

# Signal Inductor

## Air Wound Coil Type

SIA-09P Series

MERITEK

### PART NUMBERING SYSTEM

SIA   5N50   K   0806   09P  
(1)   (2)   (3)   (4)   (5)

| No  | item                | Digit | Description         | Series Reference                              |
|-----|---------------------|-------|---------------------|-----------------------------------------------|
| (1) | Meritek Series      | SIA   | Signal Inductor     | Air Wound Coil type                           |
| (2) | Inductance or Turns | 5N50  | 5N50: 5.50nH        | 15N7:15.7nH, 150N: 150nH N denoted to decimal |
| (3) | Tolerance           | K     | ±10%                | J: ±5%, M: ±20%, N:±30%, G: ±2%               |
| (4) | Size Code           | 0806  | 1.8x1.3mm           | Dimension information or Size Code            |
| (5) | Package Code        | 09P   | Package Information | Package or customer Project reference         |

### PACKAGE CODE REFERENCE TABLE

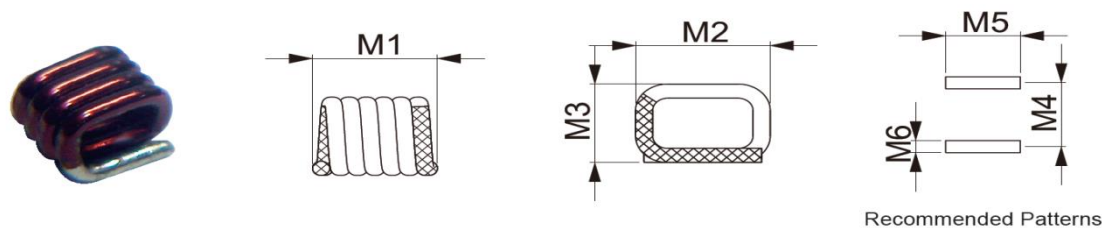
| <u>Series</u> | <u>Size</u>      | <u>Picture</u>                                                                      | <u>Inductance</u> | <u>Rated Current</u> |
|---------------|------------------|-------------------------------------------------------------------------------------|-------------------|----------------------|
| SIA-080609P   | 2.59x1.82x1.39mm |    | 5.5nH~19.4nH      | 2.9A                 |
| SIA-080709P   | 2.59x1.82x1.52mm |  | 6.9nH~22nH        | 2.7A                 |
| SIA-090809P   | 2.97x2.13x1.82mm |  | 8.1nH~27.3nH      | 4.4A                 |

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## SIA-080609P PACKAGE DIMENSION



Recommended Patterns

Unit: mm

| Part Number     | M1          | M2          | M3          | M4    | M5  | M6   |
|-----------------|-------------|-------------|-------------|-------|-----|------|
| SIA5N50□080609P | 1.346±0.102 | 1.829±0.254 | 1.397±0.102 | 0.962 | 2.6 | 0.51 |
| SIA6N00□080609P | 1.295±0.102 | 1.829±0.254 | 1.397±0.102 | 1.02  | 2.6 | 0.51 |
| SIA8N90□080609P | 1.626±0.152 | 1.829±0.254 | 1.397±0.102 | 1.32  | 2.6 | 0.51 |
| SIA12N3□080609P | 1.930±0.152 | 1.829±0.254 | 1.397±0.102 | 1.63  | 2.6 | 0.51 |
| SIA15N7□080609P | 2.286±0.152 | 1.829±0.254 | 1.397±0.102 | 1.96  | 2.6 | 0.51 |
| SIA19N4□080609P | 2.591±0.152 | 1.829±0.254 | 1.397±0.102 | 2.29  | 2.6 | 0.51 |

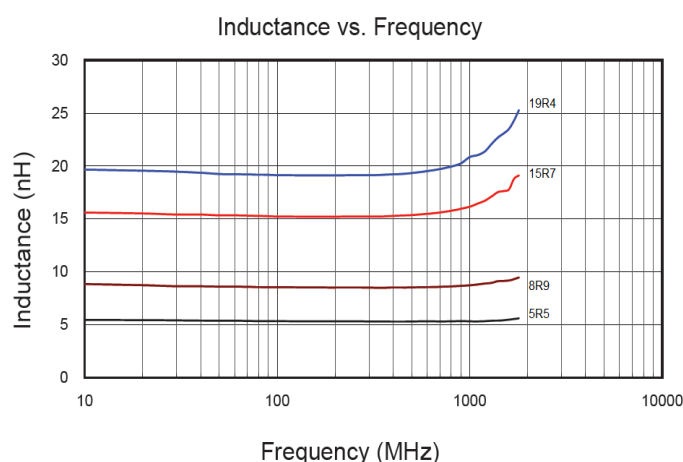
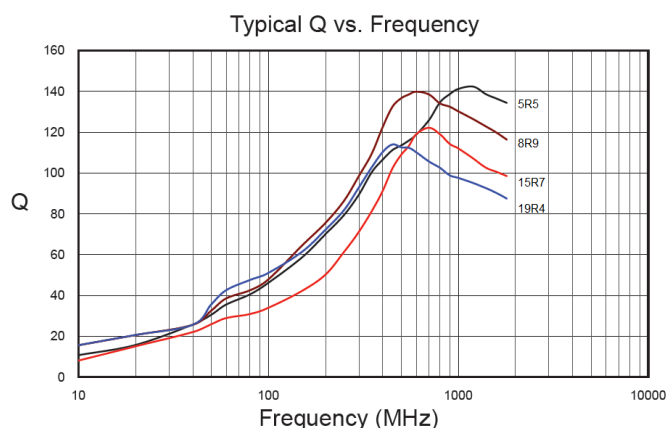
## ELECTRICAL CHARACTERISTIC

| Part Number     | Turns | Inductance (nH) | Tolerance (± %) | Min Q | Test Freq. (MHz) | Max DCR (mΩ) | Typ. SRF (GHz) | Max Rated Current (A) |
|-----------------|-------|-----------------|-----------------|-------|------------------|--------------|----------------|-----------------------|
| SIA5N50□080609P | 3     | 5.50            | J,K             | 60    | 400              | 3.4          | 4.9            | 2.9                   |
| SIA6N00□080609P | 3     | 6.00            | J,K             | 64    | 400              | 6            | 5.2            | 2.9                   |
| SIA8N90□080609P | 4     | 8.90            | J,K             | 90    | 400              | 7            | 4.3            | 2.9                   |
| SIA12N3□080609P | 5     | 12.3            | J,K             | 90    | 400              | 8            | 4.8            | 2.9                   |
| SIA15N7□080609P | 6     | 15.7            | J,K             | 90    | 400              | 9            | 4.4            | 2.9                   |
| SIA19N4□080609P | 7     | 19.4            | J,K             | 90    | 400              | 10           | 4              | 2.9                   |

NOTES:

- (Tolerance: J: ± 5%, K: ± 10%)
- Operating temperature range: -40°C to +125°C.
- Storage Temp. : -40°C to +85°C.
- MSL : Level 1
- Test Equipment: L/Q: HP-4291B With HP16193A test fixture or equivalent. SRF: HP8753E or equivalent. RDC: Chroma 16502 or equivalent.

## CHARACTERISTIC CURVE

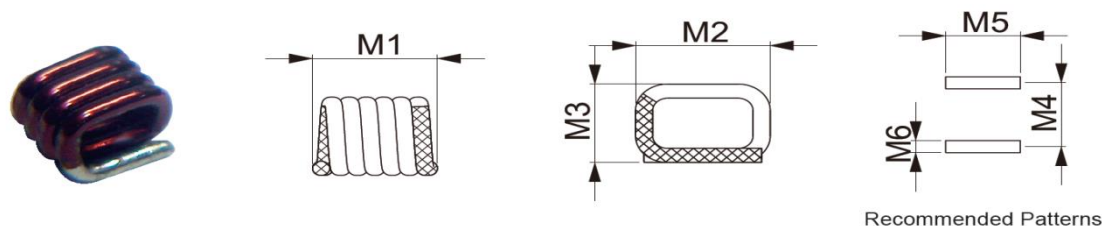


# Signal Inductor Air Wound Coil Type

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## SIA-080709P PACKAGE DIMENSION



Unit: mm

| Part Number     | M1          | M2          | M3          | M4   | M5  | M6   |
|-----------------|-------------|-------------|-------------|------|-----|------|
| SIA6N90□080709P | 1.295±0.102 | 1.829±0.254 | 1.524±0.254 | 1.02 | 2.6 | 0.51 |
| SIA10N2□080709P | 1.626±0.152 | 1.829±0.254 | 1.524±0.254 | 1.32 | 2.6 | 0.51 |
| SIA11N2□080709P | 1.549±0.152 | 1.829±0.254 | 1.524±0.254 | 1.24 | 2.6 | 0.51 |
| SIA13N7□080709P | 1.930±0.152 | 1.829±0.254 | 1.524±0.254 | 1.63 | 2.6 | 0.51 |
| SIA17N0□080709P | 2.286±0.152 | 1.829±0.254 | 1.524±0.254 | 1.96 | 2.6 | 0.51 |
| SIA22N0□080709P | 2.591±0.152 | 1.829±0.254 | 1.524±0.254 | 2.29 | 2.6 | 0.51 |

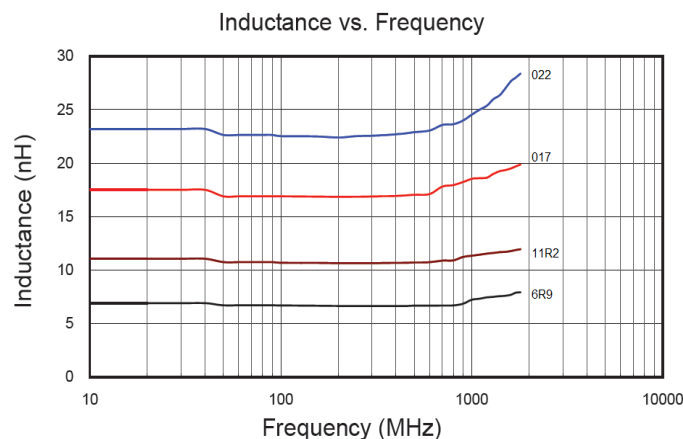
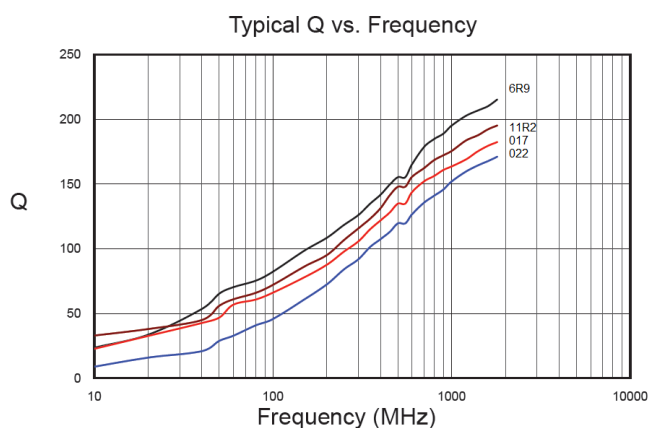
## ELECTRICAL CHARACTERISTIC

| Part Number     | Turns | Inductance (nH) | Tolerance (± %) | Min Q | Test Freq. (MHz) | Max DCR (mΩ) | Typ. SRF (GHz) | Max Rated Current (A) |
|-----------------|-------|-----------------|-----------------|-------|------------------|--------------|----------------|-----------------------|
| SIA6N90□080709P | 3     | 6.90            | J,K             | 100   | 400              | 6            | 4.6            | 2.7                   |
| SIA10N2□080709P | 4     | 10.2            | J,K             | 100   | 400              | 7            | 4              | 2.7                   |
| SIA11N2□080709P | 4     | 11.2            | J,K             | 90    | 400              | 6.3          | 3.6            | 2.7                   |
| SIA13N7□080709P | 5     | 13.7            | J,K             | 100   | 400              | 8            | 4.3            | 2.7                   |
| SIA17N0□080709P | 6     | 17.0            | J,K             | 100   | 400              | 9            | 4              | 2.7                   |
| SIA22N0□080709P | 7     | 22.0            | J,K             | 100   | 400              | 10           | 3.5            | 2.7                   |

NOTES:

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- Test Equipment: L/Q: HP-4291B With HP16193A test fixture or equivalent. SRF: HP8753E or equivalent. RDC: Chroma 16502 or equivalent.

## CHARACTERISTIC CURVE

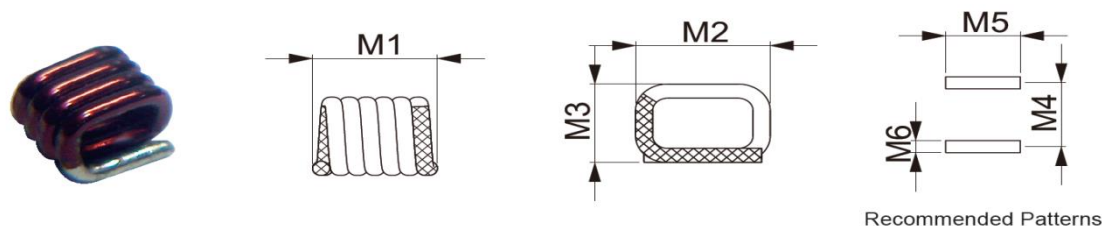


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## SIA-090809P PACKAGE DIMENSION



Unit: mm

| Part Number     | M1          | M2          | M3          | M4   | M5  | M6   |
|-----------------|-------------|-------------|-------------|------|-----|------|
| SIA8N10□090809P | 1.473±0.152 | 2.134±0.152 | 1.829±0.152 | 1.12 | 2.8 | 0.64 |
| SIA12N1□090809P | 1.854±0.152 | 2.134±0.152 | 1.829±0.152 | 1.45 | 2.8 | 0.64 |
| SIA14N7□090809P | 1.549±0.152 | 2.134±0.152 | 1.829±0.152 | 1.24 | 2.8 | 0.64 |
| SIA16N6□090809P | 2.210±0.152 | 2.134±0.152 | 1.829±0.152 | 1.83 | 2.8 | 0.64 |
| SIA21N5□090809P | 2.565±0.152 | 2.134±0.152 | 1.829±0.152 | 2.18 | 2.8 | 0.64 |
| SIA23N0□090809P | 2.235±0.152 | 2.134±0.152 | 1.829±0.152 | 1.9  | 2.8 | 0.64 |
| SIA25N0□090809P | 2.972±0.152 | 2.134±0.152 | 1.829±0.152 | 2.57 | 2.8 | 0.64 |
| SIA27N3□090809P | 2.972±0.152 | 2.134±0.152 | 1.829±0.152 | 2.57 | 2.8 | 0.64 |

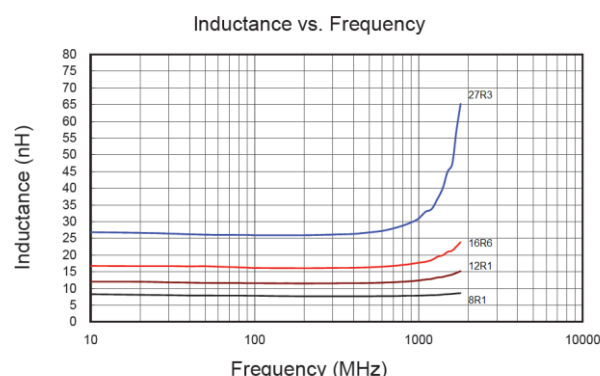
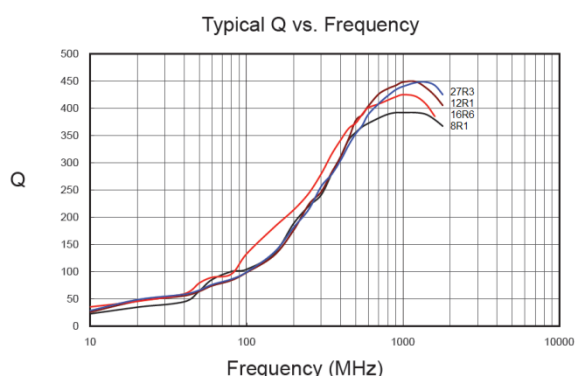
## ELECTRICAL CHARACTERISTIC

| Part Number     | Turns | Inductance (nH) | Tolerance (± %) | Min Q | Test Freq. (MHz) | Max DCR (mΩ) | Typ. SRF (GHz) | Max Rated Current (A) |
|-----------------|-------|-----------------|-----------------|-------|------------------|--------------|----------------|-----------------------|
| SIA8N10□090809P | 3     | 8.10            | J,K             | 130   | 400              | 6            | 5.2            | 4.4                   |
| SIA12N1□090809P | 4     | 12.1            | J,K             | 130   | 400              | 7            | 4.3            | 4.4                   |
| SIA14N7□090809P | 4     | 14.7            | J,K             | 90    | 400              | 7.2          | 3              | 4.4                   |
| SIA16N6□090809P | 5     | 16.6            | J,K             | 130   | 400              | 8            | 3.4            | 4.4                   |
| SIA21N5□090809P | 6     | 21.5            | J,K             | 130   | 400              | 9            | 3.7            | 4.4                   |
| SIA23N0□090809P | 6     | 23.0            | J,K             | 130   | 400              | 10           | 2.6            | 4.4                   |
| SIA25N0□090809P | 7     | 25.0            | J,K             | 130   | 400              | 10           | 2.5            | 4.4                   |
| SIA27N3□090809P | 7     | 27.3            | J,K             | 130   | 400              | 10           | 3.2            | 4.4                   |

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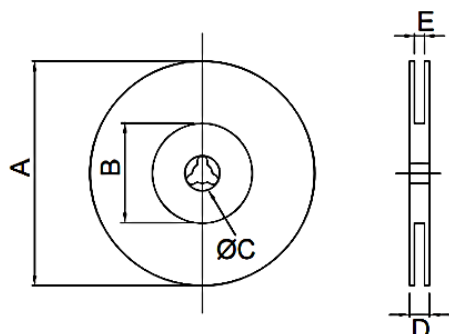
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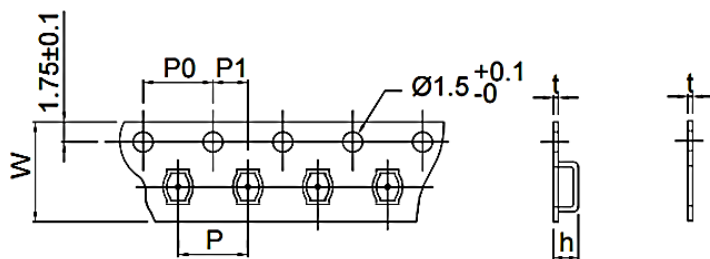
MERITEK

## PACKAGING SPECIFICATION

CARRIER TAPE REELS



TAPE DIMENSIONS (mm)



Plastic

Paper

| SIA Series | Reel Dimension (mm) |     |    |      |      | Tape Dimensions (mm) |    |    |    |      |      | Parts Per Reel |       | Quantity per |        |
|------------|---------------------|-----|----|------|------|----------------------|----|----|----|------|------|----------------|-------|--------------|--------|
|            | A                   | B   | C  | D    | E    | W                    | P  | P0 | P1 | h    | t    | 7"             | 13"   | Box          | Carton |
| 080609P    | 180                 | 50  | 13 | 16.4 | 12.5 | 12                   | 4  | 4  | 2  | 1.75 | 0.23 | 2,000          | -     | 8,000        | 48,000 |
| 080709P    | 180                 | 50  | 13 | 16.4 | 12.5 | 12                   | 4  | 4  | 2  | 1.86 | 0.23 | 2,000          | -     | 8,000        | 48,000 |
| 090809P    | 180                 | 50  | 13 | 16.4 | 12.5 | 12                   | 4  | 4  | 2  | 2.1  | 0.25 | 2,000          | -     | 8,000        | 48,000 |
| 29101P     | 180                 | 75  | 13 | 16.5 | 12.5 | 12                   | 8  | 4  | 2  | 3.30 | 0.25 | 500            | -     | 2,000        | 12,000 |
| 29102P     | 180                 | 75  | 13 | 20.5 | 16.5 | 16                   | 8  | 4  | 2  | 3.30 | 0.25 | 500            | -     | 1,500        | 9,000  |
| 29305P     | 340                 | 100 | 13 | 25.5 | 16.5 | 16                   | 12 | 4  | 2  | 4.40 | 0.30 | -              | 1,000 | 1,000        | 10,000 |
| 29406P     | 340                 | 100 | 13 | 30.4 | 24.5 | 24                   | 12 | 4  | 2  | 5.30 | 0.35 | -              | 1,000 | 1,000        | 8,000  |
| 29203P     | 180                 | 75  | 13 | 12.5 | 8.4  | 8                    | 4  | 4  | 2  | 1.7  | 0.30 | 2,000          | -     | 10,000       | 60,000 |
| 29204P     | 180                 | 50  | 13 | 18.4 | 12.4 | 12                   | 4  | 4  | 2  | 1.75 | 0.35 | 2,000          | -     | 6,000        | 36,000 |