

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

变更 ESP32-WROVER-E 和 ESP32-WROVER-IE 模组 PCB EPAD 为双面塞孔工艺

The PCB EPAD Vias are Changed to be Double-sided Plugged for ESP32-WROVER-E/IE

PCN 编号 PCN No.	PCN-2021-025	提出日期 Issue Date of PCN	2021/10/18
变更日期 Proposed Date of Change	2021/11/25	首次出货日期 Proposed Date of First Shipment	2021/12/25
PCN 类型 / PCN Category	<input checked="" type="checkbox"/> 客户需要批准/Customer Approval Required <input type="checkbox"/> 客户通知/Customer Notification		

1. 影响产品名称/Affected Product Name
ESP32-WROVER-E, ESP32-WROVER-IE

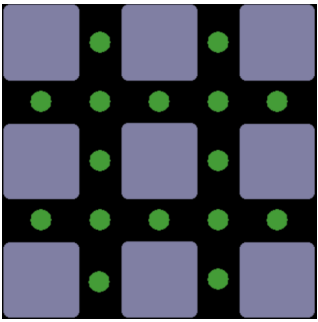
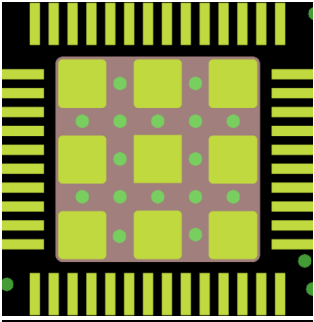
2. 变更原因/Reason for Change

为进一步提升 ESP32-WROVER-E 和 ESP32-WROVER-IE 模组在客户生产二次回流焊制程中的可靠性，模组 PCB EPAD 上的过孔由单面塞孔变更为双面塞孔。
The vias on the PCB EPAD for ESP32-WROVER-E and ESP32-WROVER-IE are going to be double-sided plugged in order to improve reliability during customer reflow process.

3. 变更描述/Description of Change

ESP32-WROVER-E 和 ESP32-WROVER-IE PCB EPAD 上的过孔由 bottom 面塞孔变更为双面塞孔。
The vias on the PCB EPAD for ESP32-WROVER-E and ESP32-WROVER-IE are going to be double-sided plugged instead of bottom-sided plugged.

4. 变更对比/Change Comparison

Products	Before	After
ESP32-WROVER-E ESP32-WROVER-IE	<p>仅 PCB EPAD bottom 面过孔塞孔，如下图。 Only vias of the EPAD on the bottom side of the PCB are plugged.</p>  <p align="center">Bottom side of the PCB EPAD</p>	<p>PCB EPAD bottom 面无变更，增加 PCB EPAD top 面过孔塞孔，如下图。 No change on bottom side of the PCB. Vias of the EPAD on top side of the PCB are plugged as well.</p>  <p align="center">Top side of the PCB EPAD</p>

5. 变更影响/Impact of Change

1) 品质和性能/Quality & Performance: 无影响/No impact.

a) 双面塞孔模组的芯片推力测试与原有模组无差异;

Bonding test of the chip on double-sided plugged module shows there is no difference compared with the original module.

b) 双面塞孔模组在不同环境温度下运行的发热程度与原有模组无差异。

The double-sided plugged module operating under different ambient temperature shows there is no difference on heat dissipation compared with the original module.

2) 成本/Cost: 无影响/No impact.

3) 交期/Delivery: 无影响/No impact.

4) 生产料号/Material Part Numbers (MPN):

无影响, 客户可用相同料号下单。

No impact. Customer can place orders with the same module part number.

5) 认证/Certification: 无影响/No impact.

6. 变更前后产品处理/How to Deal with Products

先进先出。FIFO

7. 相关报告/Report(s) Attached:

Related ECN No. ECN-2021-032

邮件订阅
Espressif Email Notifications

乐鑫为注册用户提供电子邮件通知服务，用户可通过[乐鑫订阅系统](#)接收技术文档更新、新闻通讯、PCN 等邮件通知。

Espressif sends email notifications of technical documentation changes, along with newsletters, PCNs and other valuable information, to subscribed customers only. If you wish to stay updated on our products and services, please subscribe [here](#).

客户响应要求
Customer Response Requirements
需客户批准的变更/ Change Requiring Customer Approval:

- a) 客户须在乐鑫发出 PCN 后的 30 天内告知乐鑫已收到 PCN。如客户未在接收到 PCN 后的 30 天内告知已收到，则视为客户收到变更。

Customers are requested to acknowledge receipt of the PCN within 30 calendar days from the date of issue of the PCN. Customers would be considered as notified 30 calendar days after issue of the PCN if no acknowledgement is received.

- b) 自发布 PCN 之日起 90 天内，客户没有任何其他反馈，则表示客户接受该 PCN。

The lack of any additional responses from customers within 90 calendar days from date of issue of the PCN constitutes acceptance of the proposed changes.

客户通知/ Customer Notification:

- a) 客户需在乐鑫发出 PCN 后 14 天内通知乐鑫收到该 PCN。如客户未在接收到 PCN 14 日反馈乐鑫，则视为客户确认该 PCN。

Customers are requested to acknowledge receipt of the PCN within 14 calendar days from the date of issue of the PCN. Customers would be considered as having acknowledged the PCN if no response is received after 14 calendar days.

请反馈至 pcn@espressif.com。

Please send feedback to pcn@espressif.com.

客户批准/确认信息
Customer Approval/Acknowledgement and Remarks

客户公司全称:

Customer's Company Name:

PCN 评审结果/PCN Review Result:

- 批准/确认 Accepted/Acknowledged
 不批准/Rejected
 需要分析/Further Analysis Required

客户意见/Comment:

公司代表人姓名
Representative's Name:

公司代表人职责
Representative's Job Title:

公司代表人签名
Representative's Signature:

日期
Date: