SLOVENSKI STANDARD
oSIST prEN IEC 63563-10:2024

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Različica specifikacije Qi 2.0 - 10. del: Specifikacija sistema Mpp (Hitri postopek)

Qi specification version 2.0 - Part 10: Mpp system specification (Fast track)

Ta slovenski standard je istoveten z: **prEN IEC 63563-10:2024**

ICS:

29.240.99	Druga oprema v zvezi z omrežji za prenos in distribucijo električne energije	Other equipment related to power transmission and distribution networks
33.160.99	Druga avdio, video in avdiovizuelna oprema	Other audio, video and audiovisual equipment
35.200	Vmesniška in povezovalna oprema	Interface and interconnection equipment

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COMMITTEE DRAFT FOR VOTE (CDV)

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OF INTEREST TO THE FOLLOWING COMMITTEES: TC 106,TC 108	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY	
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TITLE:

Qi Specification version 2.0 - Part 10: MPP System Specification (Fast track)

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NOTE FROM TC/SC OFFICERS:

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WIRELESS POWER CONSORTIUM

Qi Specification

MPP System Specification

Version 2.0

April 2023

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RELEASE HISTORY

Specification Version	Release Date	Description
2.0	April 2023	First release of this v2.0 specification.

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1 General Description

1.1 Introduction

1.1.1 Scope

This specification defines MPP (Magnetic Power Profile), an extension to Qi v1.3 BPP (Baseline Power Profile). Manufacturers can use this specification to implement PTx and/or PRx that are interoperable.

1.1.2 Document organization

The MPP (Magnetic Power Profile) Specification is organized as these documents:

1. MPP System Specification (this document)
2. MPP Communications Protocol Specification
3. MPP Compliance Test Specification
4. MPP Test Tool Specification

MPP is an extension of the Baseline Power Profile (BPP) and utilizes some (but not all) features defined in the Extended Power Profile (EPP). Where relevant, refer to the Qi v2.0 Specification.

1.1.3 Design goals

Magnetic Power Profile (MPP) is an interface which allows for:

- Never missing the sweet spot - ease of attach through ring of magnets
- Ecosystem of powered and unpowered accessories
- Conveniently using your device while charging
- Delivering high power (15W) safely
- Preventing interference with vehicle key fobs without regulatory issues by operating at 360 kHz
- Compatibility with Qi 2.0 BPP products and maintaining near-parity backward compatibility with Qi 1.x BPP products

Sweet spot

The goal for MPP is to enable a new wireless charging experience for users where they will never miss the charging "sweet spot" and can consistently, efficiently, and safely charge their devices at high power. To achieve accurate alignment between the PTx and PRx coils, a circular array of magnets has been added that surround the coils. The magnetic alignment provides tactile feedback to the user guiding accurate placement even in the case where the user isn't directly looking at the PTx. Conveniently, the magnetic attachment enables users to use their device while it is charging and greatly simplifies docking functionality.

Magnet array

The magnet array has been carefully designed so that it can coexist with the wireless power transfer system to deliver high power transfer at high efficiency. Figure 2.1.3: 1 shows the multipole magnet design that tightly couples strong permanent magnetic fields within the region of the magnet array, keeping most of the strong fields away from the magnetic shielding material of the power transfer coils.

Because of the consistent accurate alignment, the magnetic state-space that the system must be designed to work across is reduced. Figure 2.1.3: 2 shows data from a study where 99.9% of placements aligned the PTx and PRx within a 2mm radius [1]. By reducing the state-space, the design of features like foreign object detection is simplified.

[1] The placement study used a case with integrated magnets as shown in Figure 2.1.3: **Error! Main Document Only.**