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**ESP32-WROOM-32 / ESP32-WROVER / ESP32-WROVER-I / ESP-WROOM-02 BOM 变更**

**BOM Change for ESP32-WROOM-32 / ESP32-WROVER / ESP32-WROVER-I / ESP-WROOM-02**

PCN 编号 PCN No.	PCN-2021-034	提出日期 Issue Date of PCN	2021/12/31
变更日期 Proposed Date of Change	2021/12/31	首次出货日期 Proposed Date of First Shipment	2022/01/31
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-WROOM-32, ESP32-WROVER, ESP32-WROVER-I, ESP-WROOM-02

**2. 变更原因/Reason for Change**

- 1) 村田物料 LQP 系列电感产品计划停产，故段落 1 模组中使用的电感物料切换为村田 LQG 系列电感产品。  
LQP series inductor supplied by Murata is going to be end of life, thus Espressif is going to change the LQP series inductor used in the affected modules to LQG series inductor.
- 2) 为保障更稳定的交付，将段落 1 涉及产品中使用的晶振替换为泰晶 26 MHz（料号：SX32Y026000BA1T）和 40 MHz（料号：SX32Y040000BF1T）。  
To endure a better delivery, Espressif is going to change the crystal material used in the affected modules to TKD crystal(26 MHz PN: SX32Y026000BA1T; 40 MHz PN: SX32Y040000BF1T).

**3. 变更描述/Description of Change**

- 1) 段落 1 中列出的模组产品使用的村田 LQP 系列电感切换为村田 LQG 系列电感；  
LQP series inductor used in the affected modules is going to be replaced by LQG series inductor.
- 2) ESP-WROOM-02 的 BOM 中使用晶振替换为泰晶 26 MHz 晶振（料号：SX32Y026000BA1T）；  
Crystal used in ESP-WROOM-02 is going to be replaced by TKD 26 MHz crystal.(PN: SX32Y026000BA1T).
- 3) ESP32-WROOM-32, ESP32-WROVER, ESP32-WROVER-I 的 BOM 中使用晶振替换为泰晶 40MHz 晶振（料号：SX32Y040000BF1T）。  
Crystal used in ESP32-WROOM-32, ESP32-WROVER, ESP32-WROVER-I is going to be replaced by TKD 40 MHz crystal.(PN: SX32Y040000BF1T).

#### 4. 变更对比/Change Comparison

请见附录 I: 变更对比。

Please refer to Appendix I: Change comparison.

变更前后产品识别方式: 以模组 PW 区分。

You may identify the change by Espressif PW number.

#### 5. 变更影响/Impact of Change

##### 1) 品质和性能/ Quality & Performance:

乐鑫针对村田 LQG 系列电感对段落 1 中列出的模组产品重新进行射频测试, 性能满足乐鑫标准; 在 ESP-WROOM-02 模组上验证了泰晶 26 MHz 晶振 (料号: SX32Y026000BA1T), ESP32-WROOM-32 模组上验证了泰晶 40MHz 晶振 (料号: SX32Y040000BF1T), 性能满足乐鑫标准。

LQG series inductor is tested on the affected modules and verified to meet Espressif RF performance requirements. The TKD 26 MHz crystal (PN: SX32Y026000BA1T) is tested on ESP-WROOM-02 and verified to meet Espressif RF performance requirements. The TKD 40 MHz crystal (PN: SX32Y040000BF1T) is tested on ESP32-WROOM-32 and verified to meet Espressif RF performance requirements.

##### 2) 交期/ Delivery: No impact

##### 3) 生产料号/ Material Part Numbers (MPN): No impact

##### 4) 认证/ Certification:

该变更不影响模组射频性能, 对认证无影响。

The change will not impact the RF performance of the affected modules, thus there is no influence on the certifications.

#### 6. 变更前后产品处理/How to Deal with Products

FIFO

#### 7. 相关报告/Report(s) Attached:

1) Related ECN No.: ECN-2021-043

2) 射频性能验证/ RF Performance Verification: Pass

## Appendix I 变更对比/ Change Comparison

产品名称 Product Name	变更前 Before Change	变更后 After Change
ESP-WROOM-02	C4 = 8.2 pF (GRM1555C1H8R2CA01D) L1 = 2.4 pF (GRM1555C1H2R4CA01D) L2 = 2.7 nH (LQP15MN2N7B02D) U1 = 834A026000-10201000	C4 = 8.2 pF (GRM1555C1H8R2CA01D) L1 = 2.4 pF (GRM1555C1H2R4CA01D) L2 = 2.7 nH (LQG15HS2N7B02D) U1 = SX32Y026000BA1T
ESP32-WROOM-32	C14 = 2.7 nH (LQP15MN2N7B02D) C15 = 2.7 pF (GRM1555C1H2R7BA01D) L4 = 3.3 pF (GRM1555C1H3R3CA01D) U1 = E3SB40E00001BE	C14 = 2.4 nH (LQG15HS2N4B02D) C15 = 2.4 pF (GRM1555C1H2R4BA01D) L4 = 3.3 pF (GRM1555C1H3R3CA01D) U1 = SX32Y040000BF1T
ESP32-WROVER	C14 = 4.7 pF (GRM1555C1H4R7CA01D) C15 = 2.4 pF (GRM1555C1H2R4CA01D) L4 = 3.3 nH (LQP15MN3N3B02D) U1 = E3SB40E00001BE	C14 = 1.5 nH (LQG15HS1N5B02) C15 = 2.2 pF (GRM1555C1H2R2BA01D) L4 = 3.3 pF (GRM1555C1H3R3BA01D) U1 = SX32Y040000BF1T
ESP32-WROVER-I	C14 = 2.7 pF (GRM1555C1H2R7BA01D) C15 = 2.4 pF (GRM1555C1H2R4CA01D) L4 = 3.6 nH (LQP15MN3N6B02D) U1 = E3SB40E00001BE	C14 = 1.5 nH (LQG15HS1N5B02) C15 = 2.2 pF (GRM1555C1H2R2BA01D) L4 = 3.3 pF (GRM1555C1H3R3BA01D) U1 = SX32Y040000BF1T

**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](mailto:pcn@espressif.com)。

Please send feedback to [pcn@espressif.com](mailto: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: