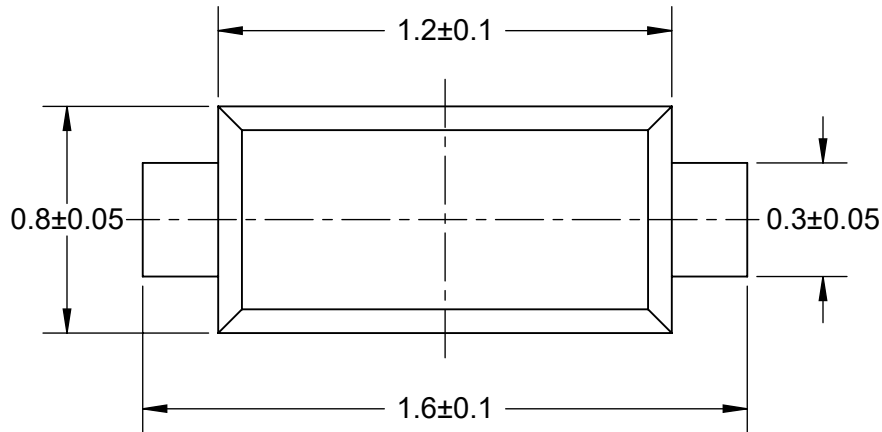
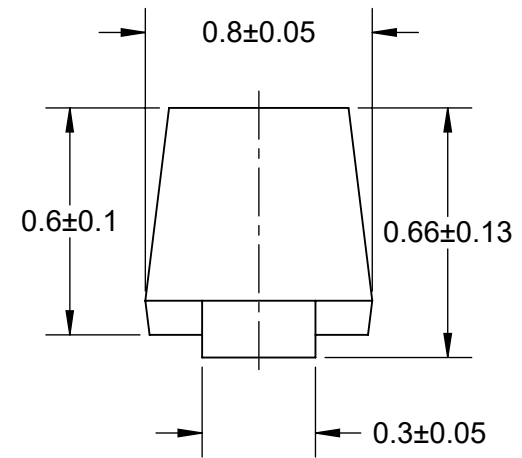


# SOD523FL OUTLINE FLAT NARROW LEADS

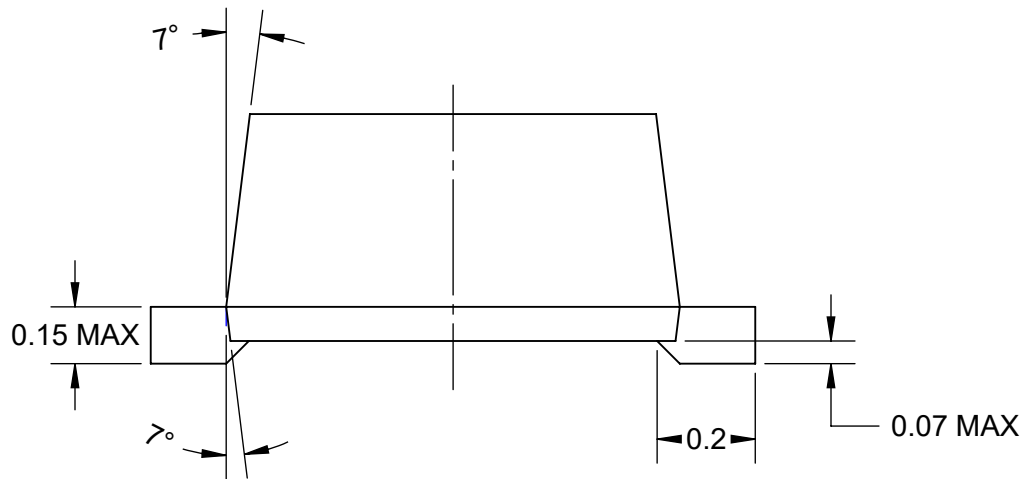
TOP VIEW



END VIEW

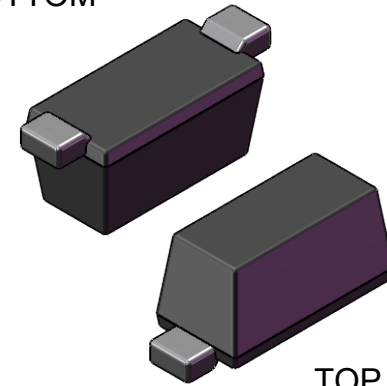


SIDE VIEW



MODEL

BOTTOM



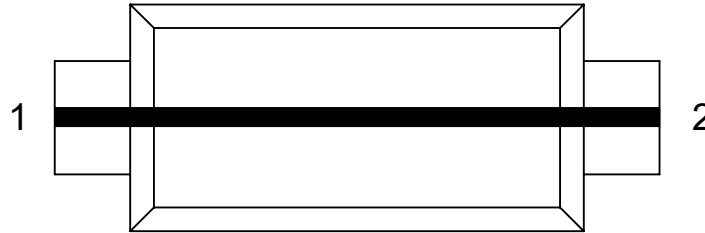
TOP

Notes: (Unless Otherwise Specified).

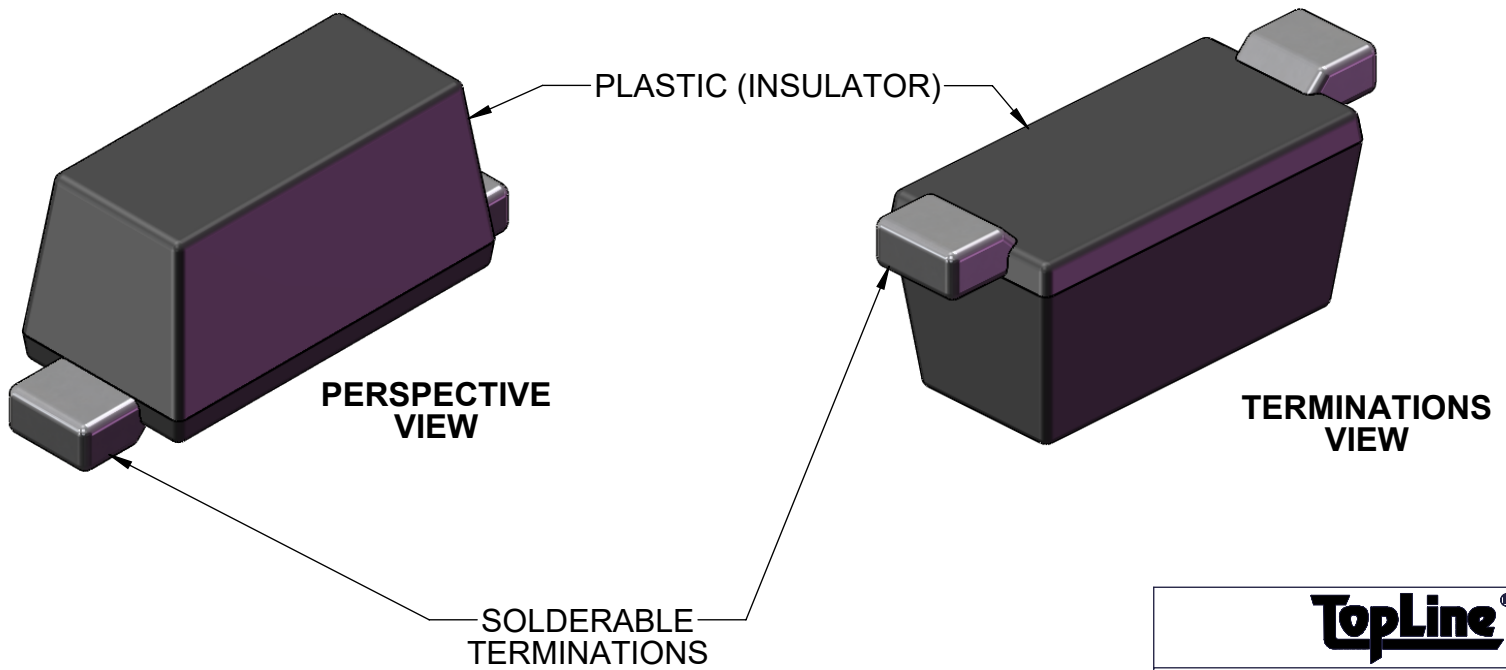
- 1) DIMENSIONS IN mm.
- 2) SEE JUMPER DIAGRAM (PAGE 2).
- 3) SEE PART NUMBER CONFIGURATION (PAGE 4).
- 4) RECOMMENDED PC BOARD LAYOUT PATTERN (PAGE 5).
- 5) MOUNTING POSITION: ANY (NON-POLARIZED).

|             |           |                            |      |             |              |
|-------------|-----------|----------------------------|------|-------------|--------------|
| APPROVALS   | DATE      | <b>TopLine®</b>            |      |             |              |
| DRAWN T.Au  | 12/2/2019 |                            |      |             |              |
| ENG M. Hart | 12/2/2019 | TITLE SOD523FL-DC12 JUMPER |      |             |              |
| MFG         |           | SCALE                      | SIZE | DRAWING NO. | REV          |
| QA          |           | 50:1                       | A    | 164559      | A            |
| CUST        |           | DO NOT SCALE DRAWING       |      |             | SHEET 1 OF 7 |
| REVISED     |           |                            |      |             |              |

**INTERNAL WIRING CIRCUIT**  
**PART NUMBER SUFFIX**  
**TOP VIEW**

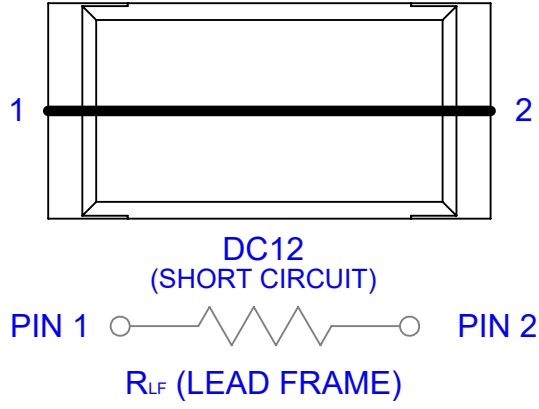


**DC12**  
**1-WIRE**  
**CIRCUIT JUMPER**



|                      |      |                         |              |
|----------------------|------|-------------------------|--------------|
| <b>TopLine®</b>      |      |                         |              |
| TITLE                |      | SOD523FL-DC12<br>JUMPER |              |
| SCALE                | SIZE | DRAWING NO.             | REV          |
| 50:1                 | A    | 164559                  | A            |
| DO NOT SCALE DRAWING |      |                         | SHEET 2 OF 7 |

**SCHEMATIC EQUIVALENT INTERNAL CIRCUIT**




| ELECTRICAL RESISTANCE MILLIOHM (DC) MAX |                   |
|---|-------------------|
| CIRCUIT                                 | PIN 1 TO PIN 2    |
| DC12                                    | 50 milli $\Omega$ |

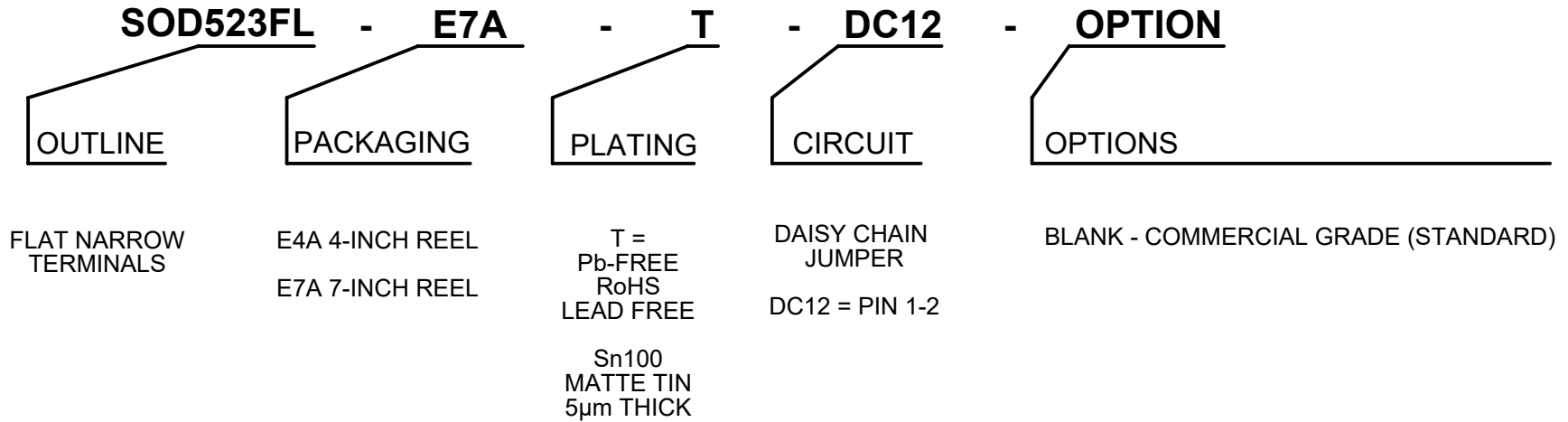
| THERMAL RESISTANCE  | PART TYPE                     |
|---|-------------------------------|
|   | SOD523FL                      |
| JUNCTION TO AMBIENT<br>( $T_a=25^\circ$ ) $R_{\theta(j-a)}$ | 500 $^\circ\text{C}/\text{W}$ |

| TEMPERATURE RATING                          |  |
|---|--|
| JUNCTION TEMP $T_j$                         | 150 $^\circ\text{C}$                         |
| STORAGE TEMP $T_{stg}$                      | -65 $^\circ\text{C}$ TO 150 $^\circ\text{C}$ |
| PEAK REFLOW TEMP<br>$T_{reflow}$ 10 SECONDS | 260 $^\circ\text{C}$                         |

| MAXIMUM ELECTRICAL (DC) RATING  | PART TYPE |
|---------------------------------|-----------|
|                                 | SOD523FL  |
| $V_R$ WORKING VOLTAGE           | 100V      |
| $V_F$ FORWARD @ RATED CURRENT   | 100V      |
| $I_o$ FORWARD CURRENT           | 4.0 A     |
| $I_{FSM}$ FORWARD SURGE CURRENT | 4.0 A     |
| $I_R$ REVERSE CURRENT           | 4.0 A     |
| $C_J$ JUNCTION CAPACITANCE      | 5 pF      |

|  |      |                        |              |
|---|------|------------------------|--------------|
| TITLE   |      | SOD523FL-D12<br>JUMPER |              |
| SCALE   | SIZE | DRAWING NO.            | REV          |
| 15:1  | A    | 164559                 | A            |
| DO NOT SCALE DRAWING  |      |                        | SHEET 3 OF 7 |

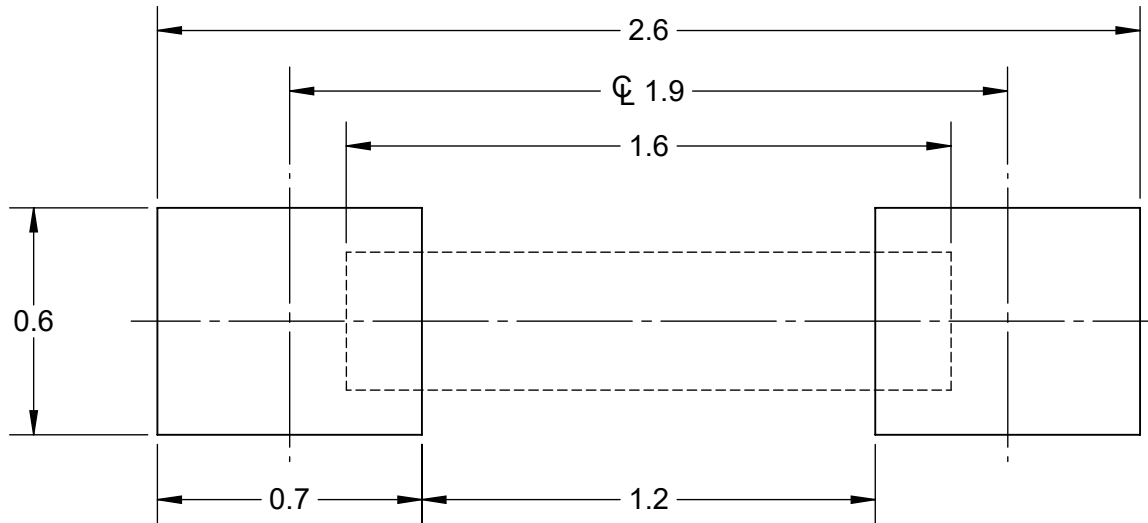
# PART NUMBERING SYSTEM



| OUTLINE     | REEL QTY | NOTES         | RoHS | MSL LEVEL | HALOGEN FREE | APPLICATION | TOP MARK | REF | DP#    |
|-------------|----------|---------------|------|-----------|--------------|-------------|----------|-----|--------|
| SOD523-DC12 | 4000     | SHORT CIRCUIT | YES  | 1         | YES          | JUMPER      | 000      |     | 164559 |

|                      |      |                         |              |
|----------------------|------|-------------------------|--------------|
| <b>TopLine®</b>      |      |                         |              |
| TITLE                |      | SOD523FL-DC12<br>JUMPER |              |
| SCALE                | SIZE | DRAWING NO.             | REV          |
| 1:1                  | A    | 164559                  | A            |
| DO NOT SCALE DRAWING |      |                         | SHEET 4 OF 7 |

# PC BOARD LAND PATTERN



ALL DIMENSIONS IN mm

Notes: (Unless Otherwise Specified).

1) DIMENSIONS IN mm.

2) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE.  
DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.

**TopLine®**

TITLE SOD523FL-DC12  
JUMPER

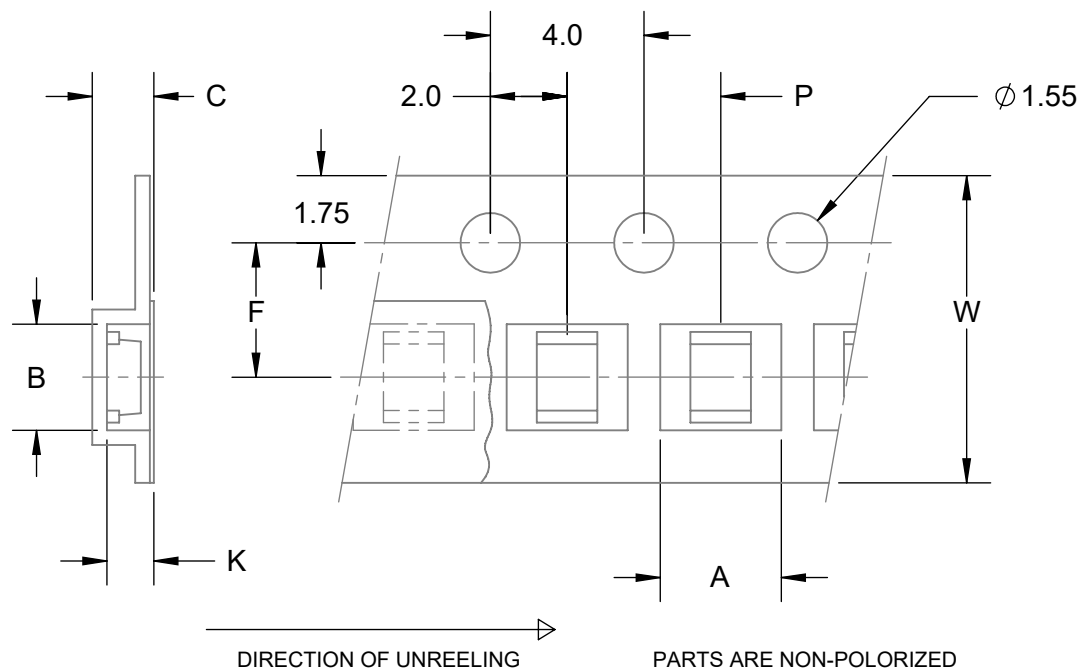
| SCALE | SIZE | DRAWING NO. | REV |
|-------|------|-------------|-----|
| 50:1  | A    | 164559      | A   |

DO NOT SCALE DRAWING

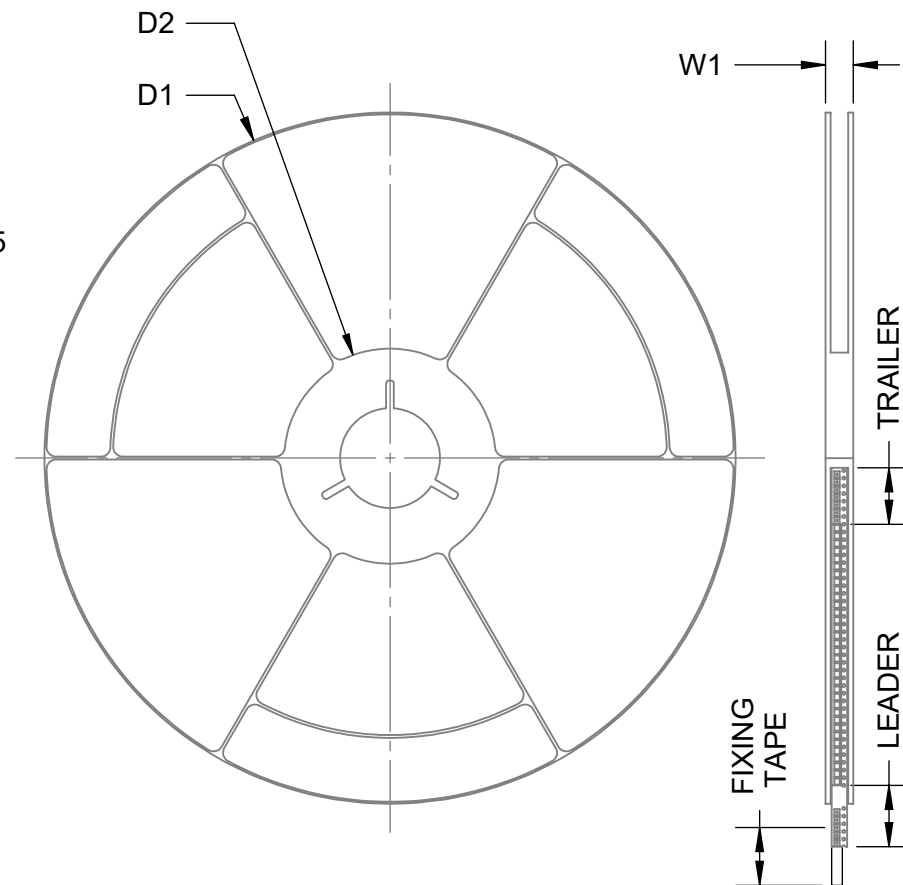
SHEET 5 OF 7

# TAPE SPECIFICATION SURFACE MOUNT DEVICE

7 INCH PACKAGE REEL



PARTS ARE NON-POLARIZED

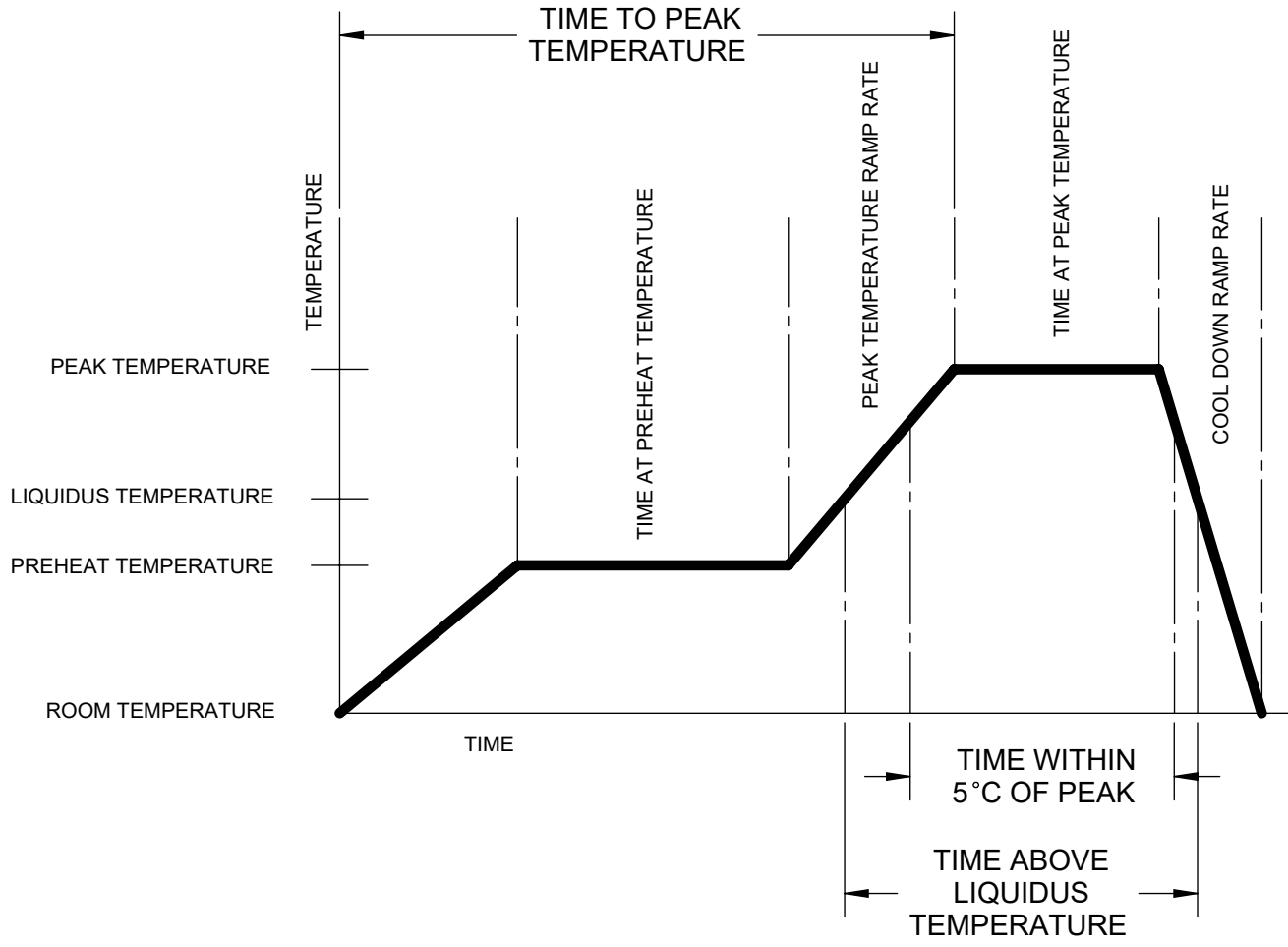


ALL DIMENSIONS IN mm.

| TAPE AND REEL DIMENSIONS |        | E7A 7-INCH |
|--------------------------|--------|------------|
|                          | SYMBOL | SOD523FL   |
| TAPE WIDTH               | W      | 8          |
| PITCH OF COMPONENTS      | P      | 4          |
| POCKET WIDTH             | A      | 0.9        |
| POCKET LENGTH            | B      | 1.94       |
| POCKET DEPTH             | K      | 0.73       |
| CARRIER THICKNESS        | C      | 0.95       |
| REEL DIAMETER            | D1     | 178        |
| HUB DIAMETER             | D2     | 50         |
| PUNCH HOLE POSITION      | F      | 3.5        |
| MAX REEL WIDTH           | W1     | 11.4       |
| REF (JUMPER)             | -      |            |
| REF (SPACER)             | -      |            |
| QUANTITY (PSC)           | -      | 4000       |

|                      |      |                         |              |
|----------------------|------|-------------------------|--------------|
| <b>TopLine®</b>      |      |                         |              |
| TITLE                |      | SOD523FL-DC12<br>JUMPER |              |
| SCALE                | SIZE | DRAWING NO.             | REV          |
| 1:5                  | A    | 164559                  | A            |
| DO NOT SCALE DRAWING |      |                         | SHEET 6 OF 7 |

# LEAD FREE REFLOW PROFILE OF SMD PACKAGE



| DESCRIPTION                | REQUIREMENT                  |
|----------------------------|------------------------------|
| AVERAGE PREHEAT RAMP RATE  | 3°C /SECOND MAXIMUM          |
| PREHEAT TEMPERATURE        | 150°C MINIMUM, 200°C MAXIMUM |
| PREHEAT TIME               | 60 TO 120 SECONDS            |
| RAMP TO PEAK               | 3°C /SECOND MAXIMUM          |
| TIME OVER LIQUIDUS (217°C) | 60 TO 260 SECONDS            |
| PEAK TEMPERATURE           | 260°C +0/-5°C                |
| TIME WITHING 5°C OF PEAK   | 10 TO 30 SECONDS             |
| RAMP - COOL DOWN           | 6°C /SECONDS MAXIMUM         |
| TIME 25°C TO PEAK          | 6 MINUTES MAXIMUM            |

**TopLine<sup>®</sup>**

|                      |      |                         |              |
|----------------------|------|-------------------------|--------------|
| TITLE                |      | SOD523FL-DC12<br>JUMPER |              |
| SCALE                | SIZE | DRAWING NO.             | REV          |
| 20:1                 | A    | 164559                  | A            |
| DO NOT SCALE DRAWING |      |                         | SHEET 7 OF 7 |