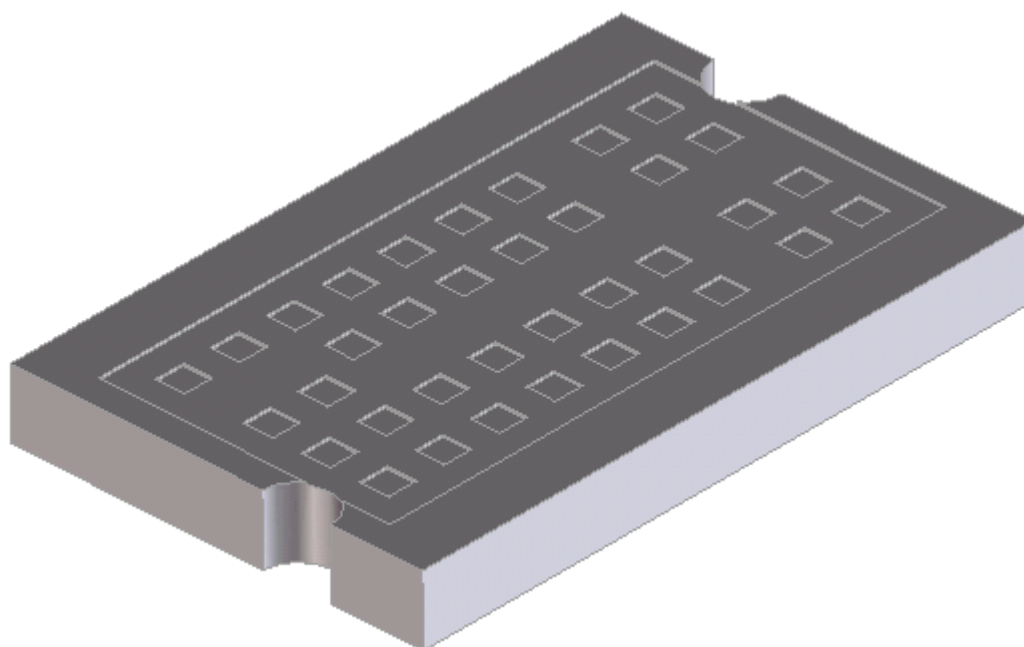




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REV.	A	A	A	A	A	A															
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<b>A</b>	ORIGINAL RELEASE DC 2004/08/26 E2004-0178						THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION														
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### 1.0 SCOPE

This document determines the specification for the 91658 Traceability Pad.

### 2.0 PRODUCT DESCRIPTION

2.1 The part number covered in this specification is:

Part number: 91658-0020

Sales drawing: SD-91658-010

2.2 This pad consists of a flat solderable pad that has a 2D data matrix laser-etched onto its surface. A unique number will be attached to each pad using this data matrix. Laser etched surface with respect to non-etched surface is to have a contrast of at least 50%.

2.3 This pad must be suitable for soldering with both Pb and Pb-free soldering processes.

### 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

In the event of conflict between the requirements of this specification and sales drawing, the sales drawing shall take precedence. See the sales drawing and the other sections of this specification for the necessary documents and specifications.

### 4.0 RATINGS

#### 4.1 CLIMATIC REQUIREMENTS

Storage Temperature Range -40 to +85 °C

#### 4.2 READABILITY REQUIREMENTS

A Quadrus EZ reader can be used to read this product. This reader should be used during product testing and verification to confirm that the number programmed into the laser etching machine corresponds to the number being read by the scanner. This will ensure that the laser etching is correct.

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5.0 ENVIRONMENTAL PERFORMANCE SPECIFICATIONS

Item	Test Condition	Requirement
5.1 Damp Heat (cyclic) IEC 68-2-30 Db	Temp 25°C-55 °C and 90-100% humidity for 6 cycles of 24 hours (Cycle: 25 °C-55 °C in 3 hours 9 hours at 55 °C 55 °C-25 °C in 3 hours 9 hours at 25 °C Recovery at 25 °C and 25-75% humidity for 2 hours)	No change in the readability of the laser marking
5.2 Cold Storage IEC 68-2-1 Ab	96 hours in -40 °C Recovery 2 hours at room temp	No change in the readability of the laser marking
5.3 Dry Heat Storage IEC68-2-2Bb	96 hours in +85 °C Recovery 2 hours at room temp	No change in the readability of the laser marking
5.4 Thermal Shock IEC 68-2-14 Ab	-55 °C to +85 °C (change < 3 min) 50 cycles, 1 cycle 0.5 + 0.5 hours, recovery time 2 hours at room temp	No change in the readability of the laser marking
5.5 Gradual change of temperature	From -55 °C to +125 °C at steps of 10 °C/hr, starting at 25 °C to min/max temp	No change in the readability of the laser marking
5.6 Reflow Test	Reflow the connector as per Appendix 8.1.	Solders correctly to PWB. No change in the readability of the laser marking
5.7 Solderability Test	Reflow the connector as per Appendix 8.2.	Solders correctly to PWB. No change in the readability of the laser marking
5.8 Salt Spray IEC512-5, test 1f	48hour spray, at temp. 35° +/-2° C R/H 90-95% Salt NaCl mist 5% After test wash parts and return to room Temperature for 1-2 hours	No change in the readability of the laser marking
5.9 Mixed Gas IEC68-2-42 Kc	96 hours. H <sub>2</sub> S 3ppm + SO <sub>2</sub> 10ppm At temp 40 °C +/- 2 °C, R/H 80% After test return to ambient for 1-2 hours	No change in the readability of the laser marking

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### 6.0 TEST SEQUENCE

	Test Group	1	2	3	4
4.2	Readability check with scanner	1, 3,5, 7	1,3, 5, 7	1, 3, 5	1, 3, 5,7,9
5.1	Damp heat (cyclic)				4
5.2	Dry cold	6			
5.3	Dry heat	4			
5.4	Thermal shock		4		
5.5	Gradual change of temp			4	
5.6	Reflow test (x3)	2	2		2
5.7	Solderability test			2	
5.8	Salt spray		6		
5.9	Mixed gas				8

### 7.0 PACKAGING

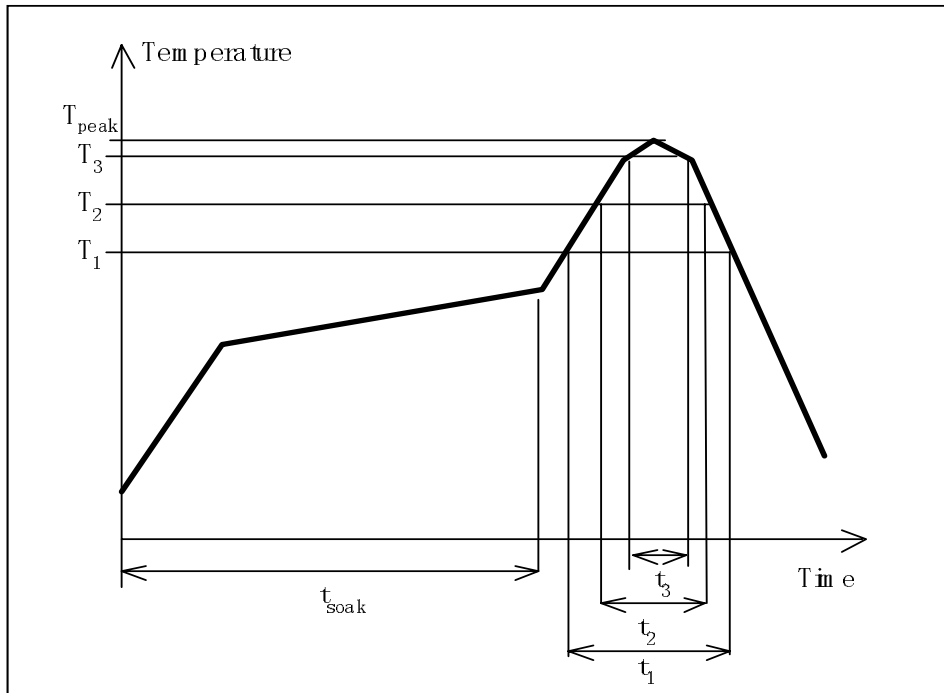
Parts shall be packaged to protect against damage during handling, transit and storage. The parts shall be inserted into paper tape pockets and put on reels which will be put inside boxes.

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### 8.0 APPENDIX

#### 8.1 REFLOW PROFILE (Soldering heat resistance testing)



Generic Profile for Pb-free assemblies (For soldering heat resistance testing)

Components must tolerate this profile three times.

Peak temperature during reflow 255°C (-0/+5)°C

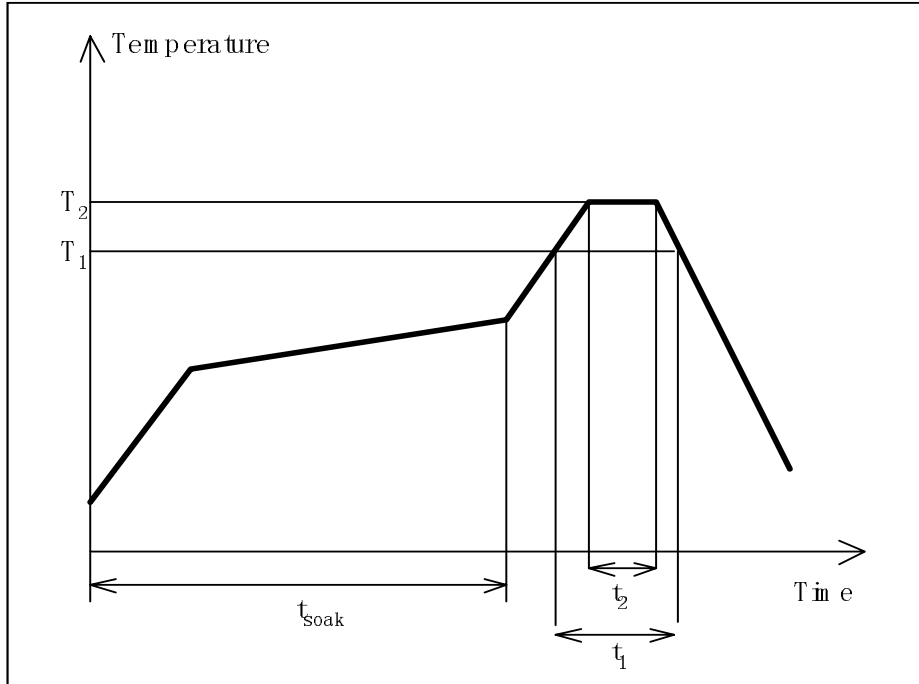
Time above 230 °C max 50 secs

Time above 250 °C max 10 secs

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8.2 REFLOW PROFILE (Solderability test)



Peak temperature during reflow 230°C (-0/+5)°C

Time at peak temperature: 10 secs

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