

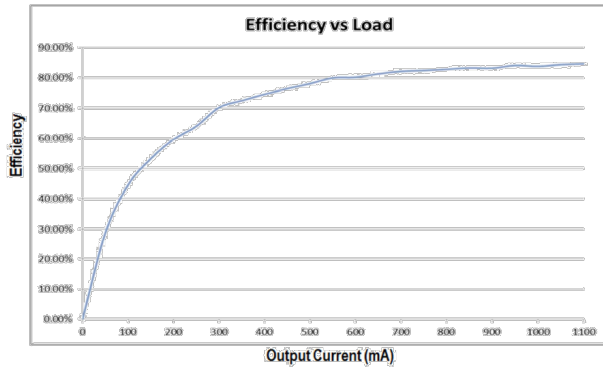
20W DUAL MODE RX WIRELESS CHARGING COIL

For use in the SEMTECH LINKCHARGE™ 20 TSDMRX-19V20W-EVM reference design

Abrakon's AWCCA-RX350300-101 wireless charging coil is optimized to meet the requirements of Semtech's LinkCharge™ 20 TSDMRX-19V20W-EVM reference design board.

As part of Semtech's complete wireless charging solution delivering up to 85% efficiency at 20W, this coil implements the receive side of the wireless charging solution. Designed for compact applications, it features a 35mm diameter achieving a high power density with low profile 3.15mm max height.

UP TO 85% EFFICIENT POWER TRANSFER



- High efficiency
- Reduces heat dissipation
- Minimizes battery charge time



PART NUMBER	INDUCTANCE	DC RESISTANCE	Q
AWCCA-RX350300-101	25µH±10%	<150mΩ Typ	90 Typ
Test Condition	100KHz / 1V	20±15°C	100KHz/1V
Test Equipment	HP4284A, HP42841A, Agilent 34420A or equivalent		
Test Environment	Temperature: 20±15°C, RH: 65% ±20%.		

THE WIRELESS ADVANTAGE

Green, safe, and convenient for both designers and consumers, wireless charging is rapidly expanding throughout the consumer electronics industry. With technology standards still in their infancy, however, the high power market has gone under served and under researched with standards barely reaching 15 watts.

Abrakon has directly addressed the need for improved high power solutions by offering a wide variety of off-the-shelf RX and TX coils across all major distributors. Benefits include fully enclosed devices that resist moisture, the elimination of contact failures for power connectors, and fast and efficient power transfer rates. Abrakon's coils are compatible with Qi solutions.

STANDARD WIRELESS CHARGING COILS

PART NUMBER	TYPICAL DIMENSIONS (mm)	MAX HEIGHT (mm)	TYPE RATIO	FUNCTION (TX OR RX)	INDUCTANCE (µH)	DC RESISTANCE (mΩ)
AWCCA-15N15H06-C01-B	∅ 15	0.7	1 Coil, 1 Layer	TX/RX	14.9µH±10	1.0Ω±20%
AWCCA-20N20H20-C01-B	∅20.0	2.5	1 Coil, 1 Layer	TX/RX	6.3µH±10	150Ω
AWCCA-20R20H08-C01-B	20 x 20	1.2	1 Coil, 1 Layer	RX	12µH±10%	290Ω±20%
AWCCA-28R15H08-C01-B	28 x 15	1.0	1 Coil, 1 Layer	RX	7.5µH±10%	500Ω±20%
AWCCA-30N30H20-C01-B	∅ 30	2.2	1 Coil, 1 Layer	RX	6.3µH±10%	140Ω±20%
AWCCA-30R30H05-C01-B	∅ 30	0.5	1 Coil, 1 Layer	RX	29.5µH±10%	1.8Ω±20%
AWCCA-37R37H18-C01-B	∅ 37	2.0	1 Coil, 1 Layer	RX	29.5µH±10%	1.8Ω±20%
AWCCA-38R32H09-C01-B	38 x 32	1.0	1 Coil, 1 Layer	RX	11.1µH	250±20%
AWCCA-48R32H11-C01-B	48 x 32	1.2	1 Coil, 1 Layer	RX	10.5µH	190±20%
AWCCA-53N53H50-C01-B	53 x 53	5.5	1 Coil, 1 Layer	TX/RX	24µH	72±20%
AWCCA-53N53H50-C02-B	53 x 53	5.5	1 Coil, 1 Layer	TX/RX	6.3µH	72±20%
AWCCA-42R38H08-C03-B	42 x 38	0.9	1 Coil, 1 Layer	RX	12µH	350 mΩ max
AWCCA-26R26H08-C01-B	∅26	0.9	1 Coil, 1 Layer	RX	10µH	320 ±20% mΩ
AWCCA-36R36H08-C51-B	36 x 36	0.8	1 Coil, 1 Layer	RX	12µH	350 mΩ max
AWCCA-98T56H38-C01-B	98 x 56	3.8	3 Coils, 2 Layers	TX	12µH (lower coils), 11.5µH (upper coils)	56 ± 20% mΩ
AWCCA-12R12H11-C01-B	12 x 12	11 REF	1 Coil, 1 Layer	RX	8µH	520 mΩ max
AWCCA-18R18H10-C01-B	∅18	1.0 REF	1 Coil, 1 Layer	RX	10.5µH	330 mΩ max
AWCCA-50N50H30-C21-B	50 x 50	3.4	1 Coil, 1 Layer	TX/RX	6.3µH	38±20% mΩ
AWCCA-50N50H16-C51-B	50 x 50	2.1	1 Coil, 1 Layer	TX/RX	12.5µH	80±20% mΩ
AWCCA-47R38H08-C01-B	47 x 38	0.86	1 Coil, 1 Layer	RX	11.5µH	160±20% mΩ
AWCCA-107T52H40-C01-B	107 x 52	4.5	3 Coil, 2 Layer	TX	Upper 11.5µH/ Lower 12.0µH	56±20%

APPLICATIONS FOR HIGH POWER WIRELESS CHARGING AND LOW PROFILE/COMPACT

High power applications including robotics, drones, automation systems, power tools, and medical devices, all benefit from the reliable and consistent power delivery to device batteries. With wireless technology, designs are limitless.



Industrial Robotics



Hermetically Sealed Medical Equipment



Drones



Power Tools



Industrial IoT



Roamable Industrial Appliances