PCN RP2040 Second Source

Raspberry Pi Ltd

2023-03-23: githash: 72372ef-clean

Colophon

© 2020-2022 Raspberry Pi Ltd

build-date: 2023-03-23

build-version: githash: 72372ef-clean

Legal Disclaimer Notice

TECHNICAL AND RELIABILITY DATA FOR RASPBERRY PI PRODUCTS (INCLUDING DATASHEETS) AS MODIFIED FROM TIME TO TIME ("RESOURCES") ARE PROVIDED BY RASPBERRY PI LTD ("RPL") "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN NO EVENT SHALL RPL BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THE RESOURCES, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

RPL reserves the right to make any enhancements, improvements, corrections or any other modifications to the RESOURCES or any products described in them at any time and without further notice.

The RESOURCES are intended for skilled users with suitable levels of design knowledge. Users are solely responsible for their selection and use of the RESOURCES and any application of the products described in them. User agrees to indemnify and hold RPL harmless against all liabilities, costs, damages or other losses arising out of their use of the RESOURCES.

RPL grants users permission to use the RESOURCES solely in conjunction with the Raspberry Pi products. All other use of the RESOURCES is prohibited. No licence is granted to any other RPL or other third party intellectual property right.

HIGH RISK ACTIVITIES. Raspberry Pi products are not designed, manufactured or intended for use in hazardous environments requiring fail safe performance, such as in the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, weapons systems or safety-critical applications (including life support systems and other medical devices), in which the failure of the products could lead directly to death, personal injury or severe physical or environmental damage ("High Risk Activities"). RPL specifically disclaims any express or implied warranty of fitness for High Risk Activities and accepts no liability for use or inclusions of Raspberry Pi products in High Risk Activities.

Raspberry Pi products are provided subject to RPL's Standard Terms. RPL's provision of the RESOURCES does not expand or otherwise modify RPL's Standard Terms including but not limited to the disclaimers and warranties expressed in them.

Legal Disclaimer Notice

Document version history

Release	Date	Description
1.0	16 March 2023	Initial release

Document version history 2

Product Change Note

Notification date

16 March 2023

Title

Notice of the complete qualification of a 2nd assembly source (UNISEM - Malaysia) for the RP2040 IC.

Products Affected

RP2040

Reason for Change

- To meet product demand for RP2040.
- To allow for increased flexibility and security of supply.

Change Description

Raspberry Pi Ltd has qualified an additional assembly source for RP2040 at UNISEM (Malaysia). Qualification has been successfully completed for this site. RP2040 units are sourced from either this or the originally qualified assembly house at ASE (Taiwan).

Mechanical (Form, Fit, Function) Changes

None.

The 2nd source assembled product is built to the current package outline drawing so this has the same dimensions and tolerances as that from the current source.

Moisture Sensitivity Level (MSL), per J-STD-20, matches the current source (i.e. MSL1)

Raspberry Pi Ltd has conducted and completed a full Reliability Qualification of the 2nd source, based on the JEDEC 47 standard.

	Total	Specification	Conditions	Intervals	Batch Results		
	Test				#01	#02	#03
	LIACT	JESD22-A113	MSL1	Preconditioning (MSL1)	Pass	Pass	Pass
	HAST	JESD22-A110	110°C, continuous static bias	264h	Pass	Pass	Pass
	TO	JESD22-A113	MSL1	Preconditioning (MSL1)	Pass	Pass	Pass
	TC	JESD22-A104	-55°C <-> 125°C	700 cycles	Pass	Pass	Pass

Notification date

LITOL	JEODOO 4110	45000	500 hours	Pass	Pass	Pass
HTSL JESD22-A113	150°C	1000 hours	Pass	Pass	Pass	

Electrical

None.

The products electrical specification is unchanged.

Software/Firmware Changes Required

None.

There are no software or firmware changes required for the product.

Transition Date(s)

The first shipping date of 2nd source product is from week starting 20th of November 2021.

After this introduction date RP2040 product may be sourced from either of the qualified assembly sources.

Identification Method to Distinguish Change

Raspberry Pi Ltd will maintain assembly source traceability at the silicon lot level. However, as units from the 2nd source will have an identical IC marking specification, assembly source will not be distinguishable to the end user at the IC level.

County of Origin (COO) indications on the shipping and packing material will indicate "Malaysia" for 2nd source product.

Contact Details for more information

Please contact applications@raspberrypi.com if you have any queries about this PCN.

Web: www.raspberrypi.com

Electrical 4

