

The product described in this document has not been fully tested to ensure performance to the requirements outlined below. Therefore AMP makes no representation or warranty express or implied that the product will comply with these requirements. Further AMP may change these requirements based upon the results of additional testing and evaluation. Contact AMP GB Engineering for further details.

NOTE

All numerical values are in metric units. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of ± 0.10 , and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only, and not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of the AMP 2 position 4.25 pitch battery connector assembly. The connector is designed to connect between the battery cells of the battery-pack and the system PCB within the mobile phone. The containing end of the battery connector is of spring type, while the connection to the system PCB is of surface-mount soldering type, representing two solder joints per contact. This connector is designed for a one reflow process only and should not be inverted on the PCB.

Figure 1 provides connector features and terms used throughout this specification. Use these terms when corresponding with AMP representatives to facilitate assistance.

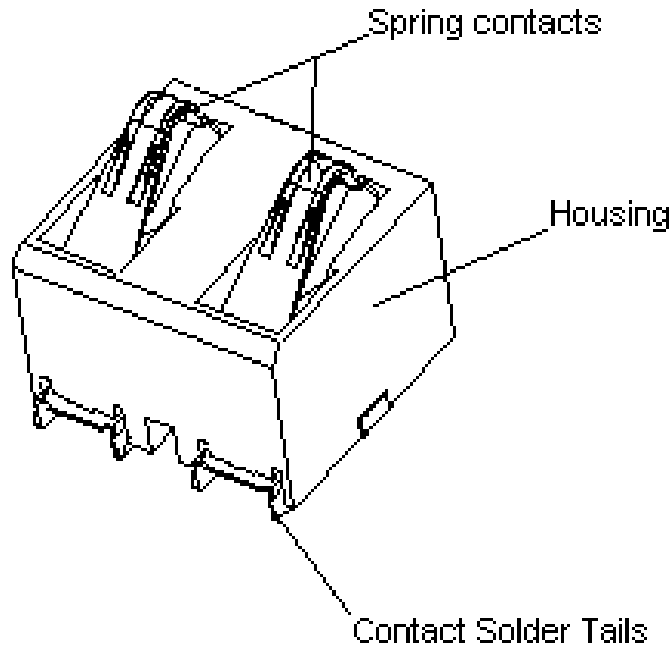


Figure .1.

2. Revision Summary

REV 1	Preliminary Issue	24 th February 1999
REV A	EB00-0669-99	15 th December 1999
REV .B.	EB00-0282-00	9 th June 2000

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Approved:- Frank Wheeler-King

3. CUSTOMER SUPPORT

3.1 Customer Assistance

Reference Part Number 699905 / 1337194 and Product Code 7157 are representative numbers of AMP Surface Mount Battery Connector. Use of these numbers will identify the product line and expedite your inquiries through the AMP service network. Further information can be obtained through your local AMP representative.

3.2 Drawings

AMP Customer drawings for this connector is available from the AMP service network. The information contained in Customer Drawings takes priority if there is a conflict with this specification or with any other technical documentation supplied by AMP.

4. REQUIREMENTS

4.1 Connector Packaging, Storage and Handling.

Connectors are packaged and shipped in boxed reels of embossed tape packaging that conforms to EIA-481 packaging standards. Boxes should remain unopened until ready for use to prevent damage to the tape and to prevent contamination of the solder tails. They should be used on a first in first out basis to prevent possible storage contamination and to ensure maximum Solderability.

Refer to AMP Packaging Specification 107-3262

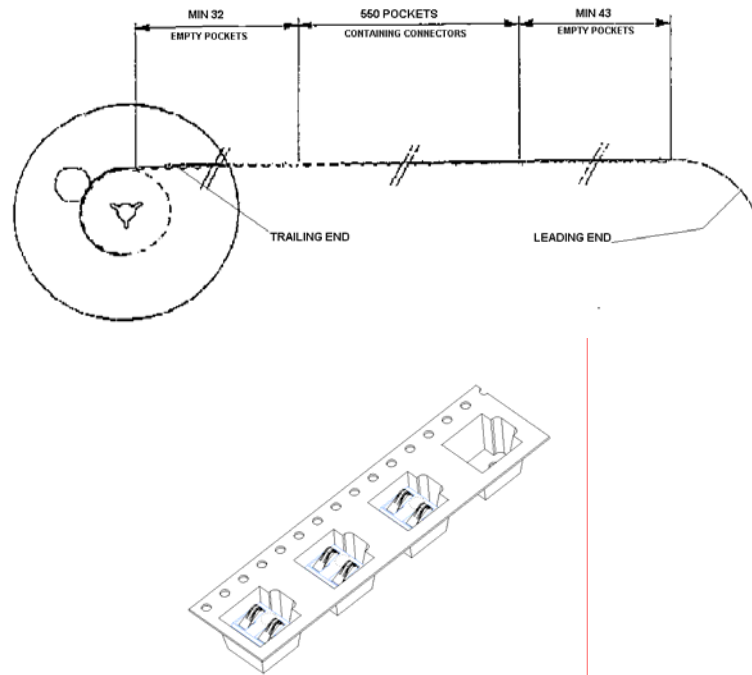


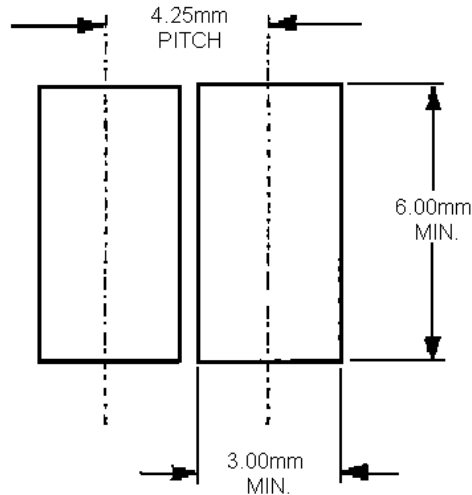
Figure .2.

4.2 Connection To Interface.

A. Interface Pad Layout and Plating.

Interface pad layout is provided in figure .3.

Pads shall be plated with 0.5 μ min Au over 1.3 μ min Ni or with 0.5 μ min Pd +Au flash over 1.3 μ min Ni.



INTERFACE PAD LAYOUT

FIGURE .3.

4.3 Printed Circuit Board.

A. Layout.

Please refer to AMP drawing C-699905 / C-1337194 for PCB layout dimensions and tolerances.

B. Solderability.

Plated pads on the PCB shall be solderable as defined in AMP Specification 109-11-2. Additional information on solderability and soldering variables can be found in AMP Corporate Bulletin 52.

Solder paste height shall be 0.20mm Max. (Aperture dimension on the stencil shall be the same as nominal pad dimension shown in the PCB layout on AMP drawing C-699905 / C-1337194.

NOTE

Please note the connector is designed for a one reflow process application. The connector should not be inverted on the PCB during the reflow oven process.

4.4 Connector Positioning.

The connectors are pre-positioned in the EIA-481 tape packaging to accommodate easy robotic / vacuum pick and place. (Ref:- connector vacuum P&P areas 2.50mm dia).

4.5 Connector soldering.

A. Mechanical Support.

Both butt style solder tails of each contact shall be soldered onto the PCB pads to provide optimum mechanical stabilization.

B. Soldering Heat Curve.

Connectors shall be soldered with IR-reflow method according to time/temperature curve as specified in figure .4.

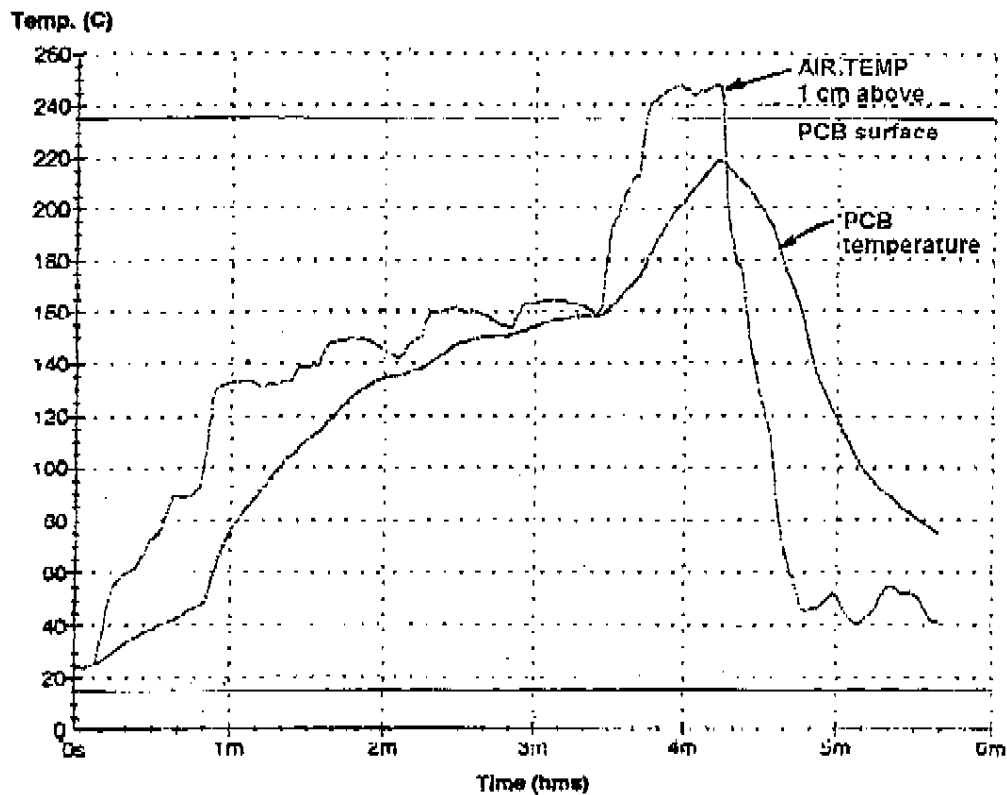


FIGURE .4.

4.6 Hand Soldering During Removal and Replacement.

A. Connector removal from PCB.

Manual hot gas soldering method shall be used to remove the battery connector from the PCB. Damaging of the removed connector is allowed. Solder conditions shall be as follows.

Max. air Temperature	+ 300°C
Max. air Velocity	10 m/s

Max. exposure time	30 s
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B. Connector Replacement on PCB.

Manual soldering iron methods shall be used to solder the replacing connector to the PCB. Damage to the replacing connector is not allowed. Care shall be taken here not to melt the connector housing. Solder conditions shall be as follows.

Tip Diameter	Selected to fit application.
Max. Tip temperature when iron is removed from heater.	+ 370°C
Max. Tip temperature when applied to connector solder tail.	Below 250°C
Anti-static Protection	Required.
Max. Exposure time	3 s

4.7 Visual Aid.

A. Spring Damage.

Spring contacts (see figure .1.) shall not be deformed and their plating shall not be scratched by collision with the vacuum nozzle during pick and place actions or by any other cause during the soldering process.

B. Centering.

Connector solder tails shall be centered on corresponding PCB pads.

C. Solder Connection.

All four solder tails shall be properly soldered on corresponding PCB pads, and shall not show any cracks in their solder joints.