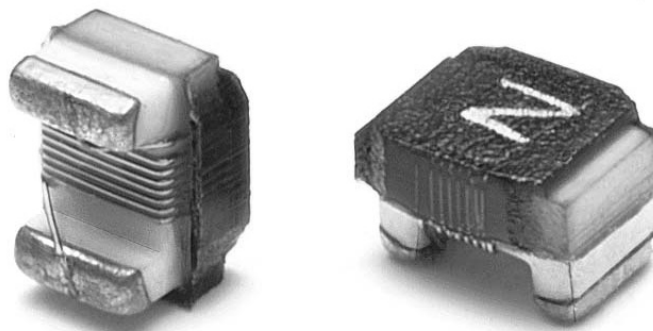


# RF Chip Inductors

Wire-Wound - 0402, 0603, 0805, 1008, 1206



Pulse Electronics - leading supplier of magnetics for consumer applications

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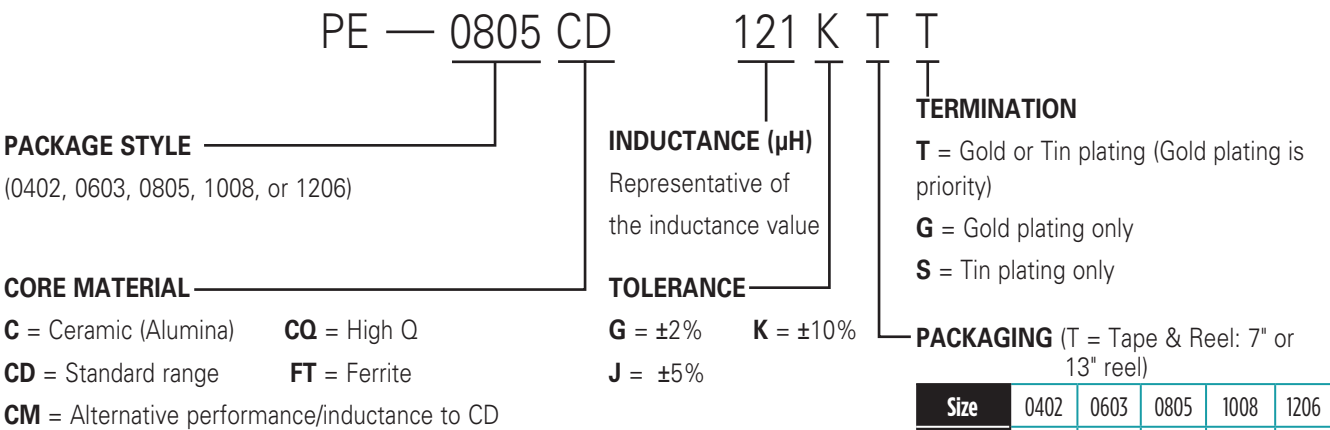
The 0402 to 1206 series range of Miniature Chip Inductors contains the very latest in wire-wound technology and Ceramic or Ferrite Core, thus providing the ultimate in performance demanded by today's Wireless products. The Inductors provide high Q and SRFs in an industry standard size and footprint. Pulse chip inductors manufactured after February 2005 are in compliance with RoHS requirements.

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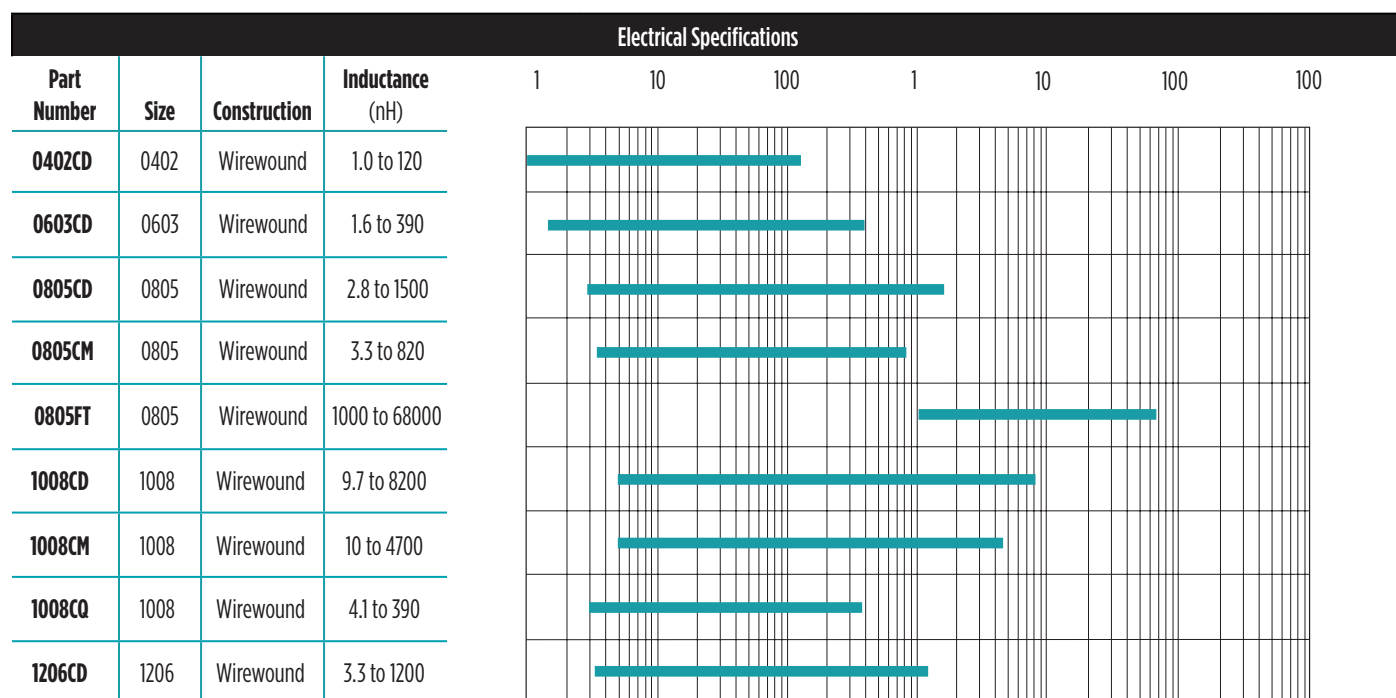
# WIRE-WOUND RF CHIP INDUCTORS

## PART NUMBER LEGEND



# WIRE-WOUND RF CHIP INDUCTORS

## SELECTION GUIDES



**CD Series:** Standard 100% compatible with other market leaders.

**CM Series:** Offers improved electrical performance or alternative inductance values to Pulse CD series.

**CQ Series:** Offers high Q and high Idc series.

**FT Series:** Ferrite core offers higher inductance values.

## Competition Cross Reference

| Type | Competition | Pulse Wire-Wound Inductors |        |                  |        |        |                  |        |
|------|-------------|----------------------------|--------|------------------|--------|--------|------------------|--------|
|      |             | 0402CD                     | 0603CD | 0805CD           | 0805FT | 1008CQ | 1008CD           | 1206CD |
|      | Coilcraft   | 0402CS                     | 0603CS | 0805CS/<br>HS/HT |        | 1008HQ | 1008CS/<br>HT/CT | 1206CS |
|      | Murata      |                            |        | LQW1608A         |        |        | LQN21A           |        |
|      | Taiyo Yuden |                            |        | LB2012T          |        |        | LEM_2520T        |        |
|      | TDK         |                            |        |                  | NL2016 |        | NLH2520          |        |

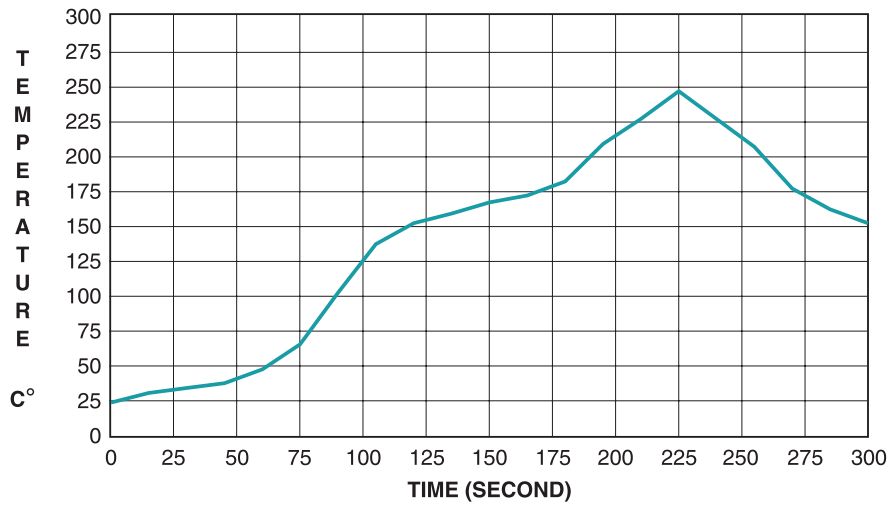
# WIRE-WOUND RF CHIP INDUCTORS

## PERFORMANCE TESTING

### Electrical Testing

|                                                                              |                                                                                                                   |                                                                                                                                                                          |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage and Operating Temperature Range:</b><br><br><b>-40° to +125°C</b> | Inductors are subjected to the extremes for 48 hours.<br>Then tested at 25 °C                                     | There shall be no deformation or change in appearance<br><br>Inductance shall not change by more than $\pm 5\%$<br><br>Q values shall not change by more than $\pm 10\%$ |
| <b>Thermal:</b><br><br><b>-40° to +85°C</b>                                  | Inductors are subjected to 30 cycles for 30 minutes at each extreme.<br>Then tested at 25 °C                      |                                                                                                                                                                          |
| <b>Moisture Resistance</b>                                                   | Inductors are subjected to 10 cycles of 24 hours at 70°C with 90 to 95% Relative Humidity<br>Then tested at 25 °C |                                                                                                                                                                          |
| <b>Operating Life</b>                                                        | Inductors are subjected to 1000 hours at 85C with 85% Relative Humidity with the rated current applied            | There shall be no Damaged, Open or Shorted Windings                                                                                                                      |

### Mechanical Testing

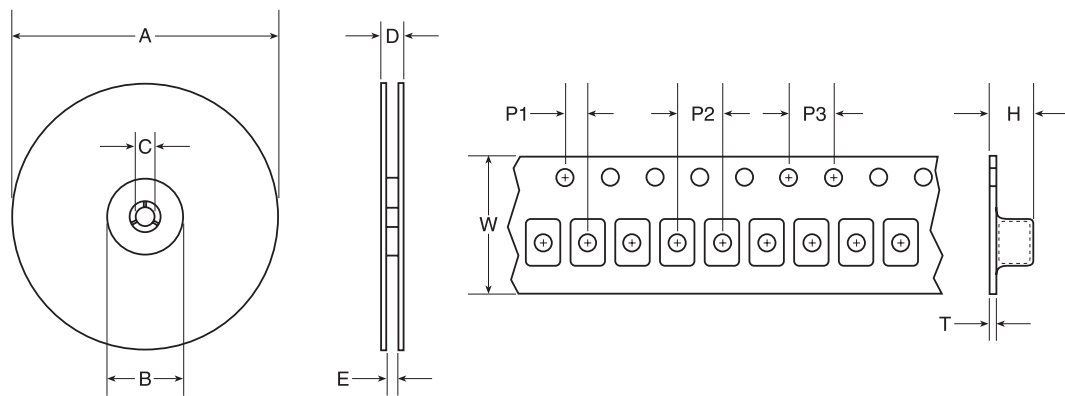
|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                          |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Temperature Range:</b>                         | Inductors are subjected to the following:<br>Use a solder pot at 260C, with RMA Flux. Each termination is immersed in 63Sn/37Pb molten solder for 4 to 6 seconds.                                                                                                                                                                                                                                                                                                                                                                                                                                           | There shall be no deformation or change in appearance<br><br>Inductance shall not change by more than $\pm 5\%$<br><br>Q values shall not change by more than $\pm 10\%$ |
| <b>Recommended Solder Heat Resistance Profile</b> |  <p>The graph shows a temperature profile for solder heat resistance testing. The y-axis represents Temperature in degrees Celsius (C°) from 0 to 300 in increments of 25. The x-axis represents Time in seconds from 0 to 300 in increments of 25. The profile starts at 25°C at 0 seconds, remains relatively flat until about 50 seconds, then rises steadily to 125°C at 100 seconds. It continues to rise to 175°C at 175 seconds, peaks at 250°C at 225 seconds, and then cools down to 150°C at 300 seconds.</p> |                                                                                                                                                                          |

# WIRE-WOUND RF CHIP INDUCTORS

## PERFORMANCE SPECIFICATIONS

| Electrical Specifications  |                                                                                                                                           |                                                                                                                                                                          |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Vibration (Random)</b>  | Samplers are subjected to random vibrations as per NAVMAT P9492                                                                           | There shall be no deformation or change in appearance<br><br>Inductance shall not change by more than $\pm 5\%$<br><br>Q values shall not change by more than $\pm 10\%$ |
| <b>Mechanical Shock</b>    | Inductors are subjected to one half sine wave pulse (8700 g's for 0.3ms) in each directional axis for a total of 18 shocks                |                                                                                                                                                                          |
| <b>Moisture Resistance</b> | Reflow Inductors on to test pads using 63 Sn/37 Pb solder paste (IR Reflow profile = 200 °C for 30 seconds or peak 235 °C for 20 seconds) | The inductors shall withstand a minimum force of 1000 g's in any direction using a dynamometer force guage.                                                              |

## Tape and Reel Specifications



### Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

| Series | Parts per Reel | Reels Dimensions (mm) |     |    |      |      | Tape Dimensions (mm) |    |    |    |     |     |
|--------|----------------|-----------------------|-----|----|------|------|----------------------|----|----|----|-----|-----|
|        |                | A                     | B   | C  | D    | E    | W                    | P1 | P2 | P3 | H   | T   |
| 0402CD | 3000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 1.1 | 0.3 |
| 0603CD | 2000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 1.7 | 0.3 |
| 0805CD | 2000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.1 | 0.3 |
| 0805CM | 2000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.1 | 0.3 |
| 0805FT | 2000           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.1 | 0.3 |
| 1008CD | 1600           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.6 | 0.3 |
| 1008CM | 1600           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.6 | 0.3 |
| 1008CQ | 1600           | 178                   | 50  | 13 | 14.4 | 8.4  | 8                    | 2  | 4  | 4  | 2.6 | 0.3 |
| 1206CD | 3000           | 330                   | 101 | 13 | 18.4 | 12.4 | 12                   | 2  | 4  | 4  | 2.0 | 0.4 |

**Notes:** P1, P2 and P3 are same for all chip inductor series. Keeping the same dimensions for guide hole and pocket pitch (P1), pocket pitch (P2), guide hold pitch (P3) and tape width (8mm) for all series, enables the packaging machine to maintain the same settings while changing models. The only difference between the series are the parts per reel which contributes to a different length of tapes/reel per model.

# WIRE-WOUND RF CHIP INDUCTORS - 0402CD SERIES



- Wirewound ceramic core construction
- High Q values
- High self resonant frequency
- Industry standard 0402 (1005) surface mount land pattern

Electrical Specifications @ 25°C

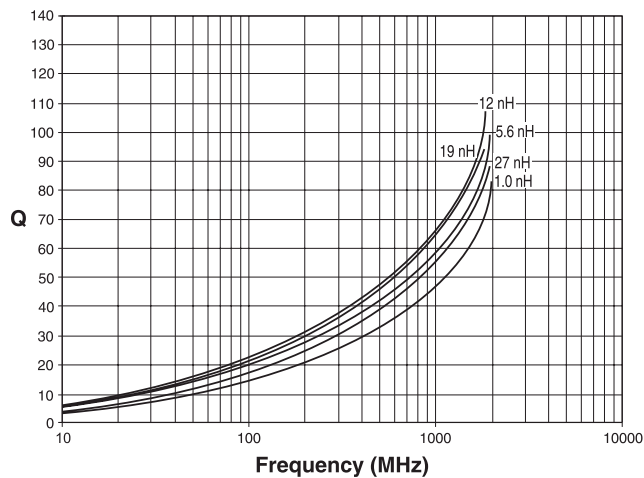
| Part Number     | Inductance 1<br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q<br>(MIN)  | SRF<br>(MHz MIN) | Rdc<br>(MHz MIN) | Ω MAX<br>(mA MAX) |
|-----------------|----------------------|-----------------------|-----------------------|-------------|------------------|------------------|-------------------|
| PE-0402CD1N0JTG | 1.0 @ 250MHz         | ±5%                   |                       | 13 @ 250MHz | 6000             | 0.045            | 1360              |
| PE-0402CD3N3JTT | 3.3 @ 250MHz         | ±5%                   |                       | 20 @ 250MHz | 6000             | 0.066            | 840               |
| PE-0402CD3N6JTT | 3.6 @ 250MHz         | ±5%                   | ±10% (K)              | 20 @ 250MHz | 6000             | 0.066            | 840               |
| PE-0402CD3N9JTT | 3.9 @ 250MHz         | ±5%                   | ±10% (K)              | 20 @ 250MHz | 5800             | 0.083            | 840               |
| PE-0402CD5N1JTT | 5.1 @ 250MHz         | ±5%                   |                       | 23 @ 250MHz | 5800             | 0.083            | 800               |
| PE-0402CD5N6JTG | 5.6 @ 250MHz         | ±5%                   |                       | 23 @ 250MHz | 5800             | 0.083            | 760               |
| PE-0402CD6N2JTT | 6.2 @ 250MHz         | ±5%                   | ±10% (K)              | 20 @ 250MHz | 5800             | 0.083            | 760               |
| PE-0402CD6N8JTT | 6.8 @ 250MHz         | ±5%                   | ±10% (K)              | 25 @ 250MHz | 5800             | 0.083            | 680               |
| PE-0402CD7N5JTG | 7.5 @ 250MHz         | ±5%                   | ±10% (K)              | 25 @ 250MHz | 5800             | 0.104            | 680               |
| PE-0402CD8N2JTT | 8.2 @ 250MHz         | ±5%                   |                       | 21 @ 250MHz | 4400             | 0.104            | 680               |
| PE-0402CD9N0JTG | 9.0 @ 250MHz         | ±5%                   |                       | 21 @ 250MHz | 4160             | 0.104            | 680               |
| PE-0402CD100JTT | 10 @ 250MHz          | ±5%                   | ±10% (K), ±2% (G)     | 21 @ 250MHz | 3900             | 0.195            | 480               |
| PE-0402CD110JTT | 11 @ 250MHz          | ±5%                   |                       | 26 @ 250MHz | 3680             | 0.120            | 640               |
| PE-0402CD120JTT | 12 @ 250MHz          | ±5%                   |                       | 26 @ 250MHz | 3600             | 0.120            | 640               |
| PE-0402CD150JTT | 15 @ 250MHz          | ±5%                   | ±10% (K), ±2% (G)     | 26 @ 250MHz | 3280             | 0.172            | 560               |
| PE-0402CD180JTG | 18 @ 250MHz          | ±5%                   | ±10% (K)              | 26 @ 250MHz | 3100             | 0.230            | 520               |
| PE-0402CD190JTT | 19 @ 250MHz          | ±5%                   |                       | 26 @ 250MHz | 3040             | 0.202            | 480               |
| PE-0402CD200GTT | 20 @ 250MHz          | ±2%                   |                       | 26 @ 250MHz | 3000             | 0.250            | 480               |
| PE-0402CD220JTG | 22 @ 250MHz          | ±5%                   |                       | 26 @ 250MHz | 2800             | 0.300            | 400               |
| PE-0402CD230JTT | 23 @ 250MHz          | ±5%                   |                       | 26 @ 250MHz | 2720             | 0.214            | 400               |
| PE-0402CD240GTT | 24 @ 250MHz          | ±2%                   |                       | 26 @ 250MHz | 2700             | 0.300            | 400               |
| PE-0402CD270JTT | 27 @ 250MHz          | ±5%                   |                       | 25 @ 250MHz | 248              | 0.298            | 400               |
| PE-0402CD330JTG | 33 @ 250MHz          | ±5%                   |                       | 26 @ 250MHz | 2350             | 0.350            | 350               |
| PE-0402CD360GTG | 36 @ 250MHz          | ±2%                   |                       | 25 @ 250MHz | 2320             | 0.403            | 320               |
| PE-0402CD400JTG | 40 @ 250MHz          | ±5%                   |                       | 25 @ 250MHz | 2240             | 0.438            | 320               |
| PE-0402CD470JTT | 47 @ 250MHz          | ±5%                   |                       | 25 @ 250MHz | 2100             | 0.830            | 100               |
| PE-0402CD680JTT | 68 @ 250MHz          | ±5%                   | ±10% (K)              | 16 @ 250MHz | 1840             | 0.970            | 100               |
| PE-0402CD820JTT | 82 @ 250MHz          | ±5%                   |                       | 16 @ 250MHz | 1680             | 1.250            | 100               |
| PE-0402CD101JTT | 100 @ 250MHz         | ±5%                   |                       | 16 @ 250MHz | 1620             | 2.600            | 100               |
| PE-0402CD121JTT | 120 @ 250MHz         | ±5%                   | ±5% (J)               | 14 @ 250MHz | 1520             | 2.700            | 90                |

# WIRE-WOUND RF CHIP INDUCTORS - 0402CD SERIES

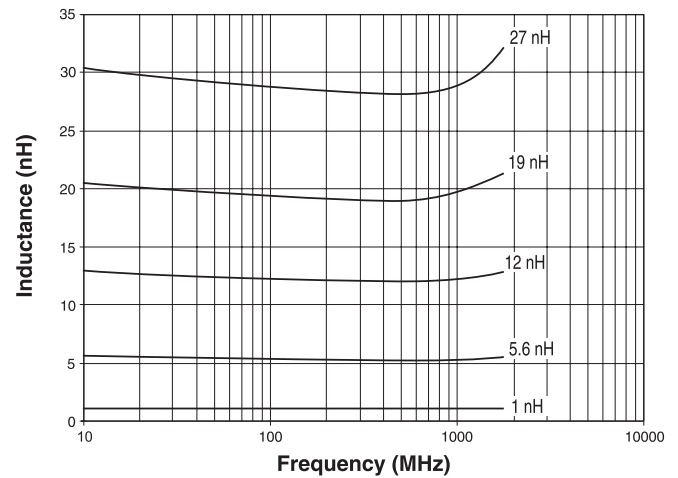
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. R<sub>DC</sub> measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.002 grams typical.

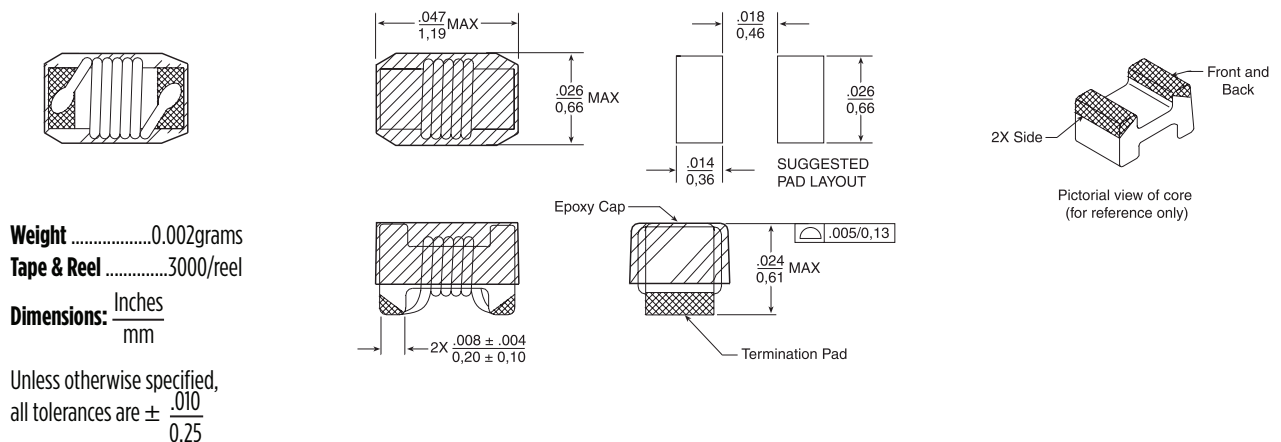
### Typical Q vs Frequency



### Typical Inductance vs Frequency

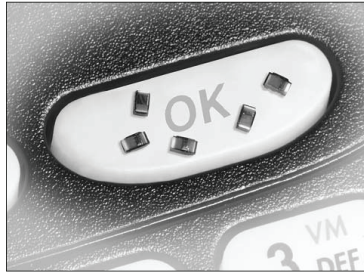


## Mechanical





# WIRE-WOUND RF CHIP INDUCTORS - 0603CD SERIES



- Wirewound ceramic core construction
- High Q values
- High self resonant frequency
- Industry standard 0603 (1608) surface mount land pattern

See page 3 for Competition Cross Reference

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| PE-0603CD1N6KTT | 1.6 @ 250MHz                    | ±10%                  |                       | 24 @ 250MHz             | 6000.0                        | 0.03                        | 700.0                                    |
| PE-0603CD010KTT | 1.7 @ 250MHz                    | ±10%                  |                       | 16 @ 250MHz             | 6000.0                        | 0.05                        | 700.0                                    |
| PE-0603CD1N8JTT | 1.8 @ 250MHz                    | ±5%                   |                       | 16 @ 250MHz             | 6000.0                        | 0.05                        | 700.0                                    |
| PE-0603CD2N2KTT | 2.2 @ 250MHz                    | ±10%                  |                       | 18 @ 250MHz             | 6000.0                        | 0.11                        | 700.0                                    |
| PE-0603CD3N6JTT | 3.6 @ 250MHz                    | ±5%                   |                       | 20 @ 250MHz             | 6000.0                        | 0.07                        | 700.0                                    |
| PE-0603CD030JTT | 3.9 @ 250MHz                    | ±5%                   | ±10% (K)              | 20 @ 250MHz             | 6000.0                        | 0.08                        | 700.0                                    |
| PE-0603CD4N3JTT | 4.3 @ 250MHz                    | ±5%                   |                       | 20 @ 250MHz             | 6000.0                        | 0.10                        | 700.0                                    |
| PE-0603CD040JTT | 4.55 @ 250MHz                   | ±5%                   | ±10% (K)              | 20 @ 250MHz             | 5800.0                        | 0.11                        | 700.0                                    |
| PE-0603CD4N7JTT | 4.7 @ 250MHz                    | ±5%                   | ±2% (G)               | 20 @ 250MHz             | 5800.0                        | 0.12                        | 700.0                                    |
| PE-0603CD5N1JTT | 5.1 @ 250MHz                    | ±5%                   | ±2% (G)               | 20 @ 250MHz             | 5700.0                        | 0.11                        | 700.0                                    |
| PE-0603CD5N6GTT | 5.6 @ 250MHz                    | ±2%                   | ±10% (K)              | 25 @ 250MHz             | 5500.0                        | 0.11                        | 700.0                                    |
| PE-0603CD6N2JTT | 6.2 @ 250MHz                    | ±5%                   | ±2% (G)               | 25 @ 250MHz             | 5800.0                        | 0.11                        | 700.0                                    |
| PE-0603CD060JTT | 6.68 @ 250MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 25 @ 250MHz             | 5800.0                        | 0.11                        | 700.0                                    |
| PE-0603CD6N8JTT | 6.8 @ 250MHz                    | ±5%                   | ±2% (G)               | 27 @ 250MHz             | 5800.0                        | 0.12                        | 700.0                                    |
| PE-0603CD7N5GTT | 7.5 @ 250MHz                    | ±2%                   |                       | 28 @ 250MHz             | 4800.0                        | 0.12                        | 700.0                                    |
| PE-0603CD080JTT | 8.2 @ 250MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 30 @ 250MHz             | 4600.0                        | 0.12                        | 700.0                                    |
| PE-0603CD8N7JTT | 8.7 @ 250MHz                    | ±5%                   | ±2% (G)               | 28 @ 250MHz             | 4600.0                        | 0.11                        | 700.0                                    |
| PE-0603CD9N5GTT | 9.5 @ 250MHz                    | ±2%                   | ±10% (K)              | 28 @ 250MHz             | 5400.0                        | 0.14                        | 700.0                                    |
| PE-0603CD100JTT | 10 @ 250MHz                     | ±5%                   | ±2% (G)               | 30 @ 250MHz             | 4800.0                        | 0.13                        | 700.0                                    |
| PE-0603CD110GTT | 11 @ 250MHz                     | ±2%                   | ±10% (K)              | 30 @ 250MHz             | 4000.0                        | 0.09                        | 700.0                                    |
| PE-0603CD120JTT | 12 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 30 @ 250MHz             | 4000.0                        | 0.13                        | 700.0                                    |
| PE-0603CD130JTT | 13 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 38 @ 250MHz             | 3600.0                        | 0.11                        | 700.0                                    |
| PE-0603CD150JTT | 15 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 30 @ 250MHz             | 4000.0                        | 0.17                        | 700.0                                    |
| PE-0603CD160JTT | 16 @ 250MHz                     | ±5%                   | ±2% (G)               | 35 @ 250MHz             | 3300.0                        | 0.17                        | 700.0                                    |
| PE-0603CD180JTT | 18 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 180MHz             | 3100.0                        | 0.17                        | 700.0                                    |
| PE-0603CD220JTT | 22 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 250MHz             | 3000.0                        | 0.19                        | 700.0                                    |
| PE-0603CD230GTT | 23 @ 250MHz                     | ±2%                   |                       | 38 @ 250MHz             | 2850.0                        | 0.19                        | 700.0                                    |
| PE-0603CD240JTT | 24 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 250MHz             | 2650.0                        | 0.20                        | 600.0                                    |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 0603CD SERIES

| Electrical Specifications @ 25°C (continued) |                                 |                       |                       |                         |                               |                             |                                          |
|----------------------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| Part Number                                  | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-0603CD270JTT                              | 27 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 250MHz             | 2800.0                        | 0.22                        | 600.0                                    |
| PE-0603CD300JTT                              | 30 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 37 @ 250MHz             | 2250.0                        | 0.14                        | 600.0                                    |
| PE-0603CD330JTT                              | 33 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 250MHz             | 2300.0                        | 0.22                        | 600.0                                    |
| PE-0603CD360GTT                              | 36 @ 250MHz                     | ±2%                   |                       | 37 @ 250MHz             | 2080.0                        | 0.25                        | 600.0                                    |
| PE-0603CD390JTT                              | 39 @ 250MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 250MHz             | 2200.0                        | 0.25                        | 600.0                                    |
| PE-0603CD430GTT                              | 43 @ 250MHz                     | ±2%                   |                       | 35 @ 250MHz             | 2000.0                        | 0.28                        | 600.0                                    |
| PE-0603CD470JTT                              | 47 @ 200MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 200MHz             | 2000.0                        | 0.28                        | 600.0                                    |
| PE-0603CD510GTT                              | 51 @ 200MHz                     | ±2%                   |                       | 35 @ 200MHz             | 1900.0                        | 0.27                        | 600.0                                    |
| PE-0603CD560JTT                              | 56 @ 200MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 200MHz             | 1900.0                        | 0.31                        | 600.0                                    |
| PE-0603CD680JTT                              | 68 @ 200MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 200MHz             | 1700.0                        | 0.34                        | 600.0                                    |
| PE-0603CD720GTT                              | 72 @ 150MHz                     | ±2%                   | ±10% (K)              | 34 @ 150MHz             | 1700.0                        | 0.49                        | 400.0                                    |
| PE-0603CD820JTT                              | 82 @ 150MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 34 @ 150MHz             | 1700.0                        | 0.54                        | 400.0                                    |
| PE-0603CD101JTT                              | 98.50 @ 150MHz                  | ±5%                   | ±10% (K), ±2% (G)     | 34 @ 150MHz             | 1400.0                        | 0.58                        | 400.0                                    |
| PE-0603CDR10JTT                              | 100 @ 150MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 34 @ 150MHz             | 1400.0                        | 0.58                        | 400.0                                    |
| PE-0603CD111JTT                              | 110 @ 150MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 33 @ 150MHz             | 1300.0                        | 0.61                        | 300.0                                    |
| PE-0603CDR12JTT                              | 120 @ 150MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 32 @ 150MHz             | 1300.0                        | 0.65                        | 300.0                                    |
| PE-0603CD121JTT                              | 122 @ 150MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 33 @ 150MHz             | 1300.0                        | 0.65                        | 300.0                                    |
| PE-0603CD151JTT                              | 150 @ 150MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 28 @ 150MHz             | 990.0                         | 0.92                        | 280.0                                    |
| PE-0603CD181JTT                              | 180 @ 100MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 25 @ 100MHz             | 990.0                         | 1.25                        | 240.0                                    |
| PE-0603CD201GTT                              | 200 @ 250MHz                    | ±2%                   |                       | 25 @ 100MHz             | 900.0                         |                             |                                          |
| PE-0603CD211JTT                              | 210 @ 100MHz                    | ±5%                   | ±2% (G)               | 27 @ 100MHz             | 895.0                         | 2.06                        | 220.0                                    |
| PE-0603CD221JTT                              | 220 @ 100MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 25 @ 100MHz             | 900.0                         | 1.90                        | 200.0                                    |
| PE-0603CD251GTT                              | 250 @ 100MHz                    | ±2%                   |                       | 25 @ 100MHz             | 822.0                         | 3.55                        | 180.0                                    |
| PE-0603CD271JTT                              | 270 @ 100MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 24 @ 100MHz             | 860.0                         | 2.30                        | 170.0                                    |
| PE-0603CD331JTT                              | 330 @ 100MHz                    | ±5%                   | ±10% (K)              | 22 @ 100MHz             | 500.0                         | 2.300                       | 150.0                                    |
| PE-0603CD391JTT                              | 390 @ 100MHz                    | ±5%                   | ±10% (K)              | 20 @ 250 MHz            | 350.0                         | 2.90                        | 130.0                                    |

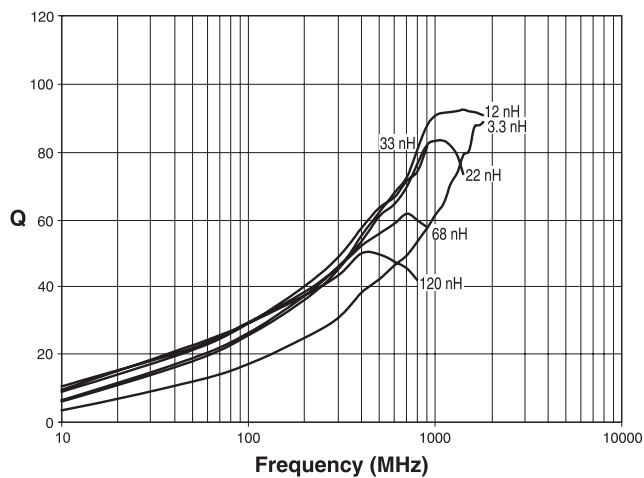
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. 5-sides o top side epoxy cap.

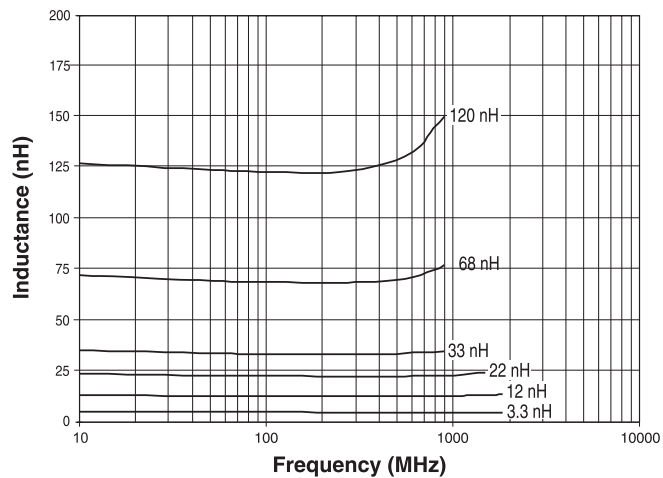
(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 0603CD Series

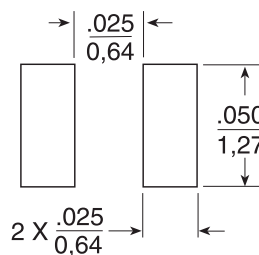
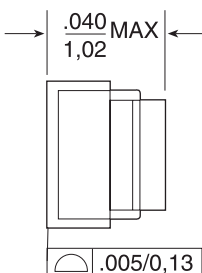
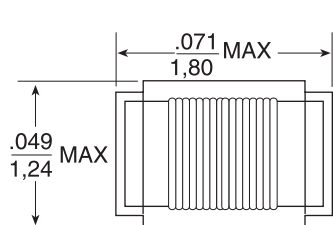
## Typical Q vs Frequency



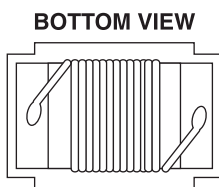
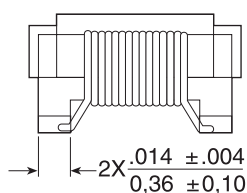
## Typical Inductance vs Frequency



## Mechanical



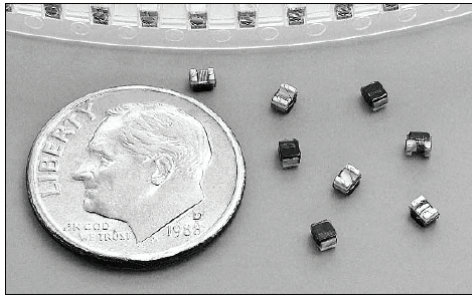
**SUGGESTED PAD LAYOUT**



**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0,25}$

# WIRE-WOUND RF CHIP INDUCTORS - 0805CD SERIES



- Ⓢ Wirewound ceramic core construction
- Ⓢ High Q values
- Ⓢ High self resonant frequency
- Ⓢ Industry standard 0805 (2012) surface mount land pattern

See page 3 for Competition Cross Reference

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------|
| PE-0805CD2N8KTT | 2.8 @ 250MHz                    | ±10% (K)              |                       | 80 @ 1500MHz            | >6000                         | 0.06                        | 600                          |
| PE-0805CD3N0KTT | 3.0 @ 250MHz                    | ±10% (K)              | ±5% (J)               | 65 @ 1500MHz            | >6000                         | 0.06                        | 600                          |
| PE-0805CD030KTT | 3.32 @ 250MHz                   | ±10% (K)              | ±5% (J)               | 40 @ 1500MHz            | 6000                          | 0.08                        | 600                          |
| PE-0805CD050KTT | 5.6 @ 250MHz                    | ±5% (J)               |                       | 50 @ 1500MHz            | 5500                          | 0.10                        | 600                          |
| PE-0805CD060KTT | 6.5 @ 250MHz                    | ±10% (K)              |                       | 50 @ 1000MHz            | 5000                          | 0.11                        | 600                          |
| PE-0805CD7N5KTT | 7.5 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 1000MHz            | 4500                          | 0.14                        | 600                          |
| PE-0805CD080KTT | 7.9 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 1000MHz            | 4700                          | 0.12                        | 600                          |
| PE-0805CD100KTT | 10.2 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 4100                          | 0.14                        | 600                          |
| PE-0805CD120KTT | 11.9 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 4000                          | 0.15                        | 600                          |
| PE-0805CD150KTT | 14.9 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 3400                          | 0.17                        | 600                          |
| PE-0805CD180KTT | 17.95 @ 250MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 3300                          | 0.20                        | 600                          |
| PE-0805CD220KTT | 21.7 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 2600                          | 0.22                        | 500                          |
| PE-0805CD240KTT | 24 @ 250MHz                     | ±5% (J)               |                       | 50 @ 500MHz             | 2000                          | 0.22                        | 500                          |
| PE-0805CD270KTT | 26.5 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 2500                          | 0.25                        | 500                          |
| PE-0805CD330KTT | 32.75 @ 250MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 2050                          | 0.27                        | 500                          |
| PE-0805CD360KTT | 36 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 1700                          | 0.27                        | 500                          |
| PE-0805CD390KTT | 38.5 @ 250MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 2000                          | 0.29                        | 500                          |
| PE-0805CD430KTT | 43 @ 200MHz                     | ±5% (J)               | ±2% (G)               | 60 @ 500MHz             | 1650                          | 0.34                        | 500                          |
| PE-0805CD470KTT | 46.6 @ 200MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1650                          | 0.31                        | 500                          |
| PE-0805CD560KTT | 55.5 @ 200MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1550                          | 0.34                        | 500                          |
| PE-0805CD680KTT | 67.8 @ 200MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1450                          | 0.38                        | 500                          |
| PE-0805CD820KTT | 82.7 @ 150MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1300                          | 0.42                        | 400                          |
| PE-0805CD910KTT | 91 @ 150MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 65 @ 500MHz             | 1200                          | 0.44                        | 400                          |
| PE-0805CD101KTT | 98.7 @ 150MHz                   | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1200                          | 0.46                        | 400                          |
| PE-0805CD111KTT | 110 @ 150MHz                    | ±5% (J)               | ±2% (G)               | 50 @ 250MHz             | 1000                          | 0.48                        | 400                          |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 0805CD Series

Electrical Specifications @ 25°C (continued)

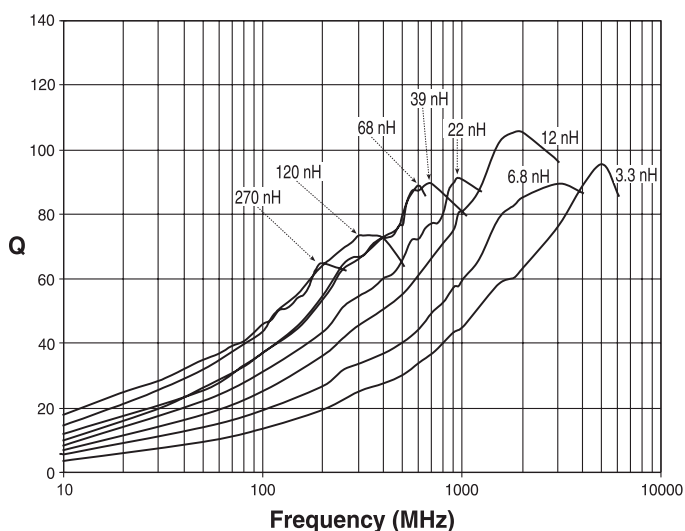
| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| PE-0805CD121KTT | 119.7 @ 150MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 1100                          | 0.51                        | 400                                      |
| PE-0805CD151KTT | 149.4 @ 100MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 920                           | 0.56                        | 400                                      |
| PE-0805CD181KTT | 179.6 @ 100MHz                  | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 870                           | 0.64                        | 400                                      |
| PE-0805CD221KTT | 217 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 850                           | 0.70                        | 400                                      |
| PE-0805CD241KTT | 240 @ 100MHz                    | ±5% (J)               | ±2% (G)               | 44 @ 250MHz             | 690                           | 1.00                        | 350                                      |
| PE-0805CD271KTT | 269 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 650                           | 1.00                        | 350                                      |
| PE-0805CD331KTT | 331 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 600                           | 1.40                        | 310                                      |
| PE-0805CD391KTT | 386 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 35 @ 250MHz             | 560                           | 1.50                        | 290                                      |
| PE-0805CD471KTT | 477 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 33 @ 100MHz             | 375                           | 1.76                        | 250                                      |
| PE-0805CD561KTT | 545 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 23 @ 50MHz              | 340                           | 1.90                        | 230                                      |
| PE-0805CD681KTT | 674 @ 25MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 23 @ 50MHz              | 188                           | 2.20                        | 190                                      |
| PE-0805CD821KTT | 783 @ 25MHz                     | ±5% (J)               | ±2% (G)               | 23 @ 50MHz              | 215                           | 2.35                        | 180                                      |
| PE-0805CD102KTT | 1000 @ 25MHz                    | ±5% (J)               | ±2% (G)               | 20 @ 50MHz              | 200                           | 3.60                        | 150                                      |
| PE-0805CD122KTT | 1200 @ 25MHz                    | ±5% (J)               | ±2% (G)               | 20 @ 50MHz              | 200                           | 4.10                        | 120                                      |
| PE-0805CD152KTT | 1500 @ 25MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 20 @ 50MHz              | 200                           | 5.00                        | 100                                      |

\*\*\* For other inductance values in 0805 size, please refer to 0805CM (page 14) and 0805FT (page 16). \*\*\*

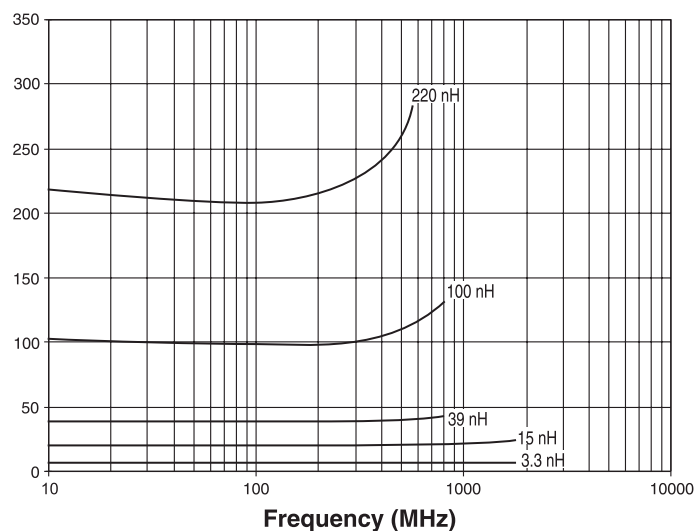
## Notes:

- Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
- Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
- SRF measured using a HP8753C Network Analyzer.
- Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
- Based on a 15°C maximum temperature rise.

Typical Q vs Frequency

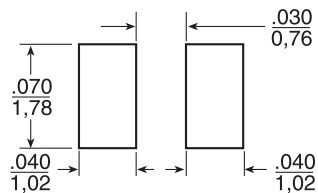
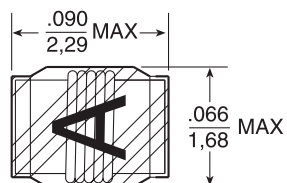


Typical Inductance vs Frequency

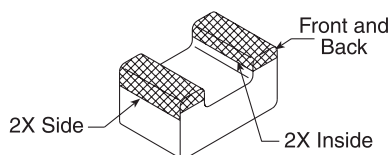
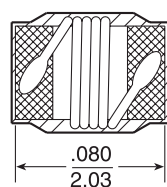
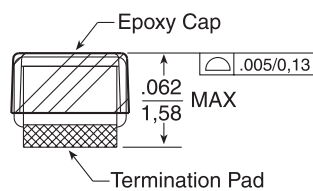
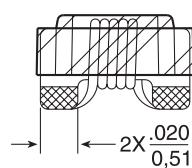


# WIRE-WOUND RF CHIP INDUCTORS - 0805CD SERIES

## Mechanical



**SUGGESTED PAD LAYOUT**



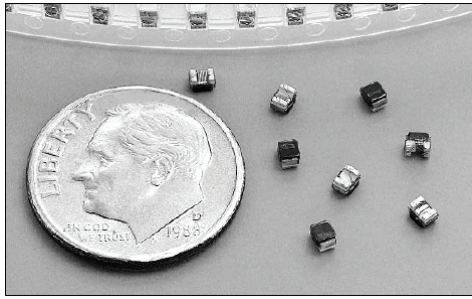
**Weight** .....0.012grams

**Tape & Reel** .....2000/reel

**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0,25}$

# WIRE-WOUND RF CHIP INDUCTORS - 0805CM SERIES



- Wirewound ceramic core construction
- High Q values
- High self resonant frequency
- Industry standard 0805 (2012) surface mount land pattern

See page 3 for Competition Cross Reference

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------|
| PE-0805CM030KTT | 3.3 @ 250MHz                    | ±10% (K)              | ±5% (J)               | 37 @ 1500MHz            | 5000                          | 0.08                        | 600                          |
| PE-0805CM060KTT | 6.8 @ 250MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 46 @ 1000MHz            | 5000                          | 0.15                        | 600                          |
| PE-0805CM080KTT | 8.2 @ 250MHz                    | ±5% (J)               | ±2% (G)               | 47 @ 1000MHz            | 3900                          | 0.13                        | 600                          |
| PE-0805CM100KTT | 10 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 3900                          | 0.10                        | 600                          |
| PE-0805CM120KTT | 12 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 2900                          | 0.13                        | 600                          |
| PE-0805CM150KTT | 15 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 2700                          | 0.15                        | 600                          |
| PE-0805CM180KTT | 18 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 500MHz             | 2600                          | 0.13                        | 600                          |
| PE-0805CM220KTT | 22 @ 250MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 55 @ 500MHz             | 2200                          | 0.13                        | 500                          |
| PE-0805CM270KTT | 27 @ 250MHz                     | ±10% (K)              | ±5% (J)               | 55 @ 500MHz             | 2000                          | 0.23                        | 500                          |
| PE-0805CM330KTT | 33 @ 250MHz                     | ±10% (K)              | ±5% (J)               | 58 @ 500MHz             | 1800                          | 0.18                        | 500                          |
| PE-0805CM390KTT | 39 @ 250MHz                     | ±5% (J)               |                       | 60 @ 500MHz             | 1600                          | 0.23                        | 500                          |
| PE-0805CM470KTT | 47 @ 200MHz                     | ±10% (K)              | ±5% (J)               | 60 @ 500MHz             | 1650                          | 0.25                        | 500                          |
| PE-0805CD560KTT | 56 @ 200MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1300                          | 0.16                        | 500                          |
| PE-0805CM680KTT | 68 @ 200MHz                     | ±5% (J)               |                       | 60 @ 500MHz             | 1350                          | 0.18                        | 500                          |
| PE-0805CM820KTT | 82 @ 150MHz                     | ±5% (J)               | ±5% (J), ±2% (G)      | 60 @ 500MHz             | 1300                          | 0.36                        | 400                          |
| PE-0805CM101KTT | 100 @ 150MHz                    | ±10% (K)              | ±2% (G)               | 55 @ 500MHz             | 1100                          | 0.36                        | 400                          |
| PE-0805CM121KTT | 120 @ 150MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 1100                          | 0.56                        | 350                          |
| PE-0805CM151KTT | 150 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 900                           | 0.56                        | 350                          |
| PE-0805CM181KTT | 180 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 50 @ 250MHz             | 875                           | 0.69                        | 300                          |
| PE-0805CM221KTT | 220 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 250MHz             | 800                           | 0.85                        | 300                          |
| PE-0805CM271KTT | 270 @ 100MHz                    | ±5% (J)               | ±2% (G)               | 40 @ 100MHz             | 800                           | 0.90                        | 300                          |
| PE-0805CM331KTT | 330 @ 100MHz                    | ±10% (K)              | ±5% (J), ±2% (G)      | 40 @ 100MHz             | 775                           | 1.28                        | 300                          |
| PE-0805CM391KTT | 390 @ 100MHz                    | ±2% (G)               |                       | 40 @ 100MHz             | 725                           | 1.70                        | 300                          |
| PE-0805CM471KTT | 470 @ 100MHz                    | ±10% (K)              | ±5% (J)               | 38 @ 100MHz             | 600                           | 3.25                        | 240                          |
| PE-0805CM561KTT | 560 @ 100MHz                    | ±10% (K)              | ±5% (J)               | 40 @ 100MHz             | 600                           | 3.10                        | 240                          |
| PE-0805CM681KTT | 680 @ 50MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 32 @ 50MHz              | 550                           | 3.50                        | 240                          |
| PE-0805CM821KTT | 820 @ 50MHz                     | ±5% (J)               |                       | 23 @ 50MHz              | 215                           | 2.35                        | 200                          |

(Continued on next page)

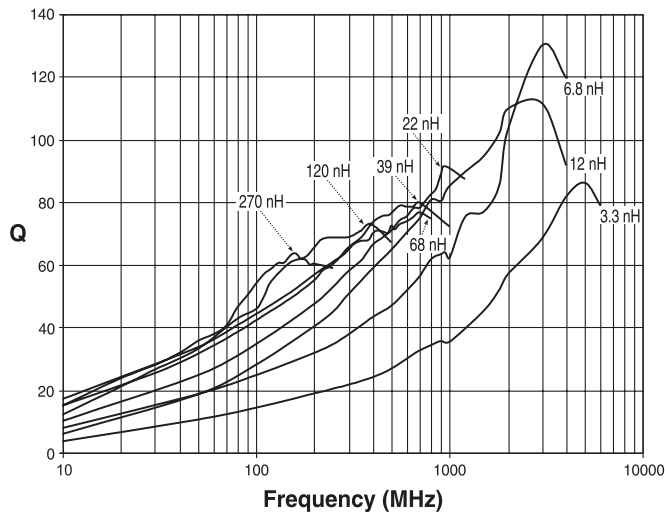


# WIRE-WOUND RF CHIP INDUCTORS - 0805CM SERIES

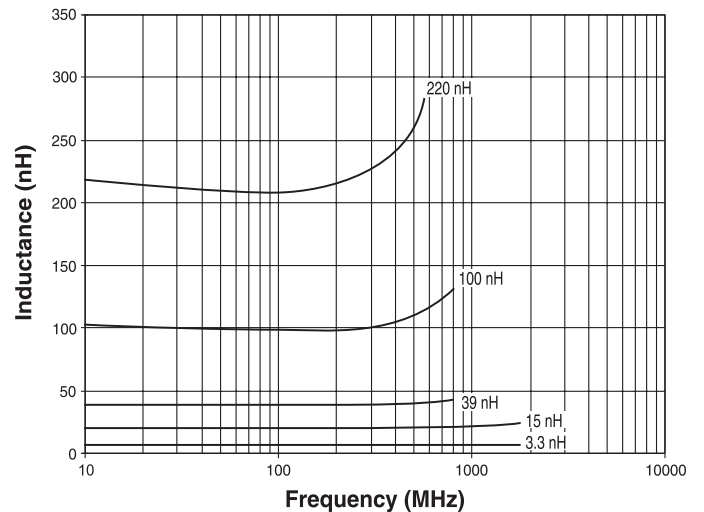
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15 °C maximum temperature rise.

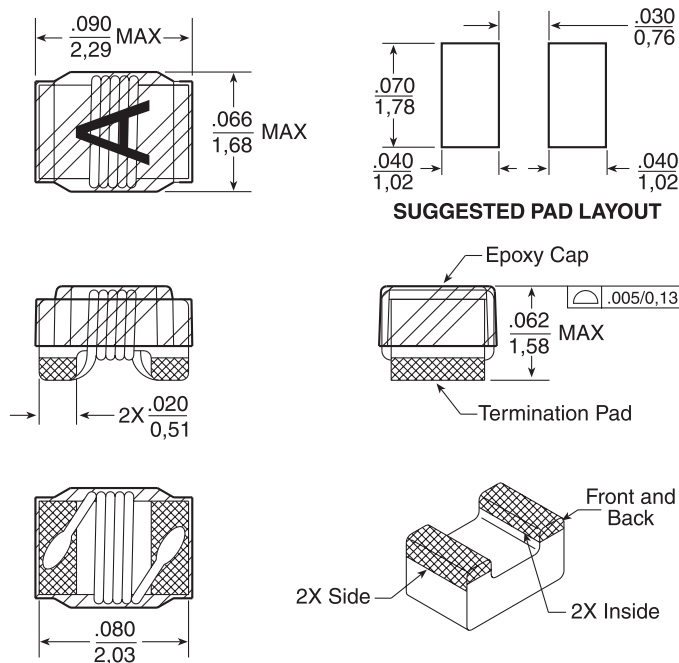
### Typical Q vs Frequency



### Typical Inductance vs Frequency



## Mechanical



Weight .....0.012grams

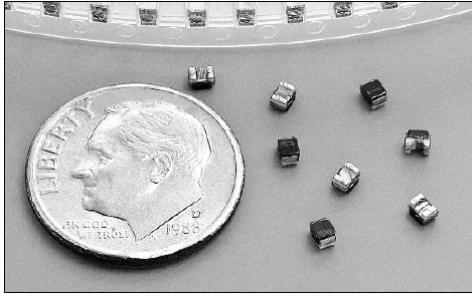
Tape & Reel .....2000/reel

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$



# WIRE-WOUND RF CHIP INDUCTORS - 0805FT SERIES



- Wirewound ceramic core construction
- High Q values and resonant frequency
- Industry standard 0805 (2012) surface mount land pattern

See page 3 for Competition Cross Reference

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| PE-0805FT102KTT | 1.0 @ 7.96MHz                   | ±5% (J)               |                       | 15 @ 7.96MHz            | 63                            | 1.20                        | 245                                      |
| PE-0805FT152KTT | 1.5 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 60                            | 1.45                        | 225                                      |
| PE-0805FT222KTT | 2.2 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 58                            | 1.80                        | 200                                      |
| PE-0805FT332KTT | 3.3 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 50                            | 2.30                        | 175                                      |
| PE-0805FT472KTT | 4.7 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 43                            | 2.80                        | 140                                      |
| PE-0805FT682KTT | 6.8 @ 7.96MHz                   | ±10% (K)              | ±5% (J)               | 15 @ 7.96MHz            | 36                            | 3.40                        | 115                                      |
| PE-0805FT103KTT | 10 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 30                            | 4.70                        | 98                                       |
| PE-0805FT153KTT | 15 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 23                            | 6.50                        | 80                                       |
| PE-0805FT223KTT | 22 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 20                            | 8.00                        | 68                                       |
| PE-0805FT333KTT | 33 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 17                            | 10.70                       | 60                                       |
| PE-0805FT473KTT | 47 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 10 @ 2.52MHz            | 14                            | 13.80                       | 55                                       |
| PE-0805FT683KTT | 68 @ 2.52MHz                    | ±10% (K)              | ±5% (J)               | 8 @ 2.52MHz             | 11                            | 17.50                       | 49                                       |

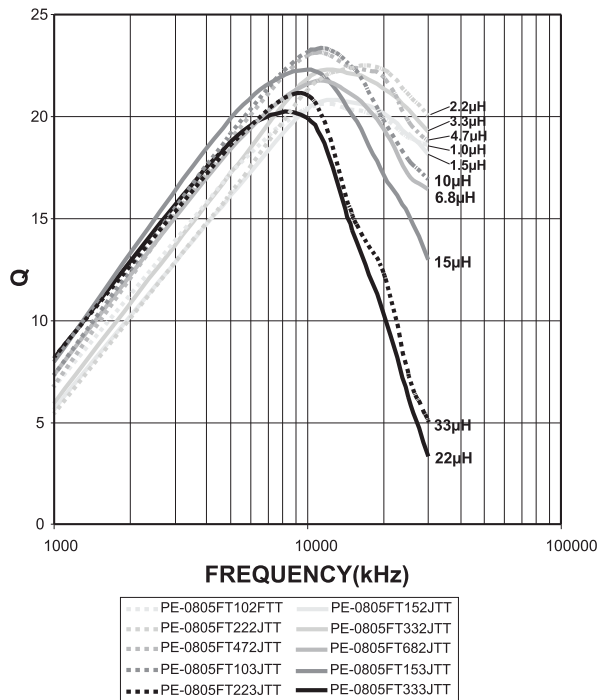
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.

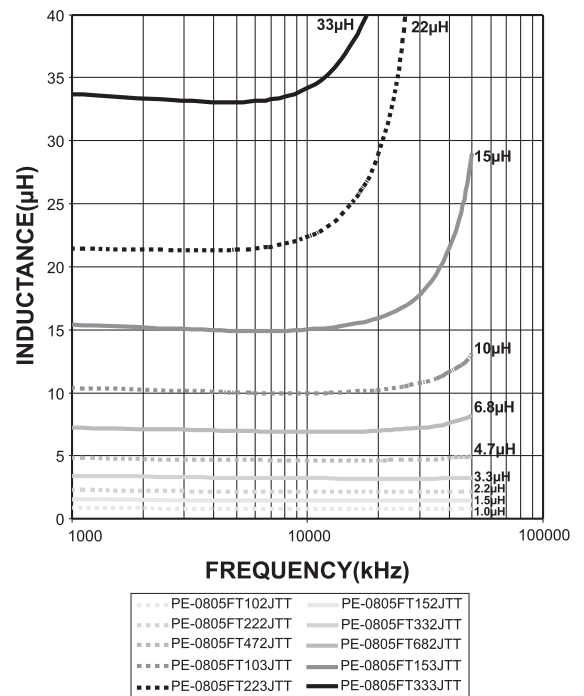
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.

# CONNECTOR PRODUCTS

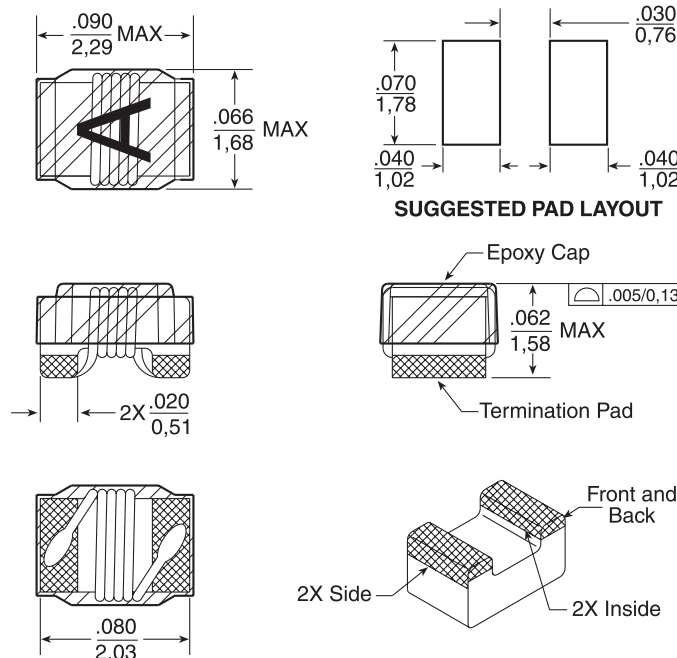
## Typical Q vs Frequency



## Typical Inductance vs Frequency



## Mechanical



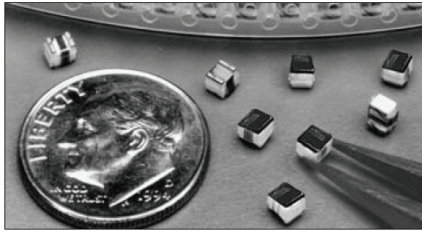
Weight .....0.012grams

Tape & Reel .....2000/reel

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 1008CD SERIES



- Wirewound ceramic core construction
- High Q values and high self-resonant frequency
- Industry standard 1008 (2520) surface mount land pattern

See page 3 for Competition Cross Reference

| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                               |                             |                                          |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-1008CD090JTT                  | 9,7 @ 50MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 500MHz             | 4100.0                        | 0.09                        | 1000                                     |
| PE-1008CD100JTT                  | 10 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 500MHz             | 4100.0                        | 0.09                        | 1000                                     |
| PE-1008CD120JTT                  | 12 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 500MHz             | 3300.0                        | 0.09                        | 1000                                     |
| PE-1008CD140JTT                  | 14,3 @ 50MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 500MHz             | 1850.0                        | 0.10                        | 1000                                     |
| PE-1008CD150JTT                  | 15 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 500MHz             | 1850.0                        | 0.10                        | 1000                                     |
| PE-1008CD180JTT                  | 17, 8 @ 50MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 350MHz             | 2500.0                        | 0.11                        | 1000                                     |
| PE-1008CD220JTT                  | 22 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 55 @ 350MHz             | 1800.0                        | 0.12                        | 1000                                     |
| PE-1008CD270JTT                  | 27 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 55 @ 350MHz             | 1500.0                        | 0.11                        | 1000                                     |
| PE-1008CD330JTT                  | 33 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 1600.0                        | 0.14                        | 1000                                     |
| PE-1008CD390JTT                  | 39 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 1400.0                        | 0.12                        | 1000                                     |
| PE-1008CD470JTT                  | 47 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 65 @ 350MHz             | 1200.0                        | 0.08                        | 1000                                     |
| PE-1008CD680JTT                  | 68 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 65 @ 350MHz             | 1100.0                        | 0.07                        | 1000                                     |
| PE-1008CD820JTT                  | 82 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 950.0                         | 0.14                        | 1000                                     |
| PE-1008CD101JTT                  | 100 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 900.0                         | 0.15                        | 650                                      |
| PE-1008CD121JTT                  | 120 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 950.0                         | 0.63                        | 650                                      |
| PE-1008CD151JTT                  | 150 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 625.0                         | 0.16                        | 580                                      |
| PE-1008CD181JTT                  | 180 @ 25MHz                     | ±5%                   | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 650.0                         | 0.77                        | 620                                      |
| PE-1008CD221JTT                  | 220 @ 25MHz                     | ±5%                   | ±5% (J), ±2% (G)      | 45 @ 100MHz             | 625.0                         | 0.84                        | 500                                      |
| PE-1008CD271JTT                  | 270 @ 25MHz                     | ±5%                   | ±5% (J), ±2% (G)      | 45 @ 350MHz             | 525.0                         | 0.91                        | 500                                      |
| PE-1008CD331JTT                  | 330 @ 25MHz                     | ±5%                   | ±2% (G)               | 45 @ 100MHz             | 500.0                         | 1.05                        | 450                                      |
| PE-1008CD391JTT                  | 390 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 475.0                         | 1.12                        | 470                                      |
| PE-1008CD471JTT                  | 470 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 450.0                         | 1.19                        | 420                                      |
| PE-1008CD561JTT                  | 560 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 415.0                         | 1.33                        | 310                                      |
| PE-1008CD621JTT                  | 620 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 375.0                         | 1.40                        | 300                                      |
| PE-1008CD681JTT                  | 680 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 375.0                         | 1.47                        | 230                                      |
| PE-1008CD751JTT                  | 750 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 350.0                         | 1.61                        | 200                                      |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 1008CD SERIES

| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                               |                             |                                          |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
| PE-1008CD821JTT                  | 820 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 325.0                         | 1.61                        | 180                                      |
| PE-1008CD911JTT                  | 909.5 @ 25MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 50MHz              | 290.0                         | 1.75                        | 150                                      |
| PE-1008CD102JTT                  | 1000 @ 25MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 50MHz              | 260.0                         | 1.90                        | 120                                      |
| PE-1008CD122JTT                  | 1200 @ 7.9MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 35 @ 50MHz              | 250.0                         | 2.00                        | 310                                      |
| PE-1008CD152JTT                  | 1500 @ 7.9MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 28 @ 50MHz              | 200.0                         | 2.30                        | 330                                      |
| PE-1008CD182JTT                  | 1792.9 @ 7.9MHz                 | ±5%                   | ±10% (K), ±2% (G)     | 28 @ 50MHz              | 160.0                         | 2.60                        | 300                                      |
| PE-1008CD212JTT                  | 2154.5 @ 7.9MHz                 | ±5%                   | ±10% (K), ±2% (G)     | 28 @ 50MHz              | 80.0                          | 2.80                        | 280                                      |
| PE-1008CD222JTT                  | 2200 @ 7.9MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 28 @ 50MHz              | 80.0                          | 2.80                        | 280                                      |
| PE-1008CD272JTT                  | 2700 @ 7.9MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 22 @ 50MHz              | 90.0                          | 3.20                        | 290                                      |
| PE-1008CD322JTT                  | 3207.6 @ 7.9MHz                 | ±10%                  |                       | 22 @ 25MHz              | 40.0                          | 3.40                        | 290                                      |
| PE-1008CD332JTT                  | 3300 @ 7.9MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 22 @ 25MHz              | 40.0                          | 3.40                        | 290                                      |
| PE-1008CD392JTT                  | 3900 @ 7.9MHz                   | ±5%                   | ±10% (K), ±2% (G)     | 20 @ 25MHz              | 35.0                          | 3.60                        | 260                                      |
| PE-1008CD452JTT                  | 4526.2 @ 7.9MHz                 | ±5%                   | ±10% (K), ±2% (G)     | 20 @ 25MHz              | 25.0                          | 4.00                        | 260                                      |
| PE-1008CD472JTT                  | 4700 @ 7.9MHz                   | ±5%                   | ±10% (K)              | 20 @ 25MHz              | 25.0                          | 4.00                        | 260                                      |
| PE-1008CD562JTT                  | 5600 @ 7.9MHz                   | ±5%                   | ±10% (K)              | 20 @ 25MHz              | 60.0                          | 5.40                        | 240                                      |
| PE-1008CD682JTT                  | 6800 @ 7.9MHz                   | ±5%                   |                       | 18 @ 7.9MHz             | 40.0                          | 4.90                        | 200                                      |
| PE-1008CD822JTT                  | 8200 @ 7.9MHz                   | ±5%                   |                       | 18 @ 7.9MHz             | 25.0                          | 6.00                        | 160                                      |

\*\*\* For other inductance values in 1008 size, please refer to 1008CM (page 21-22) and 1008CQ (page 23) \*\*\*

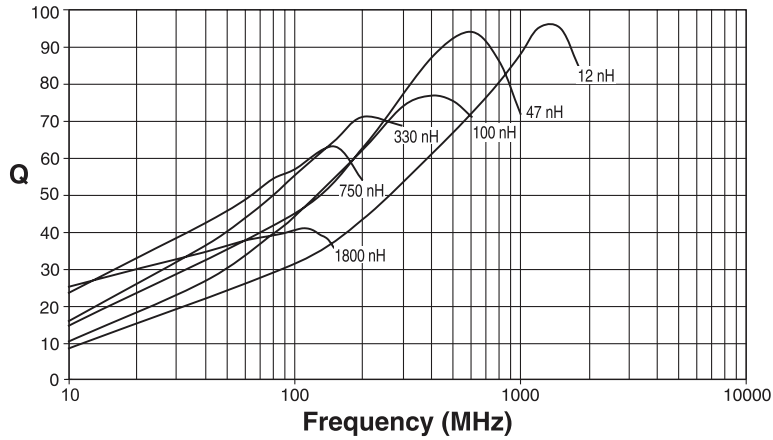
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.032 grams typical.
7. These components are 0.055" in height.

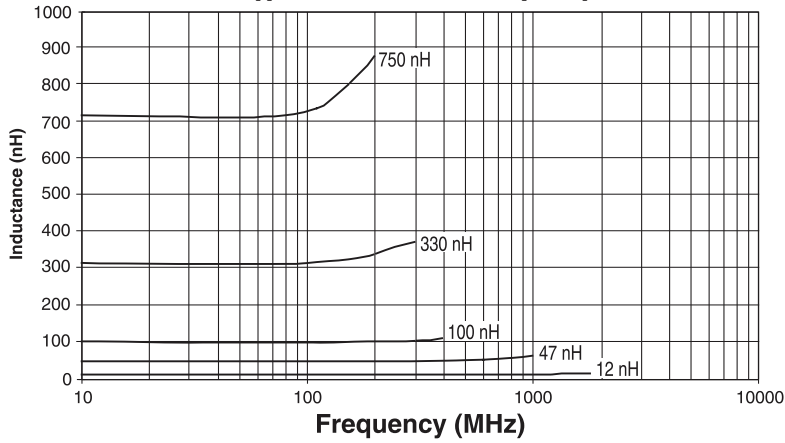
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# WIRE-WOUND RF CHIP INDUCTORS - 1008CD SERIES

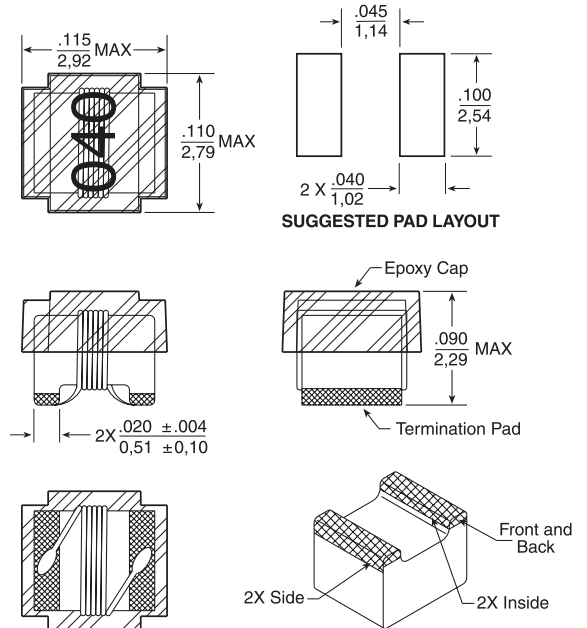
Typical Q vs Frequency



Typical Inductance vs Frequency



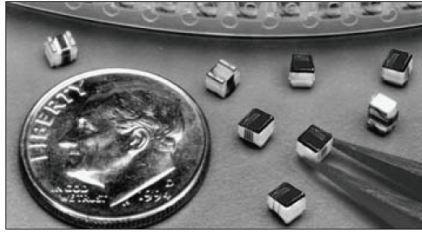
## Mechanical



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 1008CM SERIES



- Wirewound ceramic core construction
- High Q values and high self-resonant frequency
- Industry standard 1008 (2520) surface mount land pattern

See page 3 for Competition Cross Reference

| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                               |                             |                                          |       |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------------------|-------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) | Ind   |
| PE-1008CM040KTT                  | 4.7 @ 50MHz                     | ±10%                  |                       | 60 @ 1500MHz            | 5500.0                        | 0.09                        | 1000                                     | 4.7   |
| PE-1008CM080JTT                  | 8.2 @ 50MHz                     | ±5%                   | ±10% (K)              | 60 @ 1500MHz            | 5500.0                        | 0.09                        | 1000                                     | 8.2   |
| PE-1008CM100JTT                  | 10 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 500MHz             | 4100                          | 0.09                        | 1000                                     | 10.0  |
| PE-1008CM120JTT                  | 12 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 65 @ 500MHz             | 4100                          | 0.09                        | 1000                                     | 12.0  |
| PE-1008CM150JTT                  | 15 @ 50MHz                      | ±5%                   | ±10% (K)              | 55 @ 500MHz             | 3300                          | 0.09                        | 1000                                     | 15.0  |
| PE-1008CM180JTT                  | 18 @ 50MHz                      | ±2%                   | ±10% (K)              | 55 @ 500MHz             | 1850                          | 0.10                        | 1000                                     | 18.0  |
| PE-1008CM220JTT                  | 22 @ 50MHz                      | ±2%                   | ±10% (K)              | 55 @ 500MHz             | 1850                          | 0.10                        | 1000                                     | 22.0  |
| PE-1008CM270JTT                  | 27 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 2500                          | 0.11                        | 1000                                     | 27.0  |
| PE-1008CM330JTT                  | 33 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 1800                          | 0.18                        | 800                                      | 33.0  |
| PE-1008CM390JTT                  | 39 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 70 @ 350MHz             | 1400                          | 0.12                        | 1000                                     | 39.0  |
| PE-1008CM470JTT                  | 47 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 70 @ 350MHz             | 1200                          | 0.08                        | 1000                                     | 47.0  |
| PE-1008CM560JTT                  | 56 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 1150                          | 0.12                        | 1000                                     | 56.0  |
| PE-1008CM680JTT                  | 68 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 70 @ 350MHz             | 1100                          | 0.07                        | 1000                                     | 68.0  |
| PE-1008CM820JTT                  | 82 @ 50MHz                      | ±5%                   | ±10% (K), ±2% (G)     | 65 @ 350MHz             | 950                           | 0.14                        | 950                                      | 82.0  |
| PE-1008CM101JTT                  | 100 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 65 @ 350MHz             | 900                           | 0.15                        | 650                                      | 100.0 |
| PE-1008CM121JTT                  | 120 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 60 @ 350MHz             | 825                           | 0.22                        | 650                                      | 120.0 |
| PE-1008CM151JTT                  | 150 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 100MHz             | 625                           | 0.16                        | 580                                      | 150.0 |
| PE-1008CM181JTT                  | 180 @ 25MHz                     | ±5%                   | ±2% (G)               | 50 @ 100MHz             | 650                           | 0.25                        | 600                                      | 180.0 |
| PE-1008CM201JTT                  | 200 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 100MHz             | 630                           | 0.24                        | 580                                      | 200.0 |
| PE-1008CM221JTT                  | 220 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 100MHz             | 625                           | 0.28                        | 500                                      | 220.0 |
| PE-1008CM271JTT                  | 270 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 525                           | 0.50                        | 500                                      | 270.0 |
| PE-1008CM331JTT                  | 330 @ 25MHz                     | ±5%                   | ±2% (G)               | 50 @ 100MHz             | 500                           | 0.80                        | 450                                      | 330.0 |
| PE-1008CM371JTT                  | 370 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 100MHz             | 490                           | 0.80                        | 430                                      | 370.0 |
| PE-1008CM391JTT                  | 390 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 100MHz             | 475                           | 0.75                        | 425                                      | 390.0 |
| PE-1008CM401GTT                  | 400 @ 25MHz                     | ±2%                   |                       | 50 @ 100MHz             | 470                           | 0.75                        | 420                                      | 400.0 |
| PE-1008CM471JTT                  | 470 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 100MHz             | 450                           | 0.70                        | 350                                      | 470.0 |
| PE-1008CM561JTT                  | 560 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 50 @ 100MHz             | 425                           | 0.80                        | 350                                      | 560.0 |

(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 1008CM SERIES

Electrical Specifications @ 25°C

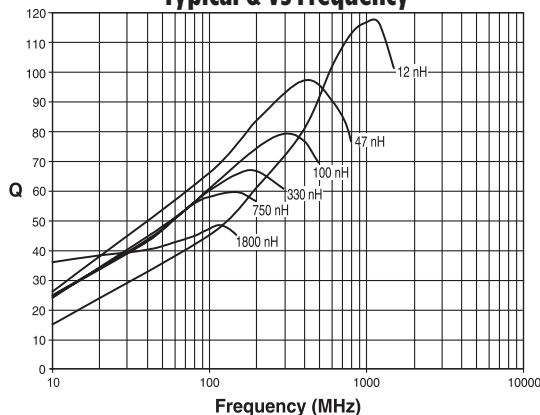
| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) | Inc    |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-------------------------------|-----------------------------|------------------------------|--------|
| PE-1008CM621JTT | 620 @ 25MHz                     | ±5%                   | ±10% (K)              | 45 @ 100MHz             | 375.0                         | 1.90                        | 200                          | 620.0  |
| PE-1008CM681JTT | 680 @ 25MHz                     | ±5%                   | ±2% (G)               | 45 @ 100MHz             | 375.0                         | 2.30                        | 200                          | 680.0  |
| PE-1008CM751JTT | 750 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 45 @ 100MHz             | 350.0                         | 1.60                        | 200                          | 750.0  |
| PE-1008CM821JTT | 820 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 40 @ 100MHz             | 325.0                         | 3.30                        | 200                          | 820.0  |
| PE-1008CM911JTT | 910 @ 25MHz                     | ±5%                   | ±10% (K), ±2% (G)     | 40 @ 50MHz              | 300.0                         | 2.10                        | 200                          | 910.0  |
| PE-1008CM102JTT | 1000 @ 25MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 40 @ 50MHz              | 300.0                         | 1.80                        | 200                          | 1000.0 |
| PE-1008CM122JTT | 1200 @ 10MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 40 @ 50MHz              | 250.0                         | 3.00                        | 200                          | 1200.0 |
| PE-1008CM152JTT | 1500 @ 10MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 40 @ 50MHz              | 200.0                         | 4.00                        | 150                          | 1500.0 |
| PE-1008CM182JTT | 1800 @ 10MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 40 @ 50MHz              | 150.0                         | 5.09                        | 150                          | 1800.0 |
| PE-1008CM222JTT | 2200 @ 10MHz                    | ±5%                   | ±10% (K), ±2% (G)     | 30 @ 25MHz              | 80.0                          | 5.85                        | 150                          | 2200.0 |
| PE-1008CM272JTT | 2700 @ 10MHz                    | ±10%                  |                       | 30 @ 25MHz              | 90.0                          | 7.70                        | 150                          | 2700.0 |
| PE-1008CM332GTT | 3300 @ 10MHz                    | ±2%                   | ±10% (K)              | 25 @ 15MHz              | 40.0                          | 7.80                        | 150                          | 3300.0 |
| PE-1008CM472JTT | 4700 @ 10MHz                    | ±5%                   | ±5% (J), ±2% (G)      | 16 @ 15MHz              | 25.0                          | 6.00                        | 150                          | 4700.0 |

## Notes:

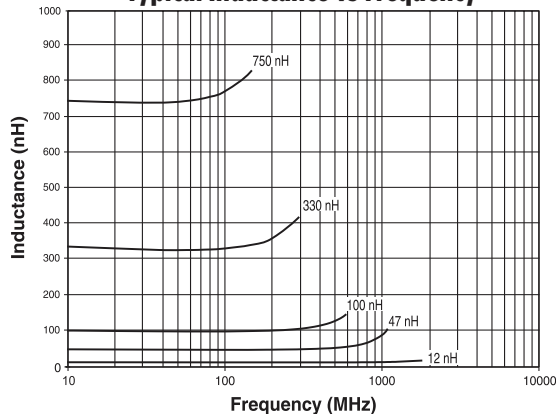
1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.

4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.032 grams typical.

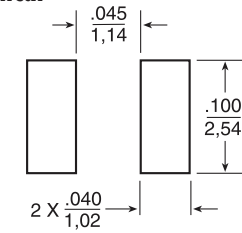
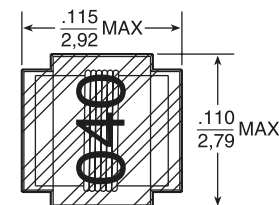
Typical Q vs Frequency



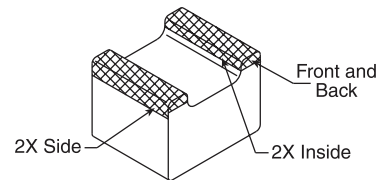
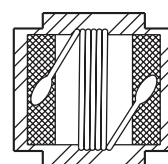
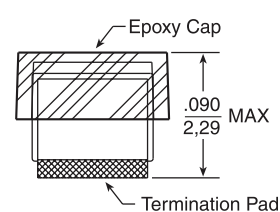
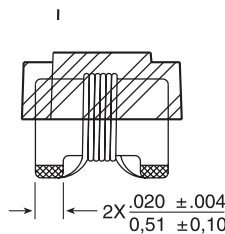
Typical Inductance vs Frequency



## Mechanical



SUGGESTED PAD LAYOUT



Dimensions: Inches  
mm

Unless otherwise specified, all tolerances are ± .010  
0.25



# WIRE-WOUND RF CHIP INDUCTORS - 1008CQ SERIES



- Wirewound ceramic core construction
- High Q values and Idc values
- High self-resonant frequency
- Industry standard 1008 (2520) surface mount land pattern

See page 3 for Competition Cross Reference

| Electrical Specifications @ 25°C |                                 |                       |                       |                         |                                   |                             |                              |       |
|----------------------------------|---------------------------------|-----------------------|-----------------------|-------------------------|-----------------------------------|-----------------------------|------------------------------|-------|
| Part Number                      | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF Min <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | Idc <sup>5</sup><br>(mA MAX) | Ind   |
| PE-1008CQ4N1JTT                  | 4.1 @ 50MHz                     | ±5%                   | ±10% (K)              | 75 @ 1500MHz            | 6000.0                            |                             |                              | 4.1   |
| PE-1008CQ100JTT                  | 10 @ 50MHz                      | ±5%                   | ±10% (K)              | 60 @ 500MHz             | 3600.0                            |                             |                              | 10.0  |
| PE-1008CQ180JTT                  | 18 @ 50MHz                      | ±5%                   | ±10% (K)              | 62 @ 350MHz             | 2700.0                            |                             |                              | 18.0  |
| PE-1008CQ390JTT                  | 39 @ 50MHz                      | ±5%                   |                       | 75 @ 350MHz             | 1300.0                            |                             |                              | 39.0  |
| PE-1008CQ470KTT                  | 47 @ 50MHz                      | ±10%                  |                       | 75 @ 350MHz             | 1450.0                            |                             |                              | 47.0  |
| PE-1008CQ820JTT                  | 82 @ 50MHz                      | ±5%                   | ±10% (K)              | 80 @ 350MHz             | 1060.0                            |                             |                              | 82.0  |
| PE-1008CQ101JTT                  | 100 @ 50MHz                     | ±5%                   | ±10% (K)              | 62 @ 350MHz             | 820.0                             |                             |                              | 100.0 |
| PE-1008CQ151KTT                  | 150 @ 50MHz                     | ±10%                  |                       | 60 @ 350MHz             | 750.0                             |                             |                              | 150.0 |
| PE-1008CQ181JTT                  | 180 @ 50MHz                     | ±5%                   | ±10% (K)              | 55 @ 350MHz             | 800.0                             |                             |                              | 180.0 |
| PE-1008CQ221JTT                  | 220 @ 50MHz                     | ±5%                   | ±10% (K)              | 56 @ 350MHz             | 680.0                             |                             |                              | 220.0 |
| PE-1008CQ271JTT                  | 270 @ 50MHz                     | ±5%                   | ±10% (K)              | 45 @ 350MHz             | 600.0                             |                             |                              | 270.0 |
| PE-1008CQ331JTT                  | 330 @ 50MHz                     | ±5%                   | ±10% (K)              | 52 @ 100MHz             | 550.0                             |                             |                              | 330.0 |
| PE-1008CQ391JTT                  | 390 @ 50MHz                     | ±5%                   | ±10% (K)              | 35 @ 350MHz             | 500.0                             |                             |                              | 390.0 |

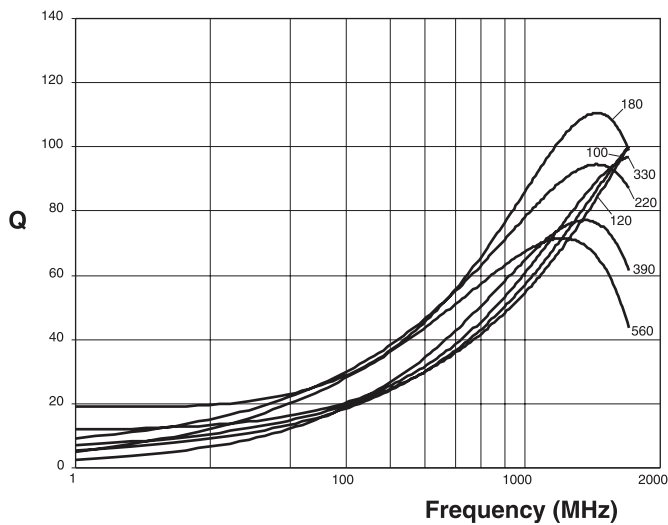
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.032 grams typical.

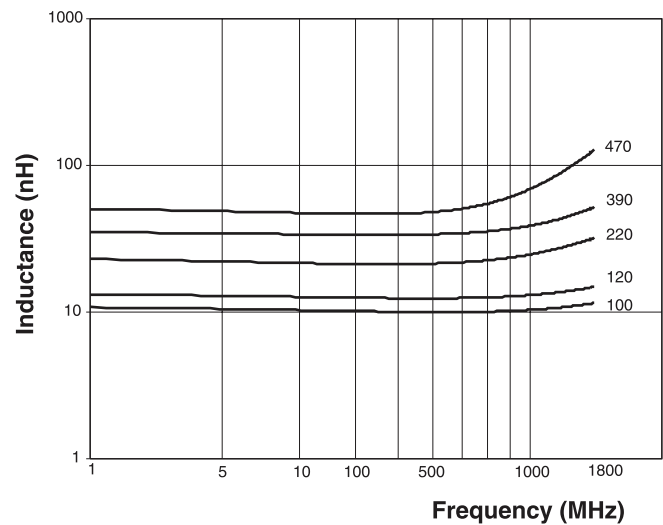


# WIRE-WOUND RF CHIP INDUCTORS - 1008CQ SERIES

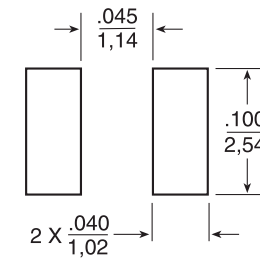
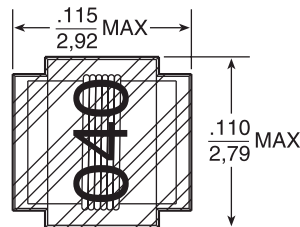
Typical Q vs Frequency



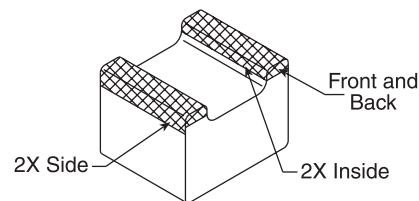
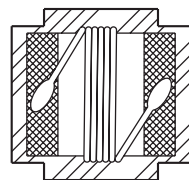
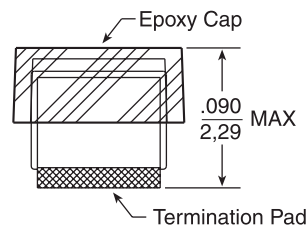
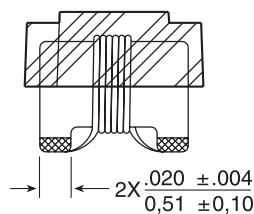
Typical Inductance vs Frequency



## Mechanical



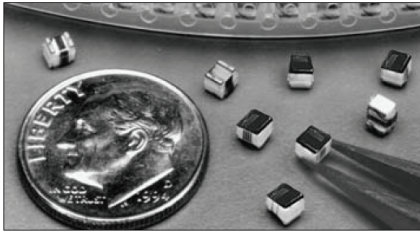
SUGGESTED PAD LAYOUT



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

# WIRE-WOUND RF CHIP INDUCTORS - 1206CD SERIES



- Wirewound ceramic core construction
  - High Q values and self-resonant frequency
  - Industry standard 1206 (3216) SMT land pattern
- See page 3 for Competition Cross Reference

Electrical Specifications @ 25°C

| Part Number     | Inductance <sup>1</sup><br>(nH) | Standard<br>Tolerance | Optional<br>Tolerance | Q <sup>2</sup><br>(MIN) | SRF Min <sup>3</sup><br>(MHz MIN) | Rdc <sup>4</sup><br>(Ω MAX) | I <sub>dc</sub> <sup>5</sup><br>(mA MAX) |
|-----------------|---------------------------------|-----------------------|-----------------------|-------------------------|-----------------------------------|-----------------------------|------------------------------------------|
| PE-1206CD030KTT | 3.3 @ 100MHz                    | ±10% (K)              | ±5% (J)               | 30 @ 300MHz             | 6200                              | 0.05                        | 1000                                     |
| PE-1206CD060KTT | 6.8 @ 100MHz                    | ±10% (K)              | ±5% (J)               | 30 @ 300MHz             | 5500                              | 0.07                        | 1000                                     |
| PE-1206CD100KTT | 10 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 40 @ 300MHz             | 4000                              | 0.08                        | 1000                                     |
| PE-1206CD120KTT | 12 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 40 @ 300MHz             | 3200                              | 0.08                        | 1000                                     |
| PE-1206CD150KTT | 15 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 40 @ 300MHz             | 3200                              | 0.10                        | 1000                                     |
| PE-1206CD180KTT | 18 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 50 @ 300MHz             | 2800                              | 0.10                        | 1000                                     |
| PE-1206CD220KTT | 22 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 50 @ 300MHz             | 2200                              | 0.10                        | 1000                                     |
| PE-1206CD270KTT | 27 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 50 @ 300MHz             | 1800                              | 0.11                        | 1000                                     |
| PE-1206CD330KTT | 33 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 55 @ 300MHz             | 1800                              | 0.11                        | 1000                                     |
| PE-1206CD390KTT | 39 @ 100MHz                     | ±5% (J)               |                       | 55 @ 300MHz             | 1800                              | 0.12                        | 1000                                     |
| PE-1206CD470KTT | 47 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 55 @ 300MHz             | 1500                              | 0.13                        | 1000                                     |
| PE-1206CD820KTT | 82 @ 100MHz                     | ±10% (K)              | ±5% (J)               | 55 @ 300MHz             | 1200                              | 0.21                        | 900                                      |
| PE-1206CD101KTT | 100 @ 100MHz                    | ±10% (K)              | ±5% (J)               | 55 @ 300MHz             | 1100                              | 0.26                        | 850                                      |
| PE-1206CD121KTT | 120 @ 100MHz                    | ±10% (K)              | ±5% (J)               | 60 @ 350MHz             | 1100                              | 0.26                        | 800                                      |
| PE-1206CD151KTT | 150 @ 100MHz                    | ±10% (K)              | ±5% (J)               | 60 @ 350MHz             | 950                               | 0.31                        | 750                                      |
| PE-1206CD181KTT | 180 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 60 @ 100MHz             | 900                               | 0.43                        | 700                                      |
| PE-1206CD221KTT | 220 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 60 @ 350MHz             | 760                               | 0.50                        | 670                                      |
| PE-1206CD271KTT | 270 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 55 @ 300MHz             | 730                               | 0.56                        | 630                                      |
| PE-1206CD331KTT | 330 @ 50MHz                     | ±10% (K)              |                       | 45 @ 150MHz             | 650                               | 0.62                        | 590                                      |
| PE-1206CD391KTT | 390 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 45 @ 150MHz             | 600                               | 0.75                        | 530                                      |
| PE-1206CD471KTT | 470 @ 50MHz                     | ±10% (K)              | ±5% (J)               | 45 @ 150MHz             | 550                               | 1.30                        | 490                                      |
| PE-1206CD561KTT | 560 @ 35MHz                     | ±10% (K)              | ±5% (J)               | 45 @ 150MHz             | 470                               | 1.34                        | 460                                      |
| PE-1206CD621KTT | 629 @ 35MHz                     | ±10% (K)              | ±5% (J), ±2% (G)      | 45 @ 150MHz             | 470                               |                             |                                          |
| PE-1206CD681KTT | 680 @ 35MHz                     | ±5% (J)               |                       | 45 @ 150MHz             | 450                               | 1.58                        | 430                                      |
| PE-1206CD821KTT | 820 @ 35MHz                     | ±5% (J)               |                       | 45 @ 150MHz             | 420                               | 1.82                        | 400                                      |
| PE-1206CD911KTT | 910 @ 35MHz                     | ±5% (J)               |                       | 45 @ 150MHz             | 410                               | 2.95                        | 400                                      |
| PE-1206CD102KTT | 1000 @ 35MHz                    | ±5% (J)               |                       | 45 @ 150MHz             | 400                               | 2.80                        | 320                                      |
| PE-1206CD122KTT | 1200 @ 35MHz                    | ±5% (J)               |                       | 45 @ 150MHz             | 380                               | 3.20                        | 300                                      |

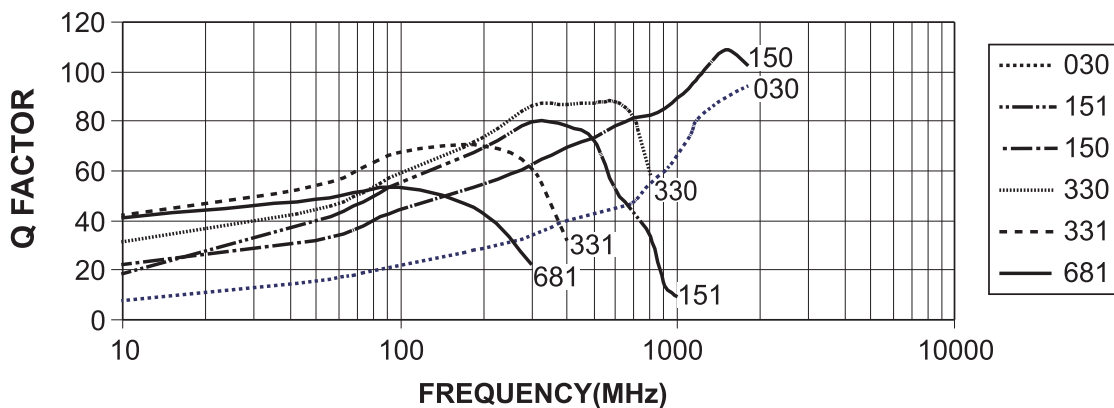
(Continued on next page)

# WIRE-WOUND RF CHIP INDUCTORS - 1206CD SERIES

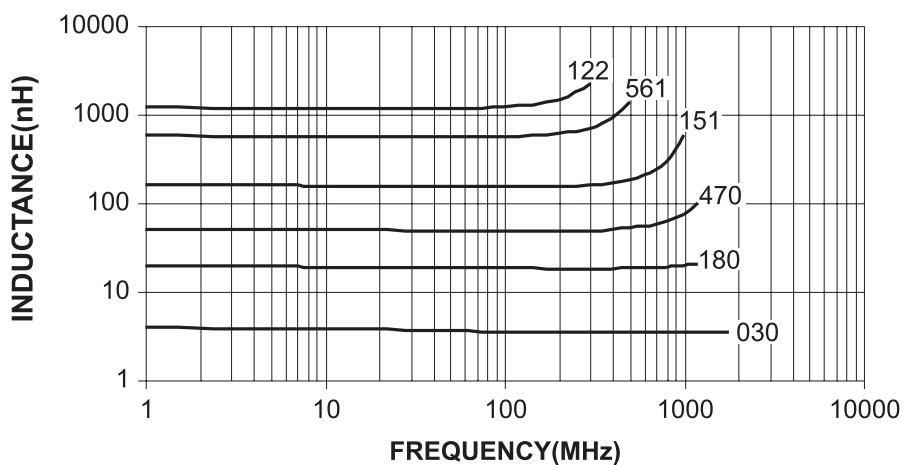
## Notes:

1. Inductance measured using a HP4286A RF Impedance Analyzer. (Please note that inductance information is not stamped on part, because of the extremely small size).
2. Q measured using a HP4291A RF Impedance Analyzer with a HP16193A Test Fixture.
3. SRF measured using a HP8753C Network Analyzer.
4. Rdc measured using a Valhalla Scientific model 4100 ATC Digital Ohmmeter.
5. Based on a 15°C maximum temperature rise.
6. Component Weight: 0.035 grams typical.
7. These components are 0.060" in height.

### Typical Q vs Frequency

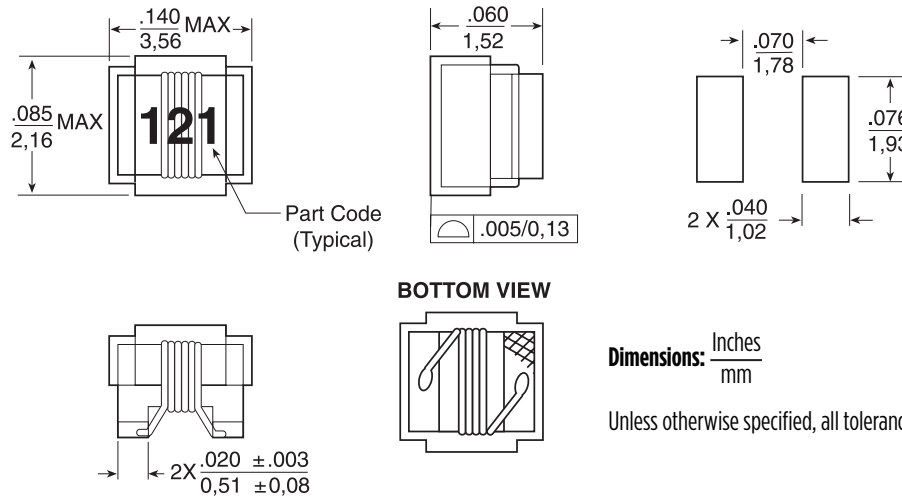


### Typical Inductance vs Frequency



# WIRE-WOUND RF CHIP INDUCTORS - 1206CD SERIES

## Mechanical



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Fax: 886 3 4356820 (FRE)

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