

PowerLife™ Standard and Custom Wireless Power Coils with NuCurrent® Technology



Combining the highest power transfer efficiency (Q) with industry-leading thin design, PowerLife™ Standard and Custom Wireless Power Coils with NuCurrent® Technology, support low, high and proprietary frequencies

Features and Benefits

Industry's highest power transfer efficiency (Q) factor

Generates low heat (electrical series resistance), resulting in faster charging

Low, high and proprietary frequencies in industry-leading thin design

Creates compact coil ideal for a broad range of applications in a variety of industries. Supports space-constrained devices

Off-the-shelf transmitters and receivers available with single and multiple frequencies

Delivers quick availability for engineering evaluation and fast-to-market solutions

Customizable form factor available

Achieves high Q with the smallest X, Y and Z dimensions in the market. Available in virtually any shape needed to fit the end-user's device

Coils produced on standard PCB or Copper Flex

Withstands environments with high vibration, heat and humidity. Enables design flexibility. Provides mechanical simplicity over wire-wound coils. Offers a cost-effective solution

Able to accommodate multiple-frequency functionality in one thin assembly (e.g., low- and high-frequency Rx on one PCB)

Enables OEMs to offer compatibility across multiple frequencies (future-proof designs). Lowers cost by reducing component count and providing reliability with standard manufacturing processes. Delivers optimal end-user experience

Applications

Consumer Electronics

- Smartphones
- Wearable Technology
- Smartphone Accessories
 - Bluetooth Headsets
 - Phone Cases
- Personal Computers (Both as Tx and Rx)
- PC Peripherals
 - External Hard Drives
 - Mice, Keyboards, Headsets
- Digital Cameras
- Gaming Systems
- Low-Power Appliances
- Furniture (Embedded TX; +NFC available)

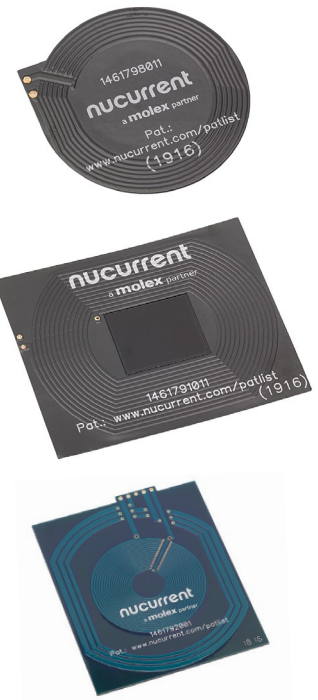
Automotive (In-Vehicle Networking)

- Embedded Tx in Center Console (+NFC Available)

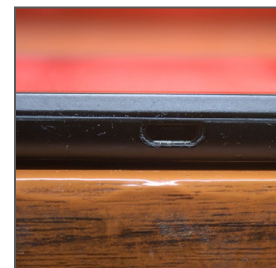
Medical

- Portable Units
- Hearing Aids
- Implantable Devices

Industrial



High-Efficiency/Thin PowerLife™ Standard and Custom Wireless Power Coils with NuCurrent® Technology for Wearable Devices



Furniture with wireless power: PowerLife™ Standard and Custom Wireless Power Coils with NuCurrent® Technology, enable wireless charging through a wood surface

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Specifications

REFERENCE INFORMATION

Packaging: PET Film except 1461794011 packaged in trays

Designed in: Millimeters

RoHS: Yes

Halogen Free: Yes

ELECTRICAL

	Frequency	Inductance +/-2% (uH)	DCR (Direct Current Resistance) +/-2% (mOhm)	ESR (Equivalent Series Resistance) +/-2% (mOhm)	End-to-End Efficiency (%)
10W Rx Coil for Low Frequency	100 to 300 kHz	@ 200kHz: 16.3	480	860	>70
Low-Frequency Wearable Coil		@ 200kHz: Transmit 6.7 Receive 10.0	Transmit 130; Receive 400	Transmit 180; Receive 650	
5W Rx Coil for Low Frequency, Dual +NFC		@ 200kHz: 9.2	270	500	
5W Rx Coil for Low Frequency, Dual Mode		@ 200kHz: 8.9	275	500	
5W Rx Coil for Low Frequency, Dual Mode		@ 200kHz: 11.4	290	600	
High-Frequency Wearable Coil	6.78 MHz	@ 1V 8.2mA: 3.6	225	1690	>40
High-Frequency Wearable Coil		@ 1V 8.2mA: 2.3	80	1200	>25
5W Rx Coil for High Frequency		@ 1V 8.2mA: 2.9	80	890	>60
Trimode Rx Coil	100kHz 200kHz 6.78 MHz	@ 1V 8.2mA: 8.5 @ 1V 8.2mA: 8.5 @ 1V 8.2mA: 1.6	190 190 45	290 460 860	>70 >70 >60

PHYSICAL

	Coil Thickness (mm)	Dimensions +/- .20 mm	Assembly Thickness with Shield (mm)	Material
10W Rx Coil for Low Frequency	0.24	Width: 50.0 Length: 43.0	0.49	Flex
Low-Frequency Wearable Coil	Transmit 0.95 Receive 0.24	T-Diameter: 25.7 R-Diameter: 25.1	Transmit 3.70 Receive 0.49	Transmit — Wire Receive — Flex
5W Rx Coil for Low Frequency, Dual Mode +NFC	0.24	Width: 48.4 Length: 65.5	0.52	Flex
5W Rx Coil for Low Frequency, Dual Mode		Width: 47.0 Length: 40.0	0.52	
5W RX Coil for Low Frequency, Dual Mode		Width: 31.0 Length: 43.0	0.48	
High-Frequency Wearable Coil		Diameter: 26.5	0.48	
High-Frequency Wearable Coil		Diameter: 35.02	0.59	
5W Rx Coil for High Frequency	0.60	Width: 72.75 Length: 56.80	0.95	FR4
Trimode Rx Coil	1.05	Width: 53.60 Length: 64.70	1.40	

Ordering Table

Assembly No.	Coil Type	Frequency	Size
1461790001	Receiver	Low	A
1461791001	Receiver	Low / Dual	B
1461791011	Receiver	Low / Dual	A
1461792001	Receiver	Tri-Mode	B
1461794001	Receiver	Low / Dual +NFC	B
1461794011	Receiver / Transmitter	Low, Wearable	Rx: A; Tx: Custom
1461798001	Receiver	High, Phone	A
1461798011	Receiver	High, Wearable	A
1461798021	Receiver	High, Wearable	B

Custom Product	Description
Contact Molex	Wireless Power Coils

www.molex.com/link/powerlifewirelesscoils.html