



# Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

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## SMD Molded Wire Wound Ferrite Chip Inductors—1306F series

### A. Electrical specifications:

| Part No.  | L (uH) | Tolerance | Q (min.) | TEST FREQ. (MHz) | SRF (min.) (MHz) | DCR (Ω) Max. | I dc (mA) | COLOR CODE |
|-----------|--------|-----------|----------|------------------|------------------|--------------|-----------|------------|
| 1306F-10N | 0.010  | M, K      | 10       | 100              | 2600             | 0.154        | 500       | Black      |
| 1306F-12N | 0.012  | M, K      | 10       | 100              | 2400             | 0.168        | 490       | Brown      |
| 1306F-15N | 0.015  | M, K      | 10       | 100              | 2200             | 0.196        | 480       | Red        |
| 1306F-18N | 0.018  | M, K      | 10       | 100              | 2000             | 0.224        | 470       | Yellow     |
| 1306F-22N | 0.022  | M, K      | 15       | 100              | 1800             | 0.252        | 460       | Green      |
| 1306F-27N | 0.027  | M, K      | 15       | 100              | 1600             | 0.280        | 450       | Blue       |
| 1306F-33N | 0.033  | M, K      | 15       | 100              | 1400             | 0.308        | 420       | Violet     |
| 1306F-39N | 0.039  | M, K      | 15       | 100              | 1300             | 0.336        | 400       | Gray       |
| 1306F-47N | 0.047  | M, K      | 15       | 100              | 1200             | 0.364        | 390       | White      |
| 1306F-56N | 0.056  | M, K      | 15       | 100              | 1100             | 0.392        | 380       | Black      |
| 1306F-68N | 0.068  | M, K      | 15       | 100              | 1000             | 0.420        | 370       | Brown      |
| 1306F-82N | 0.082  | M, K      | 15       | 100              | 950              | 0.434        | 350       | Red        |
| 1306F-R10 | 0.10   | M, K      | 15       | 100              | 850              | 0.462        | 330       | Yellow     |
| 1306F-R12 | 0.12   | M, K      | 30       | 25.2             | 150              | 0.160        | 500       | Green      |
| 1306F-R15 | 0.15   | M, K      | 30       | 25.2             | 150              | 0.170        | 490       | Blue       |
| 1306F-R18 | 0.18   | M, K      | 30       | 25.2             | 150              | 0.190        | 460       | Violet     |
| 1306F-R22 | 0.22   | M, K      | 30       | 25.2             | 150              | 0.200        | 450       | Gray       |
| 1306F-R27 | 0.27   | M, K      | 30       | 25.2             | 150              | 0.230        | 420       | White      |
| 1306F-R33 | 0.33   | M, K      | 30       | 25.2             | 150              | 0.250        | 400       | Black      |
| 1306F-R39 | 0.39   | M, K      | 30       | 25.2             | 150              | 0.270        | 380       | Brown      |
| 1306F-R47 | 0.47   | M, K      | 30       | 25.2             | 110              | 0.310        | 360       | Red        |
| 1306F-R56 | 0.56   | M, K      | 30       | 25.2             | 100              | 0.340        | 340       | Yellow     |
| 1306F-R68 | 0.68   | M, K      | 30       | 25.2             | 80               | 0.370        | 330       | Green      |
| 1306F-R82 | 0.82   | M, K      | 30       | 25.2             | 70               | 0.410        | 310       | Blue       |
| 1306F-1R0 | 1.00   | M, K      | 30       | 25.2             | 60               | 0.450        | 300       | Violet     |
| 1306F-1R2 | 1.20   | M, K      | 30       | 7.96             | 50               | 0.500        | 280       | Gray       |
| 1306F-1R5 | 1.50   | M, K      | 30       | 7.96             | 43               | 0.560        | 270       | White      |
| 1306F-1R8 | 1.80   | M, K      | 30       | 7.96             | 40               | 0.620        | 250       | Black      |
| 1306F-2R2 | 2.20   | M, K      | 30       | 7.96             | 38               | 0.680        | 240       | Brown      |
| 1306F-2R7 | 2.70   | M, K      | 30       | 7.96             | 35               | 0.760        | 230       | Red        |
| 1306F-3R3 | 3.30   | M, K      | 30       | 7.96             | 33               | 0.860        | 220       | Yellow     |
| 1306F-3R9 | 3.90   | M, K      | 30       | 7.96             | 30               | 1.450        | 170       | Green      |
| 1306F-4R7 | 4.70   | M, K      | 30       | 7.96             | 28               | 1.600        | 160       | Blue       |
| 1306F-5R6 | 5.60   | M, K      | 30       | 7.96             | 26               | 1.750        | 150       | Violet     |
| 1306F-6R8 | 6.80   | M, K      | 30       | 7.96             | 24               | 2.350        | 130       | Gray       |
| 1306F-8R2 | 8.20   | M, K      | 30       | 7.96             | 22               | 2.600        | 125       | White      |
| 1306F-100 | 10.0   | M, K      | 30       | 7.96             | 20               | 2.900        | 120       | Black      |
| 1306F-120 | 12.0   | M, K      | 20       | 2.52             | 18               | 3.500        | 105       | Brown      |
| 1306F-150 | 15.0   | M, K      | 20       | 2.52             | 16               | 3.750        | 100       | Red        |
| 1306F-180 | 18.0   | M, K      | 20       | 2.52             | 14               | 5.300        | 85        | Yellow     |
| 1306F-220 | 22.0   | M, K      | 20       | 2.52             | 12               | 6.000        | 80        | Green      |



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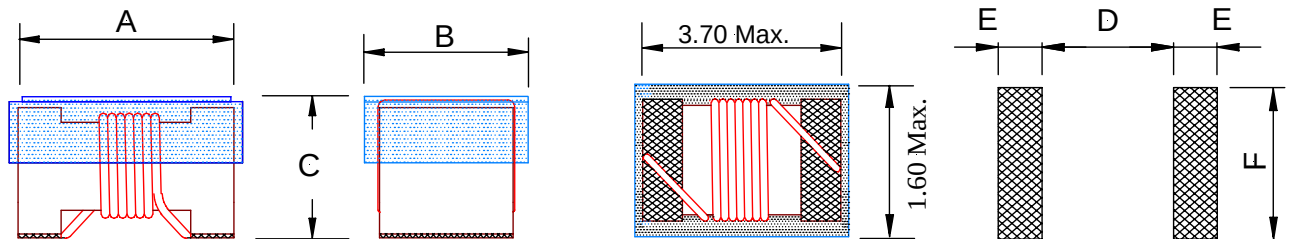
Web: <http://www.frontierusa.com>

## SMD Wire Wound Ferrite Chip Inductors—1306F series

### B. Dimensions: (Unit: mm)

| SERIES | A (Max.) | B (Max.) | C (Max.) | D (Max.) | E    | F    |
|--------|----------|----------|----------|----------|------|------|
| 1306F  | 3.60     | 1.60     | 1.60     | 2.00     | 1.02 | 1.40 |

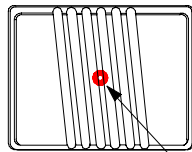
### C. Mechanical Drawing:



Land Pattern

### D. Color coding:

- These parts are marked with single color dot.
- The dot represented inductance value shows on the table.



Identifier for 1306F series.

Top view

0 = Black

1 = Brown

2 = Red

3 = Orange

4 = Yellow

5 = Green

6 = Blue

7 = Violet

8 = Gray

9 = White

Color code table



### E. General information:

- Tolerance: M:  $\pm 20\%$ , K:  $\pm 10\%$ , J:  $\pm 5\%$ .
- Operating temperature:  $-40^{\circ}\text{C}$  TO  $+125^{\circ}\text{C}$ .
- Electrical specifications at  $25^{\circ}\text{C}$ .
- For  $15^{\circ}\text{C}$  Temperature Rise.
- Small and light weight surface mounting type.
- Coil body made of ferrite material in chip form.
- High Q at high frequency.
- High self-resonance frequency.
- Inductance & Q measured using the HP4291B.
- SRF measured using the HP8720D or HP8753E.
- DCR measured using the 502BC.
- Inductance & current Range: From  $0.010\mu\text{H}$  (500mA) to  $22\mu\text{H}$  (80mA).
- RoHS compliant.

### F. Applications:

- \* Pagers.
- \* Mobile communication units.
- \* Portable telephone.
- \* Hybrid.

★ *Special specifications are available for customer's requirement.*



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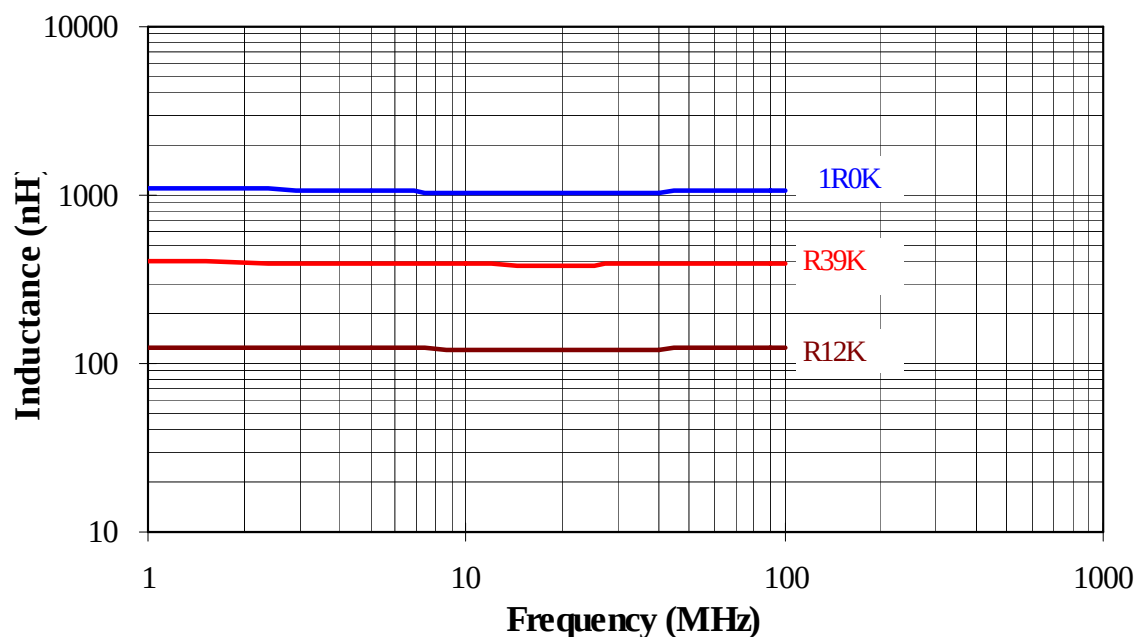
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## SMD Wire Wound Ferrite Chip Inductors—1306F series

### F. Characteristic curve:

#### 1. L vs. Frequency:



#### 2. Q vs. Frequency:

