



-DRAWING NOT TO SCALE-

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| | | |
| TITLE: PACKAGE OUTLINE, 16,20,28,32,40L THIN QFN, 5x5x0.75mm | | |
| APPROVAL | DOCUMENT CONTROL NO. 21-0140 | REV. 1/4 AJ |

| DIMENSION VARIATION | | | | | | | |
|---------------------|------|------|------|------|------|------|------------|
| PKG. CODES | D2 | | | E2 | | | L ±0.10 |
| | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. | |
| T1655-2 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T1655-2C | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T1655-3 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T1655-3C | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T1655-4 | 2.19 | 2.29 | 2.39 | 2.19 | 2.29 | 2.39 | -- |
| T1655-4C | 2.19 | 2.29 | 2.39 | 2.19 | 2.29 | 2.39 | -- |
| T1655N-1 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T2055-3 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T2055M-3 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T2055-4 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T2055-4C | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T2055-5 | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | 0.40 |
| T2055-5C | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | 0.40 |
| T2055MN-5 | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | 0.40 |
| T2055-6C | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | 0.40 |
| T2855-3 | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | -- |
| T2855-3C | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | -- |
| T2855-4 | 2.60 | 2.70 | 2.80 | 2.60 | 2.70 | 2.80 | -- |
| T2855-4C | 2.60 | 2.70 | 2.80 | 2.60 | 2.70 | 2.80 | -- |
| T2855-5 | 2.60 | 2.70 | 2.80 | 2.60 | 2.70 | 2.80 | -- |
| T2855-5C | 2.60 | 2.70 | 2.80 | 2.60 | 2.70 | 2.80 | -- |
| T2855M-5 | 2.60 | 2.70 | 2.80 | 2.60 | 2.70 | 2.80 | -- |
| T2855-6 | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | -- |
| T2855-6A | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | -- |
| T2855-6C | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | -- |
| T2855-7 | 2.60 | 2.70 | 2.80 | 2.60 | 2.70 | 2.80 | -- |
| T2855-7C | 2.60 | 2.70 | 2.80 | 2.60 | 2.70 | 2.80 | -- |
| T2855-8 | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | 0.40 |
| T2855-8C | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | 0.40 |
| T2855MK-8 | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | 0.40 |
| T2855N-1 | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | -- |
| T2855-13 | 3.15 | 3.25 | 3.35 | 3.15 | 3.25 | 3.35 | -- |

| COMMON DIMENSIONS | | | | | | | | | | | | | | | |
|-------------------|-----------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
| PKG. | 16L 5x5 | | | 20L 5x5 | | | 28L 5x5 | | | 32L 5x5 | | | 40L 5x5 | | |
| SYMBOL | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. |
| A | 0.70 | 0.75 | 0.80 | 0.70 | 0.75 | 0.80 | 0.70 | 0.75 | 0.80 | 0.70 | 0.75 | 0.80 | 0.70 | 0.75 | 0.80 |
| A1 | 0 | 0.02 | 0.05 | 0 | 0.02 | 0.05 | 0 | 0.02 | 0.05 | 0 | 0.02 | 0.05 | 0 | 0.02 | 0.05 |
| A2 | 0.20 REF. | | | 0.20 REF. | | | 0.20 REF. | | | 0.20 REF. | | | 0.20 REF. | | |
| b | 0.25 | 0.30 | 0.35 | 0.25 | 0.30 | 0.35 | 0.20 | 0.25 | 0.30 | 0.20 | 0.25 | 0.30 | 0.15 | 0.20 | 0.25 |
| D | 5.00 BSC | | | 5.00 BSC | | | 5.00 BSC | | | 5.00 BSC | | | 5.00 BSC | | |
| E | 5.00 BSC | | | 5.00 BSC | | | 5.00 BSC | | | 5.00 BSC | | | 5.00 BSC | | |
| e | 0.80 BSC. | | | 0.65 BSC. | | | 0.50 BSC. | | | 0.50 BSC. | | | 0.40 BSC. | | |
| k | 0.25 | - | - | 0.25 | - | - | 0.25 | - | - | 0.25 | - | - | 0.25 | - | - |
| L | 0.30 | 0.40 | 0.50 | 0.45 | 0.55 | 0.65 | 0.45 | 0.55 | 0.65 | 0.30 | 0.40 | 0.50 | 0.30 | 0.40 | 0.50 |
| N | 16 | | | 20 | | | 28 | | | 32 | | | 40 | | |
| ND | 4 | | | 5 | | | 7 | | | 8 | | | 10 | | |
| NE | 4 | | | 5 | | | 7 | | | 8 | | | 10 | | |
| JEDEC | WHHB | | | WHHC | | | WHHD-1 | | | WHHD-2 | | | ----- | | |

-DRAWING NOT TO SCALE-

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|---|----------------------|------|-----|
|  maxim integrated. | | | |
| TITLE: PACKAGE OUTLINE, 16,20,28,32,40L THIN QFN, 5x5x0.75mm | | | |
| APPROVAL | DOCUMENT CONTROL NO. | REV. | 2/4 |
| | 21-0140 | AJ | |

| DIMENSION VARIATION | | | | | | | |
|---------------------|------|------|------|------|------|------|------------|
| PKG. CODES | D2 | | | E2 | | | L ±0.10 |
| | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. | |
| T3255-3 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-3C | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-4 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-4C | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255M-4 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-5 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-5C | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-6 | 2.00 | 2.10 | 2.20 | 2.00 | 2.10 | 2.20 | -- |
| T3255-6C | 2.00 | 2.10 | 2.20 | 2.00 | 2.10 | 2.20 | -- |
| T3255-7 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-7C | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-8 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-8C | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255-9 | 3.30 | 3.40 | 3.50 | 3.30 | 3.40 | 3.50 | -- |
| T3255M-5 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255MK-1 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255MK-2 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255N-1 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T3255MN-1 | 3.00 | 3.10 | 3.20 | 3.00 | 3.10 | 3.20 | -- |
| T4055-1 | 3.40 | 3.50 | 3.60 | 3.40 | 3.50 | 3.60 | -- |
| T4055-1C | 3.40 | 3.50 | 3.60 | 3.40 | 3.50 | 3.60 | -- |
| T4055-2 | 3.40 | 3.50 | 3.60 | 3.40 | 3.50 | 3.60 | -- |
| T4055-2C | 3.40 | 3.50 | 3.60 | 3.40 | 3.50 | 3.60 | -- |

| CORNER LEAD CHAMFER VARIATION | | |
|----------------------------------|-----------------|----------|
| PKG. CODES | C | L4 |
| T3255-3 | 0.120 X 45° REF | 0.31 REF |
| T3255-3C | 0.120 X 45° REF | 0.31 REF |
| T3255-4 | 0.120 X 45° REF | 0.31 REF |
| T3255-4C | 0.120 X 45° REF | 0.31 REF |
| T3255-5 | 0.120 X 45° REF | 0.31 REF |
| T3255-5C | 0.120 X 45° REF | 0.31 REF |
| T3255-6 | 0.120 X 45° REF | 0.31 REF |
| T3255-6C | 0.120 X 45° REF | 0.31 REF |
| T3255-7 | 0.120 X 45° REF | 0.31 REF |
| T3255-7C | 0.120 X 45° REF | 0.31 REF |
| T3255-8 | 0.120 X 45° REF | 0.31 REF |
| T3255-8C | 0.120 X 45° REF | 0.31 REF |
| T3255-9 | 0.120 X 45° REF | 0.31 REF |
| T3255M-4 | 0.120 X 45° REF | 0.31 REF |
| T3255M-5 | 0.120 X 45° REF | 0.31 REF |
| T3255MK-1 | 0.120 X 45° REF | 0.31 REF |
| T3255MK-2 | 0.120 X 45° REF | 0.31 REF |
| T3255N-1 | 0.120 X 45° REF | 0.31 REF |
| T3255MN-1 | 0.120 X 45° REF | 0.31 REF |
| T4055-1 | 0.160 X 45° REF | 0.28 REF |
| T4055-1C | 0.160 X 45° REF | 0.28 REF |
| T4055-2 | 0.160 X 45° REF | 0.28 REF |
| T4055-2C | 0.160 X 45° REF | 0.28 REF |
| T4055MN-1 | 0.160 X 45° REF | 0.28 REF |
| T4055N-1 | 0.160 X 45° REF | 0.28 REF |

| DIMENSION VARIATION | | | | | | | |
|---------------------|------|------|------|------|------|------|------------|
| PKG. CODES | D2 | | | E2 | | | L ±0.10 |
| | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. | |
| T4055N-1 | 3.40 | 3.50 | 3.60 | 3.40 | 3.50 | 3.60 | -- |
| T4055MN-1 | 3.40 | 3.50 | 3.60 | 3.40 | 3.50 | 3.60 | -- |



TITLE:
PACKAGE OUTLINE, 16,20,28,32,40L
THIN QFN, 5x5x0.75mm

APPROVAL

DOCUMENT CONTROL NO.
21-0140

REV. 3/4
AJ

-DRAWING NOT TO SCALE-

NOTES:

1. DIMENSIONING & TOLERANCING CONFORM TO ASME Y14.5M-1994.
2. ALL DIMENSIONS ARE IN MILLIMETERS. ANGLES ARE IN DEGREES.
3. N IS THE TOTAL NUMBER OF TERMINALS.
4. THE TERMINAL #1 IDENTIFIER AND TERMINAL NUMBERING CONVENTION SHALL CONFORM TO JESD 95-1 SPP-012. DETAILS OF TERMINAL #1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE TERMINAL #1 IDENTIFIER MAY BE EITHER A MOLD OR MARKED FEATURE.
5. DIMENSION *b* APPLIES TO METALLIZED TERMINAL AND IS MEASURED BETWEEN 0.25 mm AND 0.30 mm FROM TERMINAL TIP.
6. ND AND NE REFER TO THE NUMBER OF TERMINALS ON EACH D AND E SIDE RESPECTIVELY.
7. DEPOPULATION IS POSSIBLE IN A SYMMETRICAL FASHION.
8. DRAWING CONFORMS TO JEDEC MO220, EXCEPT EXPOSED PAD DIMENSION FOR T2855-3, T2855-6, T4055-1 AND T4055-2.
9. WARPAGE SHALL NOT EXCEED 0.10 mm.
10. MARKING IS FOR PACKAGE ORIENTATION REFERENCE ONLY.
11. REFER TO DIMENSION VARIATION TABLE FOR LEAD LENGTH VARIATION
12. APPLICABLE ONLY FOR PACKAGES WITH TIGHT CORNER LEADS METAL TO METAL CLEARANCE.
13. NUMBER OF LEADS SHOWN ARE FOR REFERENCE ONLY.
14. LEAD CENTERLINES TO BE AT TRUE POSITION AS DEFINED BY BASIC DIMENSION "e", ±0.05.
15. MATERIAL MUST BE COMPLIANT WITH MAXIM SPECIFICATION 10-0131 FOR SUBSTANCE CONTENT, MUST BE Eu ROHS COMPLIANT WITHOUT EXEMPTION AND PB-FREE.
16. ALL DIMENSIONS APPLY TO BOTH LEADED (-) AND PbFREE (+) PKG. CODES.



TITLE:
PACKAGE OUTLINE, 16,20,28,32,40L
THIN QFN, 5x5x0.75mm

APPROVAL

DOCUMENT CONTROL NO.
21-0140

REV. 4/4
AJ

-DRAWING NOT TO SCALE-

REVISION HISTORY

| REV | CHANGES MADE | DATE | INIT. |
|-----|---|--------------------|----------|
| A | ECN #HQ-02-4661. INITIAL RELEASE INTO DOCUMENT CONTROL. | 6/13/02 | GP |
| B | ECN #HQ-02-4662. 16L DATA ADDED TO DRAWING. | 6/25/02 | GP |
| C | ECH #HQ-02-4663. T2855-2 PACKAGE CODE DIMENSIONS ADDED. | 6/25/02 | GP |
| D | ECN #HQ-04-2695. COSMETICS CHANGES IN DRAWING. TITLE CHANGED. | 2/26/04 | Rdel |
| E | ECN #HQ-04-3755. NEW PKG. CODES ADDED TO EXPOSED PAD VARIATIONS TABLE. DOWN BONDS COLUMN ADDED TO THIS TABLE. | 3/12/04 | JD |
| F | ECN # HQ-05-A155. ADD NEW TQFN PACKAGES TO DIMENSION TABLES. CHANGE DRAWING TO INCLUDE MARKING REFERENCE. REMOVE 40L 5X5 TQFN FROM COMMON DIMENSIONS. | 10/31/05 | JD/RdeL |
| G | ECN # HQ-05-A156. CHANGE LOCATION OF LEAD NUMBERS. MINOR PLACEMENT ADJUSTMENTS FOR DIMENSION "L". | 10/31/05 | JD/RdeL |
| H | ECN # HQ-05-3205. ADD 0.4mm LEAD PITCH PACKAGE, T4055-1, TO FAMILY PACKAGE OUTLINE. TITLE CHANGED | 10/31/05 | RdeL |
| I | ECN # HQ-05-A157. UPDATED PKG. CODES BASED ON CURRENT STATUS, CLARIFY MARKING, REMOVE REFERENCE FROM NOTE 9 | 10/31/05 | RdeL |
| J | ECN# HQ-06-3085. REMOVE DETAIL B IN DRAWING. REMOVE: L1, K(nom), K(max) DIMENSION IN TABLE CHANGE L DIMENSION AND EXPOSED PAD SIZE FOR T4055 PACKAGE TO MATCH ACTUAL NSEB TOOL DESIGN AND ACTUAL PARTS. REMOVE DOWNBOND & L EXCEPTION COLUMN FROM TABLE | 06/02/06 | RdeL |
| K | ECN # HQ-07-B493. CHANGES IN NOTE #9. PKG. CODES ADDED TO EXP. PAD VARIATIONS TABLE. | 03/20/07 | GP |
| L | ECN# HQ-07-0119. PKG. CODE NAME CHANGED FROM T2055M-5 TO T2055MN-5. NO OTHER CHANGES. | 07/13/07 | GP |
| M | ECN# HQ-09-0396. DATA FOR T1655-4 AND T4055N-1 PKGS. ADDED TO THE TABLE. | | |
| N | ECN#EV-11-0841: Package Code table Description to T1655N-1. | 03/10/09 | GP |
| O | ECN # HQ-11-0870. ADDED PKG CODES T2055M-3 & T2855M-5. | 04/12/11 | MM |
| P | ECN #HQ-11-1483. T3255M-5 PKG. CODE ADDED. | 05/10/11 | MM |
| Q | ECN #HQ-11-2105. T2855MK-8 PKG. CODE ADDED TO DWG. | 08/04/11 | GP |
| R | ECN #HQ-12-2855. ADD REFERENCE TO PACKAGE VARIATION ON CORNER PIN CHAMFER DIMENSIONS. 32 and 40 lead 5x5mm have chamfer on corner pins as verified with ASE-CL and UTAC assemblers. -ADD TABLE LISTING PACKAGE CODES WITH APPLICABLE CORNER PIN CHAMFER VARIATION -ADD DETAIL 'B' SHOWING DIAGRAM OF CORNER CHAMFER LEAD OPTION | 09/19/11 2/1/13 | GP WD |
| S | ECN #HQ-13-0551. CHANGE TABLE HEADING "EXPOSED PAD VARIATION" TO "DIMENSION VARIATION" -ADD LEAD LENGTH VARIATION (L=0.40+/-0.10) for the following pkg codes: T2055-5, T2055MN-5, T2855-8, T2855MK-8 (email confirmation from ASECL and UTL attached to ECN) -ADD NOTE 12: "REFER TO DIMENSION VARIATION TABLE FOR LEAD LENGTH VARIATION -ADD NOTE 13: APPLICABLE ONLY FOR PACKAGES WITH TIGHT CORNER METAL TO METAL CLEARANCE | 03/13/13 | WD |
| T | ECN #HQ-13-0656. Add new package code, Copper wire option | 03/20/13 | AG |
| U | ECN #HQ-13-1689. FOR COPPER WIRE BOND PACKAGE CODES. | 07/29/13 | AG |
| V | ECN # HQ-13-2247. Add new package code for copper wire bonding | 09/30/13 | AG |

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|-------------------------|---|----------------|-----------|
| Maxim Integrated | TITLE: PACKAGE OUTLINE, 16, 20, 28, 32, 40L THIN QFN, 5X5X0.75 MM | | |
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