

ECN/PCN No.: M1238

| For Manufacturer | | | |
|--|---|--|--|
| Product Description: WIRELESS CHARGING COIL ASSEMBLY | Abracon Part Number / Part Series: AWCCA-48R32H11 -C01-B | <input type="checkbox"/> Documentation only <input checked="" type="checkbox"/> ECN <input type="checkbox"/> EOL | <input type="checkbox"/> Series <input checked="" type="checkbox"/> Part Number |
| Affected Revision: Initial Release | New Revision: A | Application: | <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety |

Prior to Change:
1.1 Maximum Ratings

Table (1.1) – Maximum Ratings

| Item | Value |
|-----------------------------|-------------------------------|
| Operating Temperature Range | T= -25°C ~ 85°C, RH ≤ 90%. |
| Storage Temperature Range | -25°C~85°C, 70%RH (Max.) |

1.2 Electrical Characteristics

Table (1.2) – Electrical Characteristics AWCCA-48R32 series

| Part Number | Inductance | Q-Factor | Current Rating (rms) | Saturated Current (rms) | DC Resistance | SRF |
|----------------------|--|-----------|----------------------|-------------------------|---------------|-------|
| AWCCA-48R32H11-C01-B | 10.5µH ±10% | 28±30% | 2.6A Typ. | 15A | 190mΩ±20% | 11MHz |
| Test Condition | 100KHz / 1V | 100KHz/1V | ΔT = 40 K | 100KHz/1V | 20±15°C | |
| Test Environment | Ambient Temperature: 20±15°C, RH: 65%±20%. | | | | | |

1.3 Test Conditions

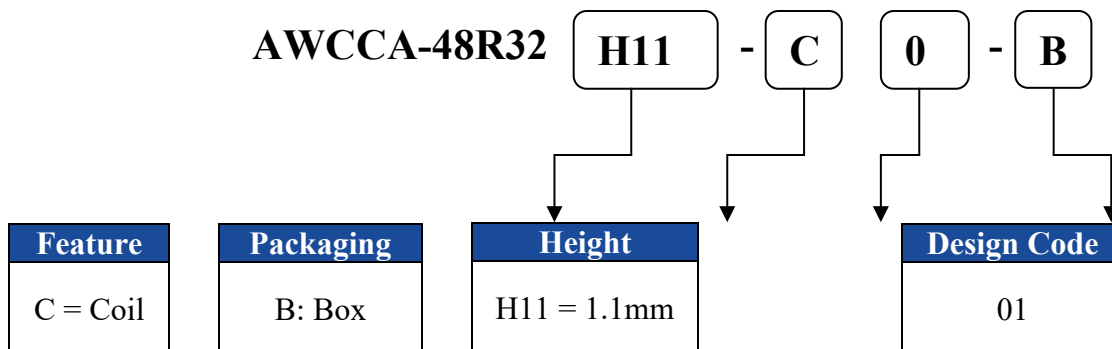
A) - Ambient Temperature: 20±15°C, RH: 65% ±20%.

If any doubt on the results, measurements/tests should be made within the following limits: Ambient Temperature: 20±2°C, RH: 65%±5%

B) - Isat: DC current at which the inductance drops approximate 5% from its value without current.

4.0 Part Identification – AWCCA-48R32 Series

Figure (1) - Identification and Order Code


4.1 Part Coding – AWCCA-48R32

AWCCA - 48R32H11 - C 01 - B

① ② ③ ④ ⑤

Table (4.1) – Part Number Coding Scheme

| ① Type | | ② External Dimensions (L x W x H) (mm) | | ③ Feature Type | |
|--------------------|------------------------------------|--|--|---------------------|------|
| AWCCA | Wireless Charging Coil Assembly | 48R32H11 | 48.5×32.5x1.1mm rectangular, R means can be used for receiver. H is for Height | C | Coil |
| ④ Design Code | | ⑤ Packing | | | |
| 01 | Nominal Value | B | Box | | |

5.1 — Markings:

Figure (2) — Marking Scheme.

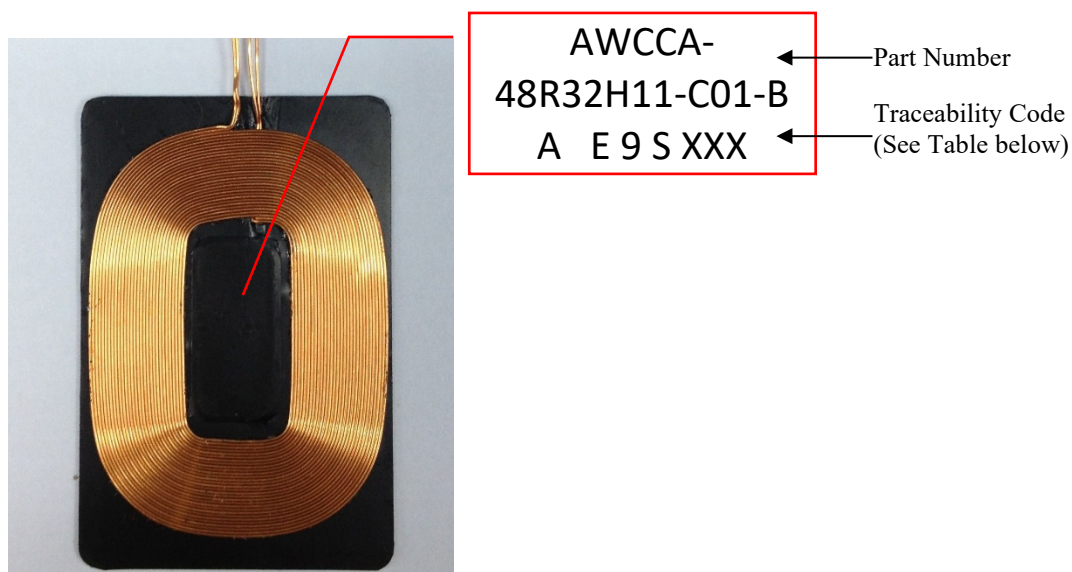


Table (5.0) — Traceability Code Table

| | | | | |
|---------------------|----------------------------|----------|----------|----------|
| Model | A — Wireless Charging Coil | | | |
| Year | 2013 — E | 2014 — F | 2015 — G | 2016 — H |
| | 2017 — A | 2018 — B | 2019 — C | 2020 — D |
| Month | Jan — 1 | Feb — 2 | Mar — 3 | Apr — 4 |
| | May — 5 | Jun — 6 | Jul — 7 | Aug — 8 |
| | Sep — 9 | Oct — A | Nov — B | Dec — C |
| Factory Code | S — Shenzhen Factory | | | |
| Series Code | XXX | | | |

5.1 — Marking Method: White Ink.

6.0 Out Line Dimensions (unit mm)

Figure (2) – Outline Dimensions AWCCA-48R32H11-C01-B

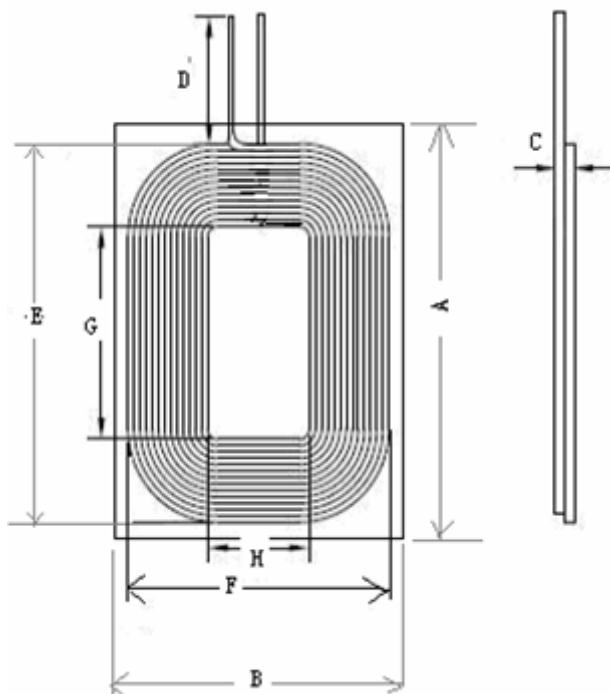


Table (6.0) – Dimensions of AWCCA-48R32H11-C01-B

| Item | A | B | C | D | E | F | G | H |
|------|----------|----------|---------|------|------|------|------|------|
| Spec | 48.5 Max | 32.5 Max | 1.2 Max | 50.0 | 41.4 | 31.0 | 22.2 | 11.5 |

6.1 Winding Specifications

Table (6.1) – Winding Details of AWCCA-48R32H11-C01-B

| Number of Coils | Wire | Number of Turns | Inductance |
|-----------------|----------------------|-----------------|----------------------------|
| 1 | $\phi 0.30 \times 2$ | 15 | $10.5\mu\text{H} \pm 10\%$ |

8.0 — Wave Soldering Profile: Not suitable for wave soldering

8.1 — Manual Soldering: 350°C Max, 3secs

9.0 — Packaging: Box, 100pcs MOQ

10.0 Storage and Operational Condition

Storage condition

- Recommended storage conditions: -25°C~85°C, 70%RH (Max.)
- Service life: Within the limits of six month from being produced.
- The appearance and solder ability should be check, if product is not in expiry date.

Operation Conditions

- Use condition limit: T=-25°C ~ 85°C, RH≤ 90%.

After Change:

1.1 Maximum Ratings

Table (1.1) – Maximum Ratings

| Item | Value |
|---|-----------------------|
| Operating Temperature Range (including self-temp rise) | T= -40°C ~ 85°C |
| Storage Temperature (packaging) | <40°C 60%RH (Max.) |

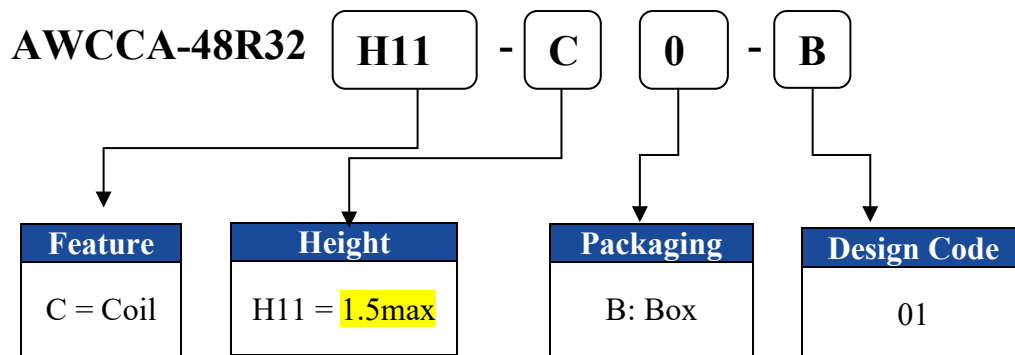
1.3 Electrical Characteristics

Table (1.2) – Electrical Characteristics AWCCA-48R32 series

| Part Number | Inductance | Q-Factor | Current Rating (rms) | DC Resistance |
|--------------------------|-------------|----------|----------------------|---------------|
| AWCCA-48R32H11 -C01-B | 10.5μH ±10% | 23 min | 2.6A Typ. | 160mΩ±20% |
| Test Condition | 100KHz / 1V | | | |

2.0 Part Identification – AWCCA-48R32

Figure (1) - Identification and Order Code



4.2 Part Coding – AWCCA-48R32

AWCCA - 48R32H11 - C 01 - B

① ② ③ ④ ⑤

Table (4.1) – Part Number Coding Scheme

| ① Type | | ② External Dimensions (L x W x H) (mm) | | ③ Feature Type | |
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| AWCCA | Wireless Charging Coil Assembly | 48R32H11 | 48.5×32.5x1.5mm rectangular, R means can be used for receiver. H is for Height | C | Coil |
| ④ Design Code | | ⑤ Packing | | | |
| 01 | Nominal Value | B | Box | | |

7.0 Out Line Dimensions

Figure (2) – Outline Dimensions AWCCA-48R32H11-C01-B

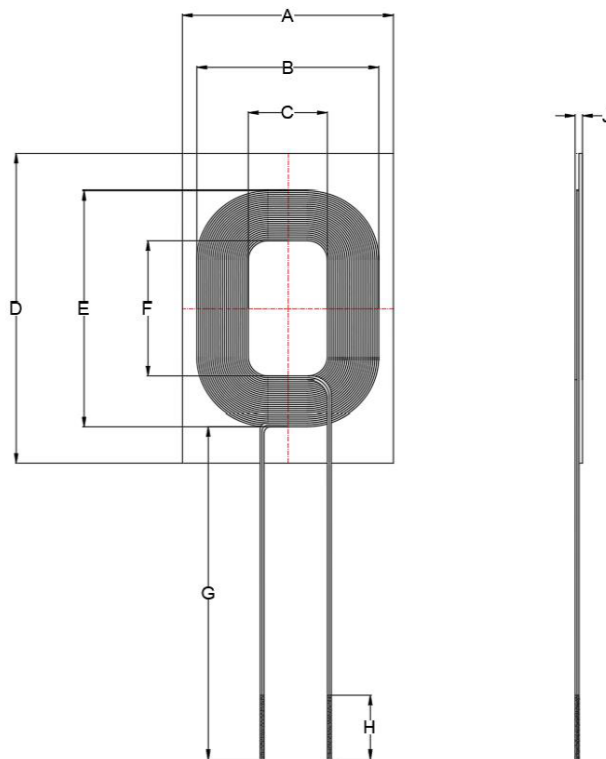


Table (6.0) – Dimensions of AWCCA-48R32H11-C01-B

| A | B | C | D | E | F | G | H | J |
|----------|----------|----------|----------|----------|----------|--------|--------|---------|
| 32.0±0.5 | 28.0±1.5 | 12.0±1.0 | 48.0±0.5 | 37.0±1.5 | 21.0±1.0 | 50±2.0 | 10.0±2 | 1.5 Max |

Dimensions Unit: mm

6.1 Winding Specifications

Table (6.1) – Winding Details of AWCCA-48R32H11-C01-B

| Number of Coils | Wire | Number of Turns | Inductance |
|-----------------|-----------|-----------------|-------------|
| 1 | φ0.30 x 2 | 13 | 10.5μH ±10% |

10.0 Storage and Operational Condition

Storage condition

- Recommended storage conditions: -40°C ~ +85°C
- Recommended storage conditions (with packaging): <40°C, 60% RH

Operation Conditions

- Use condition limit: T= -40°C ~ +85°C, (including self-temperature rise).

Cause/Reason for Change: Moving the series to a new production line, update to windings dimensions, electrical specs, operating temp., and removed markings

Change Plan

| | |
|-------------------------------------|----------------------------|
| Effective Date: 4/21/2021 | Additional Remarks: |
|-------------------------------------|----------------------------|

Change Declaration:
The change does not affect fit or function of the part. These is an update to windings dimensions, electrical specs, operating temp., and removed markings

| | | |
|----------------------------------|--|--|
| Issued Date: 4/21/2021 | Issued By: <i>Ahmed Alamin</i> | Issued Department: Engineering |
|----------------------------------|--|--|

| | | |
|--|---|--|
| Approval: <i>Syed Raza</i> Engineering VP | Approval: <i>Reuben Quintanilla</i> Quality Director | Approval: <i>Ying Huang</i> Purchasing Director |
|--|---|--|

For Abracon EOL only

| | |
|---------------------------------------|---|
| Last Time Buy (if applicable): | Alternate Part Number / Part Series: |
|---------------------------------------|---|

| | | |
|-----------------------------|-----------------------------|-----------------------------|
| Additional Approval: | Additional Approval: | Additional Approval: |
|-----------------------------|-----------------------------|-----------------------------|

Customer Approval (If Applicable)

Qualification Status:
 Approved Not accepted
Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.

| | |
|------------------------------|--------------------------|
| Customer Part Number: | Customer Project: |
|------------------------------|--------------------------|

| | | |
|----------------------|--------------------------------|----------------------------------|
| Company Name: | Company Representative: | Representative Signature: |
|----------------------|--------------------------------|----------------------------------|

Customer Remarks: