

Exhibit 6: Claim Chart Showing Infringement of U.S. Patent No. 10,027,184 by the InductEV Charger

The InductEV wireless power charging system (“InductEV Charger”) directly or indirectly infringes U.S. Patent No. 10,027,184 (the “’184 Patent”) at least because the InductEV Charger has the wireless power transfer capabilities and functionalities as claimed in the ’184 Patent. The InductEV Charger is representative of certain other InductEV products at least because other InductEV products function in the same or substantially similar manner to the InductEV Charger. WiTricity contends each of the following limitations is met literally, and, to the extent a limitation is not met literally, it is met under the doctrine of equivalents. The following references are cited to in the claim chart below:¹

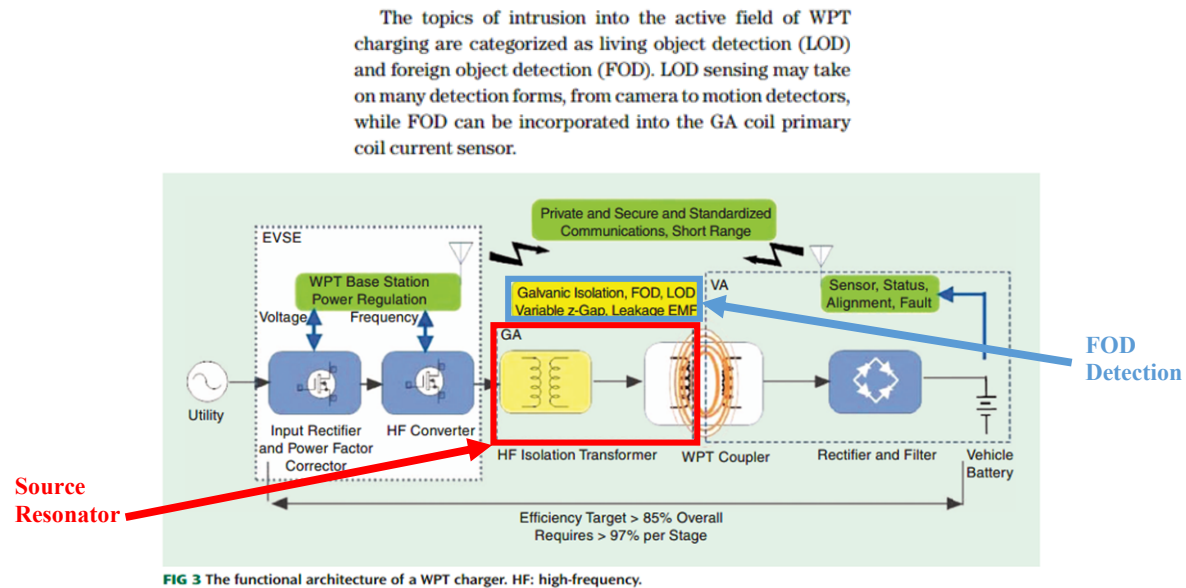
- Andrew Daga et al., *Electric Fuel Pumps for Wireless Power Transfer*, IEEE POWER ELEC. MAG. (June 2017) (“Electric Fuel Article”).
- Simon Smith, *Wireless charging – automatic power for the people*, AUTOMOTIVEEV MAG. (last visited Mar. 13, 20203), <https://magazine.automotiveev.com/issue3/andy-daga-momentum-dynamics.php> (“Wireless Charging Article”).
- Peter Schrafel et al., *Testing and Assessment of the EMFs and Touch Currents from 25-kW IPT System for Medium-Duty EVs*, IEEE VEHICULAR TECH. (June 24, 2019) (“EMF Article”).
- INDUCTEV, <https://www.inductev.com/ai-software> (last visited Mar. 13, 2023) (“InductEV Website”).
- Momentum Dynamics Corp.’s Martha’s Vineyard Transit Authority Wireless In-route Vehicle Charging System Proposal (Sept. 6, 2018) (on file with the Martha’s Vineyard Transit Authority (VTA)) (“VTA Proposal”).
- Bruce Long, *Alignment and Communication Systems for Wireless Power* (Hybrid & Electric Vehicle Technology Collaboration Programme, 2017) (“HEV TCP Presentation”).
- Bjørn Nyland, *Jaguar I-Pace with Momentum Dynamics inductive charging retrofit*, YouTube (Nov. 13, 2021), <https://www.youtube.com/watch?v=aq7SP18sPKw> (“Jaguar Video”).
- Bjørn Nyland, *Interview with Momentum Dynamics about wireless charging*, YouTube (Nov. 14, 2021), <https://www.youtube.com/watch?v=9IoPA0rq0yw> (“Interview Video”).
- Momentum Dynamics Corp. Proposal for City of Albuquerque Transit Department (ABQ RIDE) Electric Bus Inductive Charging Program 200 kW Program (Feb. 28, 2016) (on file with the City of Albuquerque) (“ABQ Proposal”).
- Photos taken of Indianapolis Public Transportation Corp.’s, “IndyGo Rapid,” public buses wirelessly charging in Indianapolis, Indiana (“IndyGo Photos”).

U.S. Patent No. 10,027,184	Description of Infringement
Independent Claim 16	
16. A method of detecting foreign object debris in a	To the extent the preamble is limiting, the InductEV Charger detects foreign object debris in a wireless energy transfer system.

¹ This claim chart is based on the information currently available to WiTricity and is intended to be exemplary in nature. WiTricity reserves all rights to update and elaborate its infringement positions, including as WiTricity obtains additional information during the course of discovery.

wireless energy transfer system, the method comprising:

See, for example, the Electric Fuel Article, written by the InductEV CEO, which describes the types of foreign object debris (FOD) detection mechanism used by the InductEV Charger and schematically illustrates how FOD detection is implemented.



See also, for example, the Wireless Charging Article where the InductEV CEO describes the functionality of the InductEV Charger FOD detection mechanism.

"The wireless charging technology is the same as is used in transformers, kitchen induction hobs and in industry to heat and treat metals, all used in close proximity to humans without any protection at all being needed." People will still need reassurance that charging 'plates' in the road surface will be safe though, and Andy says that they do build-in 'interrupts' to their systems. "As part of an industry standard, to answer this perceived risk - and I emphasise perceived - the plate is set to only be energised when in use, and it also looks for the presence of a living organism and it will not switch on, and will switch off, if it detects a human, dog, cat or even a bird on the plate. It will also turn off if a coin or other piece of metal enters the charging field."

performing a health and/or status check of a source

The InductEV Charger, based on information and belief, performs a health and/or status check of a source resonator of the wireless energy transfer system.

resonator of the wireless energy transfer system;

See, for example, the EMF Article, written by InductEV's chief product officer and chief scientist, which illustrates the InductEV Charger source resonator.

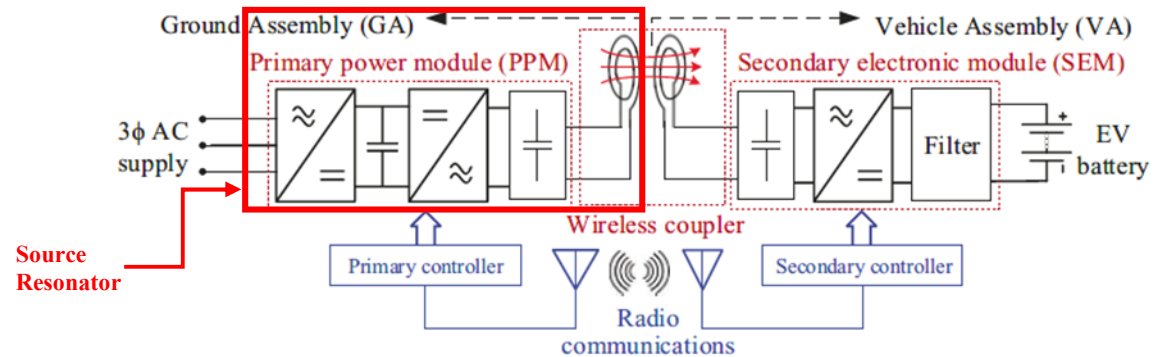


Fig. 1: Schematic diagram of IPT system from Momentum Dynamics.

See also, for example, the InductEV Website which describes the health and status check functionality of the InductEV Charger on the source resonator (ground-based charging hardware).

01	Diagnostics	Real-time network insights and charging data analysis for continuous monitoring and alerts to maintain uptime and network resiliency
02	Telematics	Continuous sensor telematics from ground-based charging hardware and vehicle-based systems to monitor fleets, infrastructure assets, and energy consumption
03	Analysis	Predictive maintenance dashboard with advanced hardware and software and data science for clear charging optimization. Our solution provides vehicle and charger level data for enhanced performance monitoring.

See also, for example, the VTA Proposal, submitted by InductEV, which describes how the InductEV Charger implements health and status checks on the source resonator.

	<p>d. During charging, a number of safety conditions are constantly monitored to assure safe operation including voltage, current and temperature monitoring. The system turns itself off if a fault condition is encountered and the default state of the system is off. Multiple safeguards are designed into the system to prevent operation if an unsafe condition should arise.</p> <p>See also, for example, the ABQ Proposal, submitted by InductEV, which describes how the InductEV Charger implements health and status checks on the source resonator.</p> <p>d. The system turns itself off if a fault condition is encountered. The default condition is off. Multiple safeguards are designed into the system to prevent operation if an unsafe condition should arise.</p> <p>See also, for example, the HEV TCP Presentation given by InductEV's VP of electrical engineering, which describes how the InductEV Charger communication system functionality performs health and status checks on the source resonator.</p> <ul style="list-style-type: none"> • Record system performance monitoring and charger status and allow remote monitoring of charging via remote access (e.g., smartphone applications). • Off load vehicle state of health and operator driving behavior information.
verifying that no foreign object debris has moved onto or over the source resonator;	<p>The InductEV Charger, based on information and belief, verifies that no foreign object debris has moved onto or over the source resonator.</p> <p>See, for example, the Electric Fuel Article, written by the InductEV CEO, which illustrates how the FOD detection mechanism of the InductEV Charger verifies no FOD has moved onto or over the source resonator.</p> <p>The topics of intrusion into the active field of WPT charging are categorized as living object detection (LOD) and foreign object detection (FOD). LOD sensing may take on many detection forms, from camera to motion detectors, while FOD can be incorporated into the GA coil primary coil current sensor.</p>

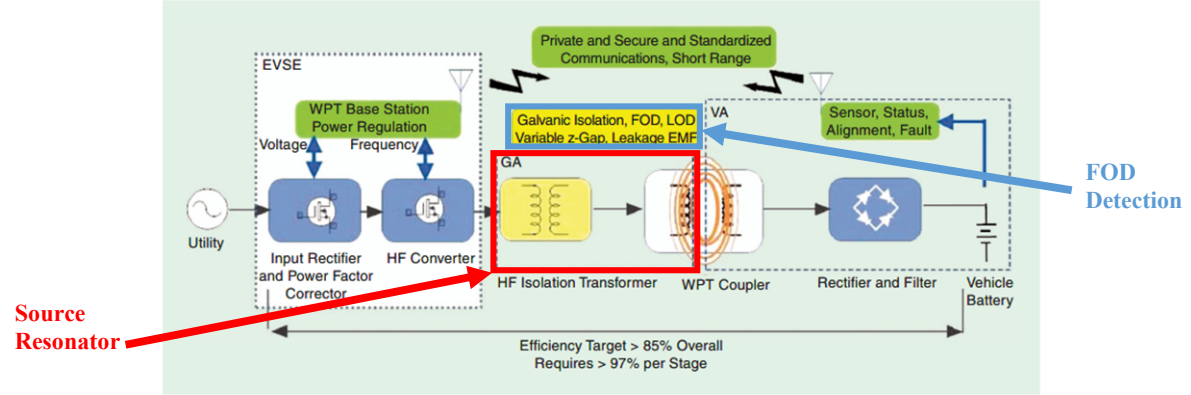


FIG 3 The functional architecture of a WPT charger. HF: high-frequency.

See also, for example, the Jaguar Video where InductEV's senior wireless charging consultant demonstrates how the InductEV Charger FOD detection mechanism verifies that no FOD has moved onto or over the source resonator.



8:52	and then i want to check out what it	9:16	an event of say like a coke can or
8:54	looks like under here	9:19	something that would
8:56	uh so gabriel can you tell me what's	9:20	roll under the pads
8:59	what's the stuff here	9:22	they will heat up
9:01	extra so what we see here in the front	9:24	and the system would shut off
9:03	uh this one and that one	9:25	immediately before it gets too hot
9:06	it's called the foreign object detection	9:28	or an animal
9:08	food so it's a thermal cameras	9:29	yeah or an animal i mean people think a
9:11	that uh measuring if there is anything	9:32	cat would go through and
9:14	heating up on the pad	9:33	it will fry it like a microwave or
9:16	an event of say like a coke can or	9:35	something like that it's not true at all
		9:37	nothing will happen
		9:38	but
		9:39	a metal object it will heat up so that's
		9:41	why we need to shut off the system as
		9:44	soon as possible but does this mean that
		9:46	the ground clearance has been reduced
		9:49	a bit

See also, for example, the Interview Video with InductEV's commercial director where he describes how the FOD detection mechanism of the InductEV Charger verifies that no FOD has moved onto or over the source resonator.

10:57	moving parts means maintenance means where means lifetime costs	11:41	phone if we didn't turn off our charger yes it would heat up the phone okay but will it will it ruin the phone before it
11:02	our street embedded wireless charger requires next to no servicing it will	11:48	turns off yes okay okay so you don't want to do that so don't do that so yeah so so but we would detect any metal
11:07	sit there in the ground for 15 years impervious to everything and will charge through water ice rain	11:54	object detection we would detect and then we kill the magnetic field to protect from it so we're constantly
11:14	snow mud squirrels and cats if i put my hand in there is anything	11:59	monitoring that magnetic field any interruption whatsoever we obviously protect from the field well okay yeah by
11:20	gonna happen no so the magnetic field doesn't interfere with biological material in any way shape or form	12:07	the way okay so if your hand what about if your hand has a clock and a ring
11:27	we have foreign object detection to control if anything does get in the way so for example if i put my phone	12:12	anything metal will heat anything metal will cause a problem it would be detected so if it disrupts the magnetic field we
11:33	so a metal object would be a problem but we have metal object detection and we would kill the feed what will it fry the	12:20	can detect that the field is disrupted and again we would shut off so yeah if you put my hand and watch
		12:26	yes we would detect it and we would stop the feed but

	<p>See also, for example, the Wireless Charging Article where the InductEV CEO describes how the FOD detection mechanism of the InductEV Charger verifies that no FOD has moved onto or over the source resonator.</p> <p>"The wireless charging technology is the same as is used in transformers, kitchen induction hobs and in industry to heat and treat metals, all used in close proximity to humans without any protection at all being needed." People will still need reassurance that charging 'plates' in the road surface will be safe though, and Andy says that they do build-in 'interrupts' to their systems. "As part of an industry standard, to answer this perceived risk - and I emphasise perceived - the plate is set to only be energised when in use, and it also looks for the presence of a living organism and it will not switch on, and will switch off, if it detects a human, dog, cat or even a bird on the plate. It will also turn off if a coin or other piece of metal enters the charging field."</p>
<p>positioning a vehicle over the source resonator;</p>	<p>The InductEV Charger positions a vehicle over the source resonator.</p> <p>See, for example, the EMF Article, written by InductEV's chief product officer and chief scientist, which illustrates how the InductEV Charger operates by positioning a vehicle over the InductEV ground pad (source resonator).</p>  <p>Fig. 2: The final installation of wireless charger at NREL's campus.</p> <p>See also, for example, the Electric Fuel Article, written by the InductEV CEO, which illustrates how the InductEV Charger operates by positioning a vehicle over the InductEV ground pad (source resonator).</p>

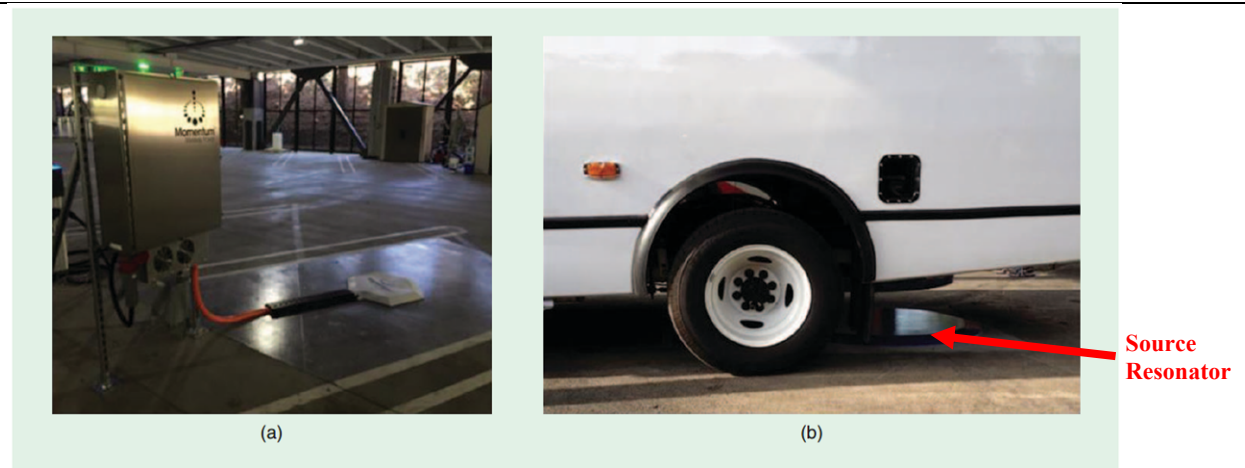


FIG 1 (a) A commercial 25-kW GA (later updated to 50 kW) with a 32-in floor plate for an autonomous vehicle charging prototype unit and (b) a charging shuttle bus with a 310-mm z-gap. (Photos courtesy of Momentum Dynamics.)

See also, for example, the IndyGo Photos, that display the IndyGo bus positioning its vehicle pad over the source resonator of the InductEV Charger and parking for wirelessly charging.



verifying that no foreign object debris has moved onto or over the source resonator;

The InductEV Charger, based on information and belief, verifies that no foreign object debris has moved onto or over the source resonator.

See, for example, the Electric Fuel Article, written by the InductEV CEO, which illustrates how the InductEV Charger FOD detection mechanism verifies no FOD has moved onto or over the source resonator.

The topics of intrusion into the active field of WPT charging are categorized as living object detection (LOD) and foreign object detection (FOD). LOD sensing may take on many detection forms, from camera to motion detectors, while FOD can be incorporated into the GA coil primary coil current sensor.

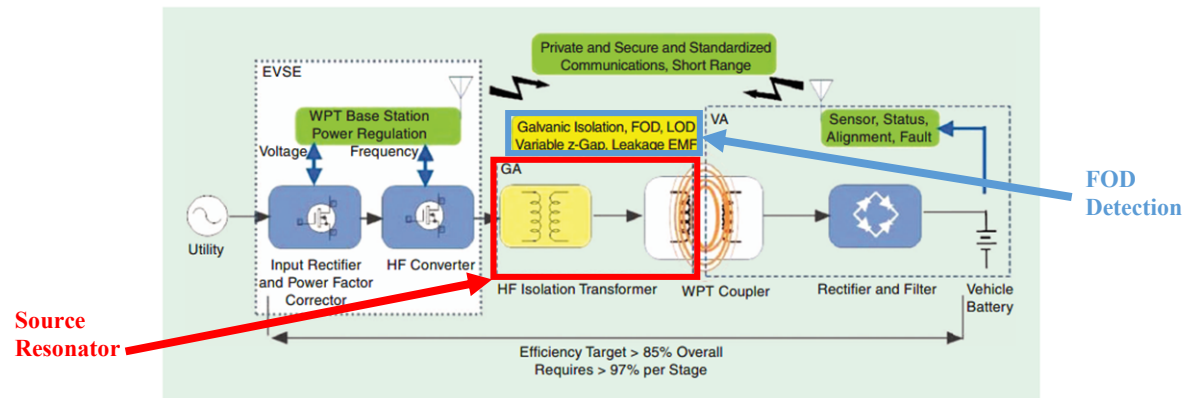


FIG 3 The functional architecture of a WPT charger. HF: high-frequency.

See also, for example, the Jaguar Video where InductEV's senior wireless charging consultant demonstrates how the InductEV Charger FOD detection mechanism verifies that no FOD has moved onto or over the source resonator.

FOD Sensor

Resonator



8:52 and then i want to check out what it

8:54 looks like under here

8:56 uh so gabriel can you tell me what's

8:59 what's the stuff here

9:01 extra so what we see here in the front

9:03 uh this one and that one

9:06 it's called the foreign object detection

9:08 food so it's a thermal cameras

9:11 that uh measuring if there is anything

9:14 heating up on the pad

9:16 an event of say like a coke can or

9:16 an event of say like a coke can or

9:19 something that would

9:20 roll under the pads

9:22 they will heat up

9:24 and the system would shut off

9:25 immediately before it gets too hot

9:28 or an animal

9:29 yeah or an animal i mean people think a

9:32 cat would go through and

9:33 it will fry it like a microwave or

9:35 something like that it's not true at all

9:37 nothing will happen

9:38 but

9:39 a metal object it will heat up so that's

9:41 why we need to shut off the system as

9:44 soon as possible but does this mean that

9:46 the ground clearance has been reduced

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See also, for example, the Interview Video with InductEV's commercial director where he describes how the FOD detection mechanism of the InductEV Charger verifies that no FOD has moved onto or over the source resonator.

	<div> <div>10:57 moving parts means maintenance means where means lifetime costs</div> <div>11:02 our street embedded wireless charger requires next to no servicing it will</div> <div>11:07 sit there in the ground for 15 years impervious to everything and will charge through water ice rain</div> <div>11:14 snow mud squirrels and cats if i put my hand in there is anything</div> <div>11:20 gonna happen no so the magnetic field doesn't interfere with biological material in any way shape or form</div> <div>11:27 we have foreign object detection to control if anything does get in the way so for example if i put my phone</div> <div>11:33 so a metal object would be a problem but we have metal object detection and we would kill the feed what will it fry the</div> <div>11:41 phone if we didn't turn off our charger yes it would heat up the phone okay but will it will it ruin the phone before it</div> <div>11:48 turns off yes okay okay so you don't want to do that so don't do that so yeah so so but we would detect any metal</div> <div>11:54 object detection we would detect and then we kill the magnetic field to protect from it so we're constantly</div> <div>11:59 monitoring that magnetic field any interruption whatsoever we obviously protect from the field well okay yeah by</div> <div>12:07 the way okay so if your hand what about if your hand has a clock and a ring</div> <div>12:12 anything metal will heat anything metal will cause a problem it would be detected so if it disrupts the magnetic field we</div> <div>12:20 can detect that the field is disrupted and again we would shut off so yeah if you put my hand and watch</div> <div>12:26 yes we would detect it and we would stop the feed but</div> </div> <p>See also, for example, the Wireless Charging Article where the InductEV CEO describes how the FOD detection mechanism of the InductEV Charger verifies that no FOD has moved onto or over the source resonator.</p> <div> <p>"The wireless charging technology is the same as is used in transformers, kitchen induction hobs and in industry to heat and treat metals, all used in close proximity to humans without any protection at all being needed." People will still need reassurance that charging 'plates' in the road surface will be safe though, and Andy says that they do build-in 'interrupts' to their systems. "As part of an industry standard, to answer this perceived risk - and I emphasise perceived - the plate is set to only be energised when in use, and it also looks for the presence of a living organism and it will not switch on, and will switch off, if it detects a human, dog, cat or even a bird on the plate. It will also turn off if a coin or other piece of metal enters the charging field."</p> </div>
generating an oscillating magnetic field using the source resonator to transfer energy wirelessly to the vehicle to charge a battery of the vehicle; and	<p>The InductEV Charger generates an oscillating magnetic field using the source resonator to transfer energy wirelessly to the vehicle to charge a battery of the vehicle.</p> <p>See, for example, the Electric Fuel Article, written by InductEV's CEO, which illustrates how the InductEV Charger uses an oscillating magnetic field of its source resonator to transfer energy wirelessly to a vehicle battery.</p>

2016. In truth, these systems are inductive; however, resonant induction systems rely on tuning (compensation) capacitors to resonate both GA and VA at, or near, the operating frequency. This is done to build a magnetic field of sufficient strength to support power transfer from GA to VA with high efficiency. To clarify, all high-power wireless power vehicle chargers are inductive systems that are resonated, and the distinction between induction and magnetic resonance is meaningless in this context.

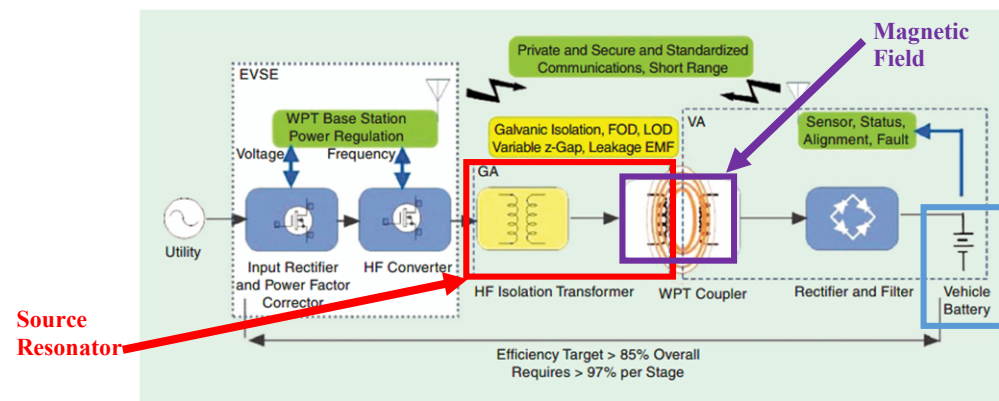


FIG 3 The functional architecture of a WPT charger. HF: high-frequency.

verifying that no foreign object debris has moved onto or over the source resonator during the transfer of energy.

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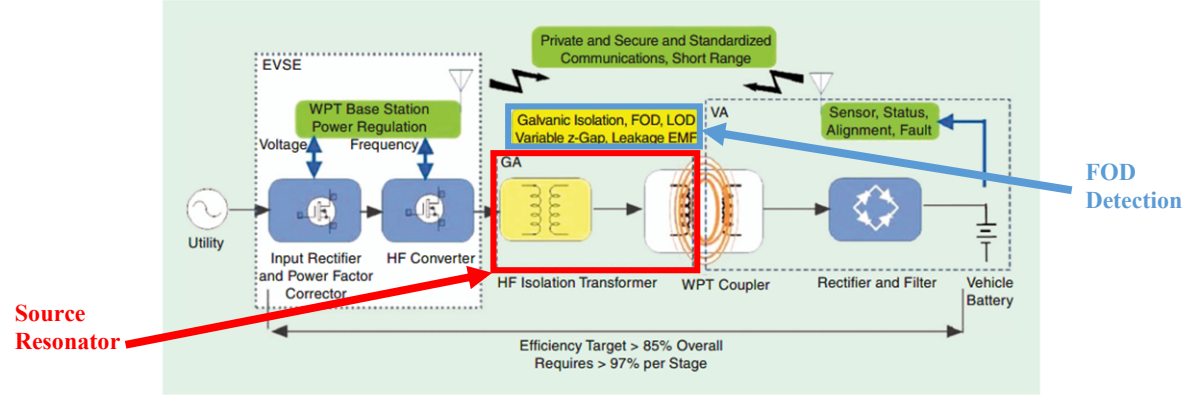


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