60) .535</td> </tr> <tr> <td>-04</td> <td>(14.10) .555</td> </tr> <tr> <td>-05</td> <td>(15.10) .594</td> </tr> <tr> <td>-06</td> <td>(17.10) .673</td> </tr> <tr> <td>-07</td> <td>(19.10) .751</td> </tr> <tr> <td>-08*</td> <td>(21.10) .830</td> </tr> <tr> <td>-09</td> <td>(11.60) .456</td> </tr> <tr> <td>-10</td> <td>(15.60) .614</td> </tr> <tr> <td>-11</td> <td>(10.08) .397</td> </tr> <tr> <td>-12*</td> <td>(28.19) 1.110</td> </tr> </tbody> </table> |  | LEAD STYLE | OAL | -01 | (8.20) .323 | -02 | (9.60) .377 | -03 | (13.60) .535 | -04 | (14.10) .555 | -05 | (15.10) .594 | -06 | (17.10) .673 | -07 | (19.10) .751 | -08* | (21.10) .830 | -09 | (11.60) .456 | -10 | (15.60) .614 | -11 | (10.08) .397 | -12* | (28.19) 1.110 |
| ROW OPTION  | STACKER HEIGHT   |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -S, -D*, -Q | (3.05) .120 MIN  |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -T, -5, -6  | (4.06) .160 MIN  |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| LEAD STYLE  | OAL              |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -01         | (8.20) .323      |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -02         | (9.60) .377      |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -03         | (13.60) .535     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -04         | (14.10) .555     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -05         | (15.10) .594     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -06         | (17.10) .673     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -07         | (19.10) .751     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -08*        | (21.10) .830     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -09         | (11.60) .456     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -10         | (15.60) .614     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -11         | (10.08) .397     |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
| -12*        | (28.19) 1.110    |                               |                                                                                                                                                 |                                                                                                                                                                                                                                       |                                                                                                         |                                                                                                                                                                              |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |
|             |                  |                               |                                                                                                                                                 | <p>*-D with stacker height greater than (4.06 mm) .160" will not have standoffs.</p>                                                                                                                                                  |                                                                                                         | <p>*Style -08 &amp; -12 = S &amp; D only</p>                                                                                                                                 |                |             |                 |            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |            |     |     |             |     |             |     |              |     |              |     |              |     |              |     |              |      |              |     |              |     |              |     |              |      |               |

## 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.

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