

Last Modified: 12-04-2024	6.11:8.1.0	Doc ID: RM100000002A2JL
Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: POWER OUTLETS (INT): WIRELESS CHARGING SYSTEM: SYSTEM DESCRIPTION; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

SYSTEM DESCRIPTION

WIRELESS CHARGER FUNCTION OUTLINE

(a) The wireless charging system enables Qi-compatible* smartphones to be recharged by merely placing it on the charging area of the mobile wireless charger cradle assembly.

HINT:

*: Qi (pronounced chee) is a wireless technology which allows devices to recharge without using any wires.

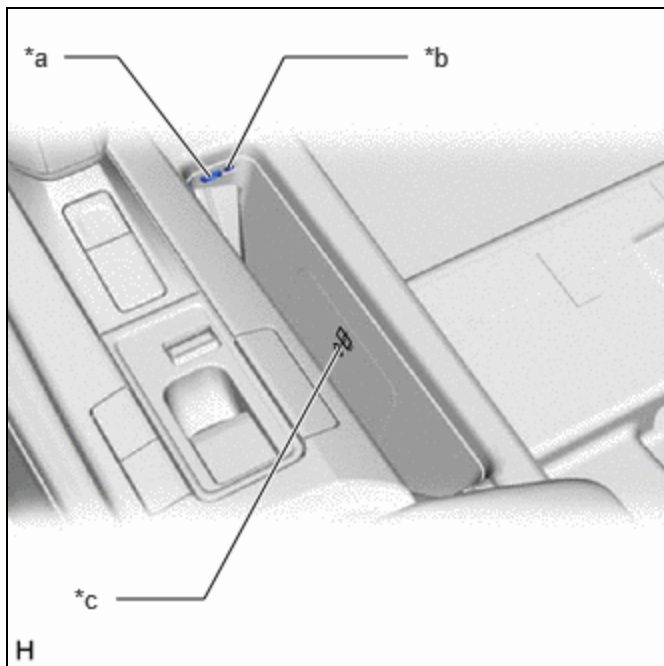
(b) Smartphones which do not fit within the charging area cannot be used. If a Qi-compatible smartphone does not operate normally, refer to the owner's manual of the device.

(c) Qi-compatible smartphones can be charged.

HINT:

- "Qi" and "Qi" logo are trademarks of the Wireless Power Consortium (WPC).
- Although the wireless charging system meets Qi standards, compatibility with all Qi-compatible devices is not guaranteed.

OPERATION INDICATOR LIGHT STATUS

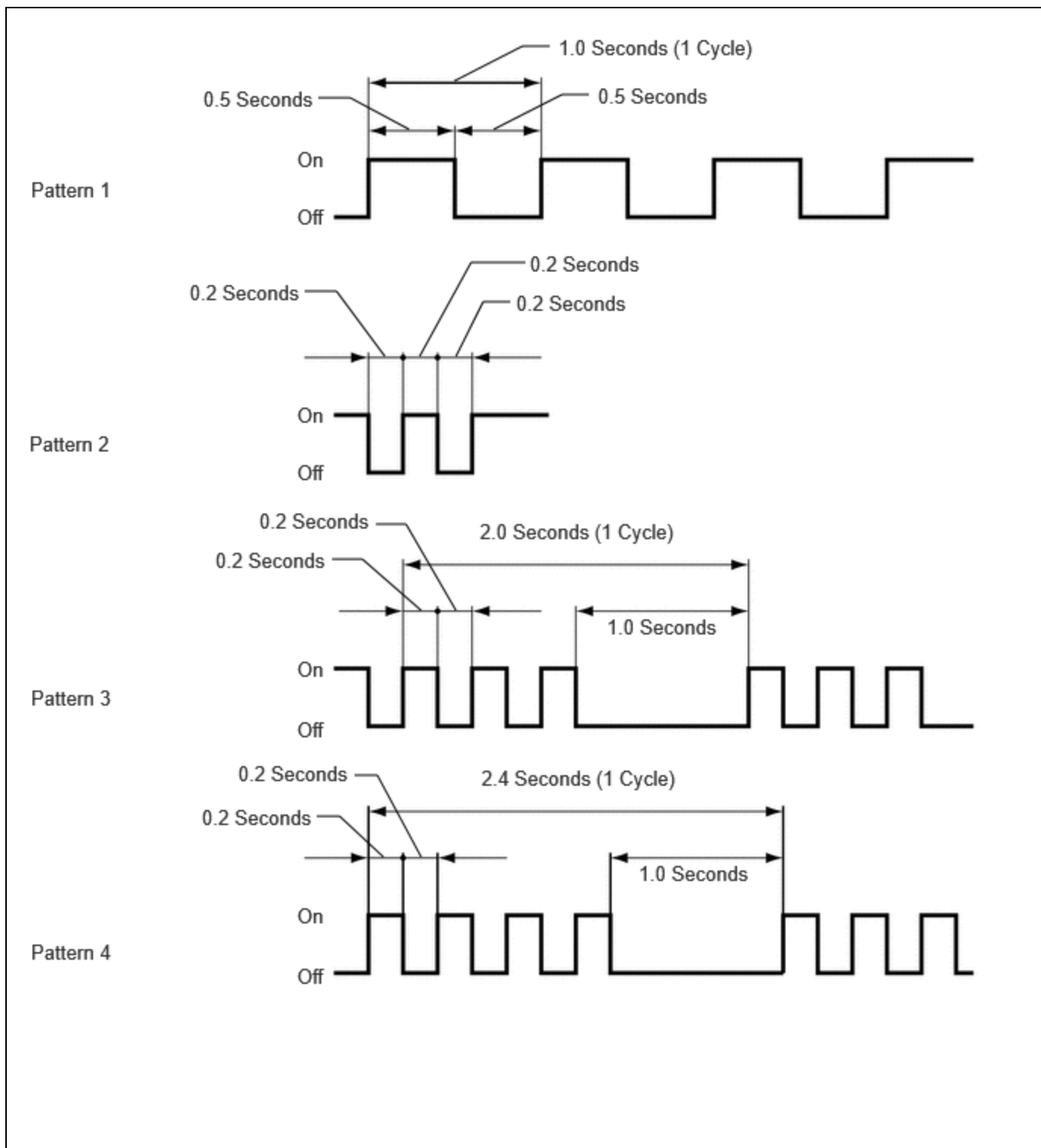


*a	Power Supply Switch
*b	Operation Indicator Light (Green/Amber)
*c	Charging Area

(a) The operation indicator light shows the operation condition of the wireless charging system.

OPERATION INDICATOR		OPERATION CONDITION
CONDITION	COLOR	
Off	-	Wireless charging system is turned off
On	Green	<ul style="list-style-type: none"> Wireless charging system is on (stand-by) Charging is complete*1 Charging is temporarily stopped
On	Amber	<ul style="list-style-type: none"> A smartphone is placed on the charging area A smartphone is being charged
Blinks (Pattern 1)*2	Amber	An open in the charging suspension signal circuit is detected
Blinks (Pattern 2)*2	Amber	The charging frequency is being changed
Blinks (Pattern 3)*2	Amber	<ul style="list-style-type: none"> A foreign object with a thickness of 2 mm (0.079 in.) or more between the charging area and smartphone is detected A gap of 2 mm (0.079 in.) or more between the charging area and smartphone is detected The smartphone is not placed correctly on the charging area It is detected that the smartphone has been moved from the location where it was first placed when charging started
Blinks (Pattern 4)*2	Amber	<ul style="list-style-type: none"> The temperature of the mobile wireless charger cradle assembly is abnormally high An abnormal current or voltage is detected The power supply switch is stuck
<p>*1: Some smartphone, cases or accessories may not cause the indicator (green) to illuminate when charging is complete, even though they are Qi-compatible. Check the smartphone to confirm the charge status.</p> <p>*2: Refer to the following diagram for details about the indicator blinking patterns.</p>		

Operation Indicator Light Blinking Pattern



RESUMPTION OF CHARGING

- After charging is complete, if the smartphone is left in the same position on the charging area, charging will resume after 30 minutes elapse.
- Charging will resume if the smartphone is moved or repositioned within the charging area, or replaced with another smartphone within 30 minutes of charging being completed.
- If the smartphone is moved while it is being charged, charging will resume when the smartphone is placed on the charging area.

SUSPENSION OF CHARGING DUE TO VERIFICATION OF ELECTRICAL KEY TRANSMITTER SUB-ASSEMBLY

(a) The wireless charging system uses the same radio wave frequency that is used to perform verification of the electrical key transmitter sub-assembly. Therefore, when the electrical key transmitter sub-assembly verification is being performed, the certification ECU (smart key ECU assembly) sends a charging suspension signal to the wireless charging system to suspend charging.

HINT:

- When charging is suspended due to the charging suspension signal, the indicator (green) will illuminate.
- If there is an open in the charging suspension signal circuit, the indicator (amber) will blink (pattern 2).

(b) The certification ECU (smart key ECU assembly) sends the charging suspension signal when any of the following conditions is met:

- Opening/closing the doors
- Pressing the back door opener switch assembly
- Closing the back door
- Starting the hybrid system
- Moving the electrical key transmitter sub-assembly out of the detection area

CHARGING FREQUENCY SWITCHING FUNCTION

(a) If noise is generated in the AM radio during charging, turn the wireless charging system off and check if the noise is reduced. If the noise is reduced, press and hold the mobile wireless charging switch for approximately 2 seconds to change the charging frequency and reduce the noise.

HINT:

When the charging frequency is being changed, the operation indicator light (amber) blinks (pattern 2).

