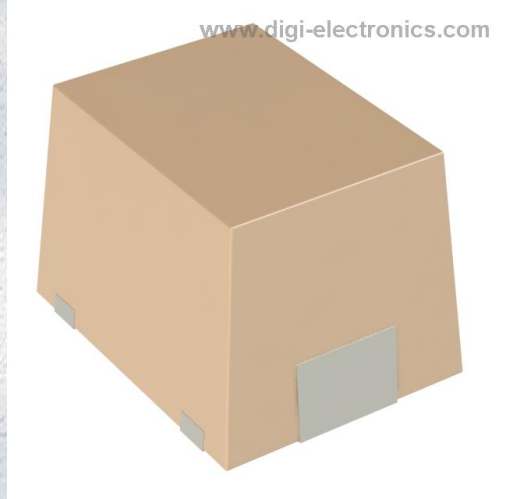
# IMC1210BN3R9J Datasheet




https://www.DiGi-Electronics.com

| | |
|---|---|
| DiGi Electronics Part Number | IMC1210BN3R9J-DG |
| Manufacturer | Vishay Dale |
| Manufacturer Product Number | IMC1210BN3R9J |
| Description | FIXED IND 3.9UH 250MA 1.3OHM SMD |
| Detailed Description | 3.9 µH Unshielded Drum Core, Wirewound Inductor 250 mA 1.3Ohm Max 1210 (3225 Metric) |

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

## Purchase and inquiry

| Manufacturer Product Number: | Manufacturer: |
| --- | --- |
| IMC1210BN3R9J | Vishay Dale |
| Series: | Product Status: |
| IMC-1210 | Active |
| Type: | Material - Core: |
| Drum Core, Wirewound | Iron Powder |
| Inductance: | Tolerance: |
| 3.9 µH | ±5% |
| Current Rating (Amps): | Current - Saturation (Isat): |
| 250 mA | - |
| Shielding: | DC Resistance (DCR): |
| Unshielded | 1.3Ohm Max |
| Q @ Freq: | Frequency - Self Resonant: |
| 30 @ 7.96MHz | 55MHz |
| Ratings: | Operating Temperature: |
| - | -55°C ~ 125°C |
| Inductance Frequency - Test: | Mounting Type: |
| 7.96 MHz | Surface Mount |
| Package / Case: | Supplier Device Package: |
| 1210 (3225 Metric) | 1210 |
| Size / Dimension: | Height - Seated (Max): |
| 0.126" L x 0.098" W (3.20mm x 2.49mm) | 0.095" (2.41mm) |

## Environmental & Export classification

| RoHS Status: | Moisture Sensitivity Level (MSL): |
| --- | --- |
| RoHS non-compliant | 1 (Unlimited) |
| REACH Status: | ECCN: |
| REACH Affected | EAR99 |
| HTSUS: | |
| 8504.50.8000 | |

# Wirewound, Surface-Mount Molded Inductors

## FEATURES

- 3.2 mm x 2.5 mm x 2.2mm SMD size
- Printed marking
- Molded construction provides superior strength and moisture resistance
- Compatible with vapor phase and infrared reflow soldering
- Tape and reel packaging for automatic handling, 2000/reel, EIA-481
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

## TEST EQUIPMENT

- HP4342A Q meter with Vishay Dale test fixture or equivalent
- HP4191A RF impedance analyzer (for SRF measurements)
- Wheatstone bridge

## ELECTRICAL SPECIFICATIONS

**Inductance range:** 0.01 µH to 220 µH

**Special tolerances available upon request**

**Operating temperature:** -55 °C to +125 °C

**Coilform material:** non-magnetic from 0.01 µH to 0.10 µH; powdered iron from 0.12 µH to 100 µH; ferrite from 120 µH to 220 µH

## STANDARD ELECTRICAL SPECIFICATIONS

| PART NUMBER | IND. (µH) | TOL. (%) | TEST FREQ. (MHz) L & Q | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) (1) |
|---|---|---|---|---|---|---|---|
| IMC1210ER10NM | 0.010 | 20 | 50 | 30 | 1000 | 0.13 | 734 |
| IMC1210ER12NM | 0.012 | 20 | 50 | 30 | 1000 | 0.14 | 707 |
| IMC1210ER15NM | 0.015 | 20 | 50 | 30 | 1000 | 0.16 | 661 |
| IMC1210ER18NM | 0.018 | 20 | 50 | 30 | 1000 | 0.18 | 624 |
| IMC1210ER22NM | 0.022 | 20 | 50 | 30 | 1000 | 0.20 | 592 |
| IMC1210ER27NM | 0.027 | 20 | 50 | 30 | 1000 | 0.22 | 564 |
| IMC1210ER33NM | 0.033 | 20 | 50 | 30 | 1000 | 0.24 | 540 |
| IMC1210ER39NM | 0.039 | 20 | 50 | 30 | 1000 | 0.27 | 530 |
| IMC1210ER47NM | 0.047 | 20 | 50 | 30 | 1000 | 0.30 | 483 |
| IMC1210ER56NM | 0.056 | 20 | 50 | 30 | 1000 | 0.33 | 470 |
| IMC1210ER68NM | 0.068 | 20 | 50 | 30 | 1000 | 0.36 | 450 |
| IMC1210ER82NM | 0.082 | 20 | 50 | 30 | 900 | 0.40 | 450 |
| IMC1210ERR10M | 0.10 | 20 | 50 | 30 | 700 | 0.44 | 450 |
| IMC1210ERR12M | 0.12 | 20 | 25.2 | 30 | 500 | 0.22 | 584 |
| IMC1210ERR15M | 0.15 | 20 | 25.2 | 30 | 450 | 0.25 | 548 |
| IMC1210ERR18M | 0.18 | 20 | 25.2 | 30 | 400 | 0.28 | 518 |
| IMC1210ERR22M | 0.22 | 20 | 25.2 | 30 | 350 | 0.32 | 484 |
| IMC1210ERR27M | 0.27 | 20 | 25.2 | 30 | 320 | 0.36 | 456 |
| IMC1210ERR33M | 0.33 | 20 | 25.2 | 30 | 300 | 0.40 | 453 |
| IMC1210ERR39M | 0.39 | 20 | 25.2 | 30 | 250 | 0.45 | 450 |
| IMC1210ERR47M | 0.47 | 20 | 25.2 | 30 | 220 | 0.50 | 450 |
| IMC1210ERR56M | 0.56 | 20 | 25.2 | 30 | 180 | 0.55 | 450 |
| IMC1210ERR68M | 0.68 | 20 | 25.2 | 30 | 160 | 0.60 | 450 |
| IMC1210ERR82M | 0.82 | 20 | 25.2 | 30 | 140 | 0.67 | 450 |
| IMC1210ER1R0K | 1.0 | 10 | 7.96 | 30 | 120 | 0.70 | 400 |
| IMC1210ER1R2K | 1.2 | 10 | 7.96 | 30 | 100 | 0.75 | 390 |
| IMC1210ER1R5K | 1.5 | 10 | 7.96 | 30 | 85 | 0.85 | 370 |

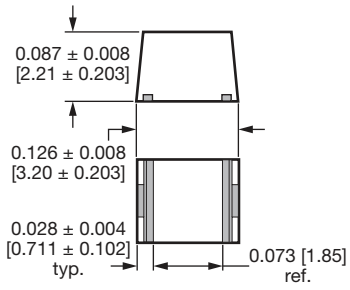
## STANDARD ELECTRICAL SPECIFICATIONS

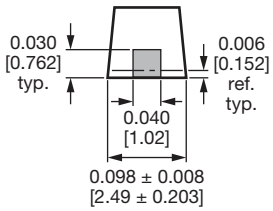
| PART NUMBER | IND. (µH) | TOL. (%) | TEST FREQ. (MHz) L & Q | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) (1) |
|---|---|---|---|---|---|---|---|
| IMC1210ER1R8K | 1.8 | 10 | 7.96 | 30 | 80 | 0.90 | 350 |
| IMC1210ER2R2K | 2.2 | 10 | 7.96 | 30 | 75 | 1.0 | 320 |
| IMC1210ER2R7K | 2.7 | 10 | 7.96 | 30 | 70 | 1.1 | 290 |
| IMC1210ER3R3K | 3.3 | 10 | 7.96 | 30 | 60 | 1.2 | 260 |
| IMC1210ER3R9K | 3.9 | 10 | 7.96 | 30 | 55 | 1.3 | 250 |
| IMC1210ER4R7K | 4.7 | 10 | 7.96 | 30 | 50 | 1.5 | 224 |
| IMC1210ER5R6K | 5.6 | 10 | 7.96 | 30 | 45 | 1.6 | 217 |
| IMC1210ER6R8K | 6.8 | 10 | 7.96 | 30 | 40 | 1.8 | 204 |
| IMC1210ER8R2K | 8.2 | 10 | 7.96 | 30 | 38 | 2.0 | 194 |
| IMC1210ER100K | 10 | 10 | 2.52 | 30 | 33 | 2.1 | 189 |
| IMC1210ER120K | 12 | 10 | 2.52 | 30 | 30 | 2.5 | 173 |
| IMC1210ER150K | 15 | 10 | 2.52 | 30 | 21 | 2.8 | 164 |
| IMC1210ER180K | 18 | 10 | 2.52 | 30 | 20 | 3.3 | 151 |
| IMC1210ER220K | 22 | 10 | 2.52 | 30 | 19 | 3.7 | 145 |
| IMC1210ER270K | 27 | 10 | 2.52 | 30 | 18 | 5.0 | 122 |
| IMC1210ER330K | 33 | 10 | 2.52 | 30 | 16 | 6.0 | 112 |
| IMC1210ER390K | 39 | 10 | 2.52 | 30 | 15 | 7.0 | 104 |
| IMC1210ER470K | 47 | 10 | 2.52 | 30 | 14 | 9.0 | 91 |
| IMC1210ER560K | 56 | 10 | 2.52 | 30 | 12 | 10.0 | 87 |
| IMC1210ER680K | 68 | 10 | 2.52 | 30 | 11 | 11.0 | 83 |
| IMC1210ER820K | 82 | 10 | 2.52 | 30 | 10 | 12.0 | 79 |
| IMC1210ER101K | 100 | 10 | 0.796 | 20 | 9 | 14.0 | 73 |
| IMC1210ER121K | 120 | 10 | 0.796 | 15 | 8 | 11.0 | 70 |
| IMC1210ER151K | 150 | 10 | 0.796 | 15 | 6.5 | 15.0 | 65 |
| IMC1210ER181K | 180 | 10 | 0.796 | 15 | 6 | 17.0 | 60 |
| IMC1210ER221K | 220 | 10 | 0.796 | 15 | 6 | 21.0 | 50 |

**Note**

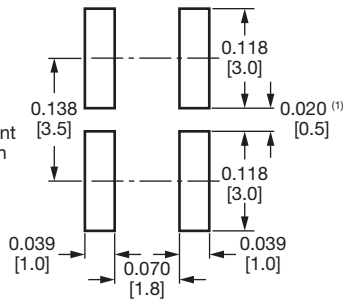
(1) Rated DC current based on the maximum temperature rise, not to exceed 40 °C at +85 °C ambient

## DIMENSIONS in inches [millimeters]




Guidelines for parallel component printed circuit mounting pads on IMC-1210 chip inductors




**Note**

(1) Recommended spacing between components

## PART MARKING

- Vishay Dale
- Inductance code
- Date code

## DESCRIPTION

| IMC-1210 | 10 µH | ± 10 % | ER | e3 |
|---|---|---|---|---|
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

## GLOBAL PART NUMBER

| I | M | C | 1 | 2 | 1 | 0 | E | R | 1 | 0 | 0 | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCT FAMILY | | | SIZE | | | | PACKAGE CODE | | INDUCTANCE VALUE | | | TOL. |

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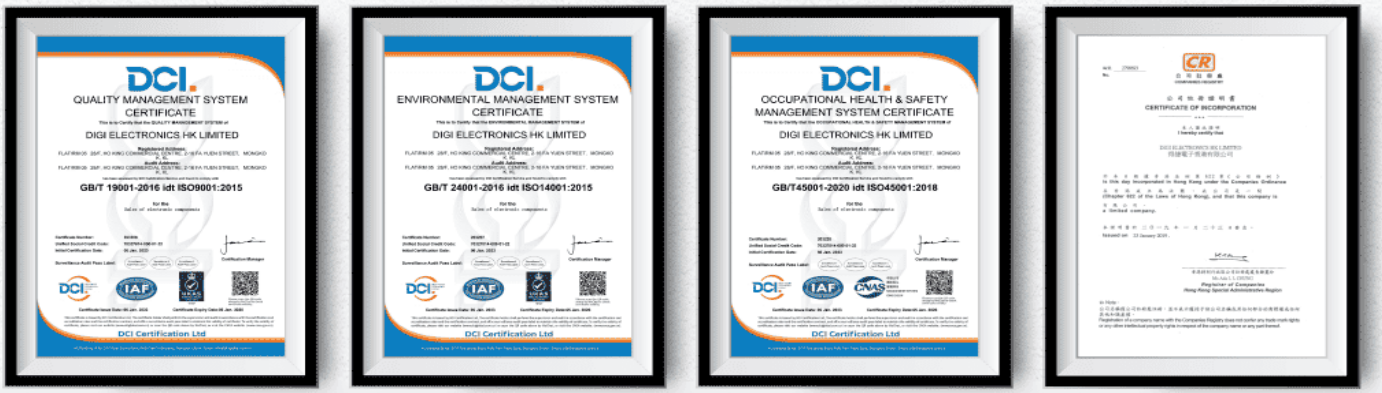



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