

## FEATURES

- Lowest molded height in this package Footprint.
- Shielded construction.
- Handles high transient current spikes without saturation.
- Ultra low buzz noise, due to composite construction.
- Encapsulated body offers improved environmental protection and moisture resistance.
- Corrosion resistant package.
- Operating Temperature: -40°C ~ + 125°C .



## APPLICATIONS

- PDA, notebook, desktop, server applications.
- High current POL converters.
- Low profile, high current power supplies.
- Battery powered devices.
- DC/DC converters in distributed power systems.
- DC/DC converter for Field Programmable Gate Array.
- RoHS, REACH Compliance.

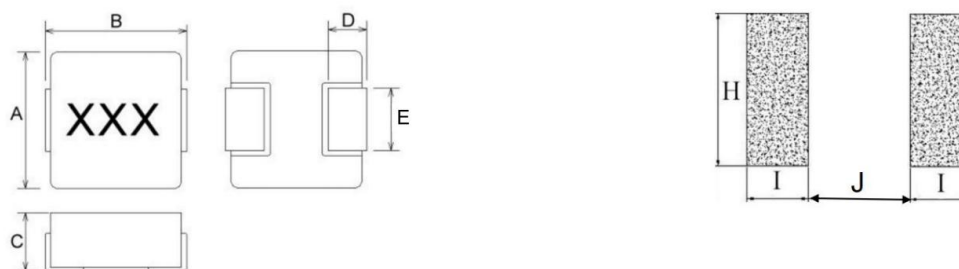
## PART NUMBERING



| ① Series Name          |                            |
|------------------------|----------------------------|
| APH                    | Molded SMD Power Inductors |
| ③ Feature Type         |                            |
| T                      | Standard                   |
| ④ Nominal inductance   |                            |
| Code (example)         | Nominal inductance [μH]    |
| 4R7                    | 4.7                        |
| 100                    | 10                         |
| 101                    | 100                        |
| ⑤ Inductance tolerance |                            |
| Code (example)         | Inductance tolerance       |
| M                      | ±20%                       |
| ⑥ Design Code          |                            |
| □□                     | Standard product is blank  |

| ② External Dimensions(L×W×H) [mm] |                 |
|-----------------------------------|-----------------|
| 0412                              | 4.4x4.2x1       |
| 0420                              | 4.4x4.2x1.8     |
| 0518                              | 5.4x5.2x1.6     |
| 0530                              | 5.4x5.2x2.8     |
| 0615                              | 7x6.6x1.3       |
| 0618                              | 7x6.6x1.6       |
| 0620                              | 7x6.6x1.8       |
| 0624                              | 7x6.6x2.2       |
| 0630                              | 7x6.6x2.8       |
| 0640                              | 7x6.6x3.8       |
| 0650                              | 7x6.6x4.8       |
| 0840                              | 8.8x8x3.8       |
| 0850                              | 8.8x8x4.8       |
| 1030                              | 11x10x2.8       |
| 1040                              | 11x10x3.8       |
| 1050                              | 11x10x4.8       |
| 1240                              | 13.45x12.8x3.8  |
| 1250                              | 13.45x12.8x4.8  |
| 1260                              | 13.45x12.8x5.8  |
| 1265                              | 13.45x12.8x6.5  |
| 1770                              | 17.65x17.15x6.7 |
| 2213                              | 23.5x22x12.6    |

## DIMENSIONS &amp; RECOMMENDED LAND PATTERN



Recommended Land Pattern

| Dimensions |           |            |          |        |        | Recommended Land Pattern |        |        | Unit: mm |
|------------|-----------|------------|----------|--------|--------|--------------------------|--------|--------|----------|
| Series     | A         | B          | C        | D Typ. | E Typ. | I Typ.                   | J Typ. | H Typ. |          |
| APH0412    | 4.2±0.25  | 4.4±0.35   | 1.0±0.2  | 0.8    | 2.0    | 1.5                      | 2.2    | 2.5    |          |
| APH0420    | 4.2±0.25  | 4.4±0.35   | 1.8±0.2  | 0.8    | 2.0    | 1.5                      | 2.2    | 2.5    |          |
| APH0518    | 5.2±0.3   | 5.4±0.35   | 1.6±0.2  | 1.3    | 2.2    | 1.9                      | 2.2    | 2.5    |          |
| APH0530    | 5.2±0.3   | 5.4±0.35   | 2.8±0.2  | 1.3    | 2.2    | 1.9                      | 2.2    | 2.5    |          |
| APH0615    | 6.6±0.3   | 7.0±0.3    | 1.3±0.2  | 1.7    | 3.0    | 2.35                     | 3.7    | 3.5    |          |
| APH0618    | 6.6±0.3   | 7.0±0.3    | 1.6±0.2  | 1.7    | 3.0    | 2.35                     | 3.7    | 3.5    |          |
| APH0620    | 6.6±0.3   | 7.0±0.3    | 1.8±0.2  | 1.7    | 3.0    | 2.35                     | 3.7    | 3.5    |          |
| APH0624    | 6.6±0.3   | 7.0±0.3    | 2.2±0.2  | 1.7    | 3.0    | 2.35                     | 3.7    | 3.5    |          |
| APH0630    | 6.6±0.3   | 7.0±0.3    | 2.8±0.2  | 1.7    | 3.0    | 2.35                     | 3.7    | 3.5    |          |
| APH0640    | 6.6±0.3   | 7.0±0.3    | 3.8±0.2  | 1.7    | 3.0    | 2.35                     | 3.7    | 3.5    |          |
| APH0650    | 6.6±0.3   | 7.0±0.3    | 4.8±0.2  | 1.7    | 3.0    | 2.35                     | 3.7    | 3.5    |          |
| APH0840    | 8.0±0.5   | 8.8±0.5    | 3.8±0.2  | 1.8    | 3.0    | 3                        | 4.0    | 4.1    |          |
| APH0850    | 8.0±0.5   | 8.8±0.5    | 4.8±0.2  | 1.8    | 3.0    | 3                        | 4.0    | 4.1    |          |
| APH1030    | 10.0±0.3  | 11.0±0.5   | 2.8±0.2  | 2.0    | 3.0    | 4.1                      | 5.4    | 4.1    |          |
| APH1040    | 10.0±0.3  | 11.0±0.5   | 3.8±0.2  | 2.0    | 3.0    | 4.1                      | 5.4    | 4.1    |          |
| APH1050    | 10.0±0.3  | 11.0±0.5   | 4.8±0.2  | 2.0    | 3.0    | 4.1                      | 5.4    | 4.1    |          |
| APH1240    | 12.8±0.3  | 13.45±0.35 | 3.8±0.2  | 2.5    | 4.0    | 4.1                      | 6.5    | 5.5    |          |
| APH1250    | 12.8±0.3  | 13.45±0.35 | 4.8±0.2  | 2.5    | 4.0    | 4.1                      | 6.5    | 5.5    |          |
| APH1260    | 12.8±0.3  | 13.45±0.35 | 5.8±0.2  | 2.5    | 4.0    | 4.1                      | 6.5    | 5.5    |          |
| APH1265    | 12.8±0.3  | 13.45±0.35 | 6.5Max.  | 2.5    | 4.0    | 4.1                      | 6.5    | 5.5    |          |
| APH1770    | 17.15±0.3 | 17.65±0.5  | 6.7±0.3  | 2.5    | 12     | 3.5                      | 11.2   | 12.8   |          |
| APH2213    | 22.0±0.3  | 23.5±0.5   | 12.6±0.4 | 5.0    | 19     | 5.75                     | 12.5   | 19.6   |          |

## ELECTRICAL CHARACTERISTICS

## ● APH0412 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |      | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ. | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |      | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | Irms                |      | Isat               |       | DCR           |         |
| APH0412TR15M | 0.15       | ±20%                 | 6.91                | 7.50 | 12.45              | 15.00 | 9             | R15     |
| APH0412TR22M | 0.22       | ±20%                 | 6.58                | 7.00 | 9.13               | 11.00 | 11            | R22     |
| APH0412TR33M | 0.33       | ±20%                 | 5.82                | 6.50 | 6.96               | 8.40  | 19            | R33     |
| APH0412TR47M | 0.47       | ±20%                 | 5.32                | 6.00 | 5.61               | 6.80  | 21            | R47     |
| APH0412TR68M | 0.68       | ±20%                 | 4.28                | 4.70 | 4.98               | 6.00  | 36            | R68     |
| APH0412TIR0M | 1          | ±20%                 | 3.91                | 4.50 | 4.57               | 5.50  | 47            | 1R0     |
| APH0412TIR5M | 1.5        | ±20%                 | 2.78                | 3.25 | 3.32               | 4.00  | 75            | 1R5     |
| APH0412T2R2M | 2.2        | ±20%                 | 2.28                | 2.75 | 2.49               | 3.00  | 83.5          | 2R2     |
| APH0412T3R3M | 3.3        | ±20%                 | 1.80                | 2.00 | 2.43               | 2.70  | 160           | 3R3     |
| APH0412T4R7M | 4.7        | ±20%                 | 1.50                | 1.80 | 1.86               | 2.20  | 195           | 4R7     |

## ● APH0420 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | Irms                |       | Isat               |       | DCR           |         |
| APH0420TR10M | 0.1        | ±20%                 | 11.47               | 13.00 | 18.26              | 22.00 | 4             | R10     |
| APH0420TR22M | 0.22       | ±20%                 | 8.40                | 9.50  | 10.38              | 12.50 | 6.6           | R22     |
| APH0420TR33M | 0.33       | ±20%                 | 8.81                | 10.00 | 9.96               | 12.00 | 11            | R33     |
| APH0420TR47M | 0.47       | ±20%                 | 6.78                | 7.50  | 7.89               | 9.50  | 14            | R47     |
| APH0420TR56M | 0.56       | ±20%                 | 6.24                | 7.00  | 7.47               | 9.00  | 16            | R56     |
| APH0420TR68M | 0.68       | ±20%                 | 6.28                | 7.00  | 6.64               | 8.00  | 18            | R68     |
| APH0420TIR0M | 1          | ±20%                 | 5.49                | 6.00  | 5.81               | 7.00  | 27            | 1R0     |
| APH0420TIR2M | 1.2        | ±20%                 | 5.49                | 6.00  | 5.40               | 6.50  | 27            | 1R2     |
| APH0420TIR5M | 1.5        | ±20%                 | 4.41                | 5.00  | 4.57               | 5.50  | 46            | 1R5     |
| APH0420T2R2M | 2.2        | ±20%                 | 3.91                | 4.50  | 4.15               | 5.00  | 58            | 2R2     |
| APH0420T3R3M | 3.3        | ±20%                 | 2.88                | 3.30  | 2.91               | 3.50  | 87            | 3R3     |
| APH0420T4R7M | 4.7        | ±20%                 | 2.29                | 2.80  | 2.49               | 3.00  | 105           | 4R7     |
| APH0420T6R8M | 6.8        | ±20%                 | 1.98                | 2.40  | 2.08               | 2.50  | 175           | 6R8     |
| APH0420T100M | 10         | ±20%                 | 1.35                | 1.60  | 1.66               | 2.00  | 282           | 100     |
| APH0420T220M | 22         | ±20%                 | 0.95                | 1.20  | 1.16               | 1.40  | 363           | 220     |

## ● APH0518 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | Irms                |       | Isat               |       | DCR           |         |
| APH0518TR47M | 0.47       | ±20%                 | 9.65                | 10.50 | 9.96               | 12.00 | 9             | R47     |
| APH0518TR56M | 0.56       | ±20%                 | 8.40                | 9.50  | 9.13               | 11.00 | 10            | R56     |

## ELECTRICAL CHARACTERISTICS

## ● APH0518 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |      | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ. | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |      | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |      | I <sub>sat</sub>   |       | DCR           |         |
| APH0518TR68M | 0.68       | ±20%                 | 7.85                | 8.70 | 9.48               | 10.50 | 13.8          | R68     |
| APH0518T1R0M | 1          | ±20%                 | 7.32                | 8.00 | 7.47               | 9.00  | 17            | 1R0     |
| APH0518T1R5M | 1.5        | ±20%                 | 6.74                | 7.50 | 6.64               | 8.00  | 26            | 1R5     |
| APH0518T2R2M | 2.2        | ±20%                 | 4.32                | 5.00 | 4.98               | 6.00  | 35            | 2R2     |
| APH0518T3R3M | 3.3        | ±20%                 | 3.91                | 4.50 | 3.98               | 4.80  | 58            | 3R3     |
| APH0518T4R7M | 4.7        | ±20%                 | 3.08                | 3.50 | 3.32               | 4.00  | 85            | 4R7     |
| APH0518T6R8M | 6.8        | ±20%                 | 2.46                | 2.80 | 2.82               | 3.40  | 120           | 6R8     |
| APH0518T100M | 10         | ±20%                 | 2.25                | 2.50 | 2.08               | 2.50  | 155           | 100     |

## ● APH0530 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH0530TR10M | 0.1        | ±20%                 | 23.30               | 25.00 | 24.90              | 30.00 | 3             | R10     |
| APH0530TR20M | 0.2        | ±20%                 | 13.15               | 14.00 | 16.60              | 20.00 | 4.1           | R20     |
| APH0530TR33M | 0.33       | ±20%                 | 13.24               | 14.00 | 14.94              | 18.00 | 5.5           | R33     |
| APH0530TR47M | 0.47       | ±20%                 | 10.15               | 11.00 | 12.45              | 15.00 | 8.5           | R47     |
| APH0530TR68M | 0.68       | ±20%                 | 8.32                | 9.00  | 9.55               | 11.50 | 12            | R68     |
| APH0530TR82M | 0.82       | ±20%                 | 9.23                | 10.50 | 9.40               | 10.50 | 10.4          | R82     |
| APH0530T1R0M | 1          | ±20%                 | 7.91                | 8.50  | 8.30               | 10.00 | 14            | 1R0     |
| APH0530T1R2M | 1.2        | ±20%                 | 7.95                | 8.50  | 7.89               | 9.50  | 16            | 1R2     |
| APH0530T1R5M | 1.5        | ±20%                 | 7.69                | 8.20  | 7.47               | 9.00  | 25            | 1R5     |
| APH0530T2R2M | 2.2        | ±20%                 | 6.49                | 7.00  | 5.81               | 7.00  | 29            | 2R2     |
| APH0530T3R3M | 3.3        | ±20%                 | 5.08                | 5.50  | 4.98               | 6.00  | 38            | 3R3     |
| APH0530T4R7M | 4.7        | ±20%                 | 4.08                | 4.50  | 3.82               | 4.60  | 60            | 4R7     |
| APH0530T6R8M | 6.8        | ±20%                 | 2.99                | 3.50  | 2.99               | 3.60  | 90            | 6R8     |
| APH0530T100M | 10         | ±20%                 | 2.86                | 3.20  | 2.91               | 3.50  | 125           | 100     |
| APH0530T150M | 15         | ±20%                 | 1.63                | 1.80  | 2.03               | 2.20  | 170           | 150     |

## ● APH0615 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH0615TR47M | 0.47       | ±20%                 | 9.02                | 10.00 | 14.44              | 16.00 | 8.5           | R47     |
| APH0615TR56M | 0.56       | ±20%                 | 8.12                | 9.00  | 12.62              | 14.00 | 11            | R56     |

## ELECTRICAL CHARACTERISTICS

## ● APH0615 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |      | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ. | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |      | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |      | I <sub>sat</sub>   |       | DCR           |         |
| APH0615TR68M | 0.68       | ±20%                 | 7.67                | 8.50 | 10.83              | 12.00 | 12            | R68     |
| APH0615TR82M | 0.82       | ±20%                 | 7.22                | 8.00 | 9.02               | 10.00 | 17            | R82     |
| APH0615T1R0M | 1          | ±20%                 | 5.41                | 6.00 | 8.12               | 9.00  | 21            | 1R0     |
| APH0615T2R2M | 2.2        | ±20%                 | 3.43                | 3.80 | 6.31               | 7.00  | 54            | 2R2     |
| APH0615T3R3M | 3.3        | ±20%                 | 3.16                | 3.50 | 4.96               | 5.50  | 63            | 3R3     |
| APH0615T4R7M | 4.7        | ±20%                 | 2.89                | 3.20 | 4.51               | 5.00  | 85            | 4R7     |
| APH0615T6R8M | 6.8        | ±20%                 | 2.25                | 2.50 | 3.61               | 4.00  | 135           | 6R8     |
| APH0615T100M | 10         | ±20%                 | 1.80                | 2.00 | 2.70               | 3.00  | 175           | 100     |
| APH0615T220M | 22         | ±20%                 | 1.33                | 1.40 | 2.25               | 2.50  | 510           | 220     |

## ● APH0618 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH0618TR10M | 0.1        | ±20%                 | 23.30               | 25.00 | 31.54              | 38.00 | 2.3           | R10     |
| APH0618TR22M | 0.22       | ±20%                 | 20.30               | 22.00 | 19.92              | 24.00 | 3.5           | R22     |
| APH0618TR47M | 0.47       | ±20%                 | 10.23               | 11.50 | 14.94              | 18.00 | 8.4           | R47     |
| APH0618TR68M | 0.68       | ±20%                 | 8.57                | 9.50  | 13.70              | 16.50 | 12            | R68     |
| APH0618T1R0M | 1          | ±20%                 | 7.74                | 8.50  | 9.96               | 12.00 | 16            | 1R0     |
| APH0618T1R5M | 1.5        | ±20%                 | 7.24                | 8.00  | 7.64               | 9.20  | 26            | 1R5     |
| APH0618T2R2M | 2.2        | ±20%                 | 6.32                | 7.00  | 6.64               | 8.00  | 35            | 2R2     |
| APH0618T3R3M | 3.3        | ±20%                 | 3.91                | 4.50  | 4.98               | 6.00  | 50            | 3R3     |
| APH0618T4R7M | 4.7        | ±20%                 | 3.58                | 4.00  | 4.15               | 5.00  | 62            | 4R7     |
| APH0618T6R8M | 6.8        | ±20%                 | 2.49                | 3.00  | 3.74               | 4.50  | 110           | 6R8     |
| APH0618T8R2M | 8.2        | ±20%                 | 2.15                | 2.40  | 3.01               | 3.60  | 135           | 8R2     |
| APH0618T100M | 10         | ±20%                 | 2.00                | 2.30  | 3.32               | 4.00  | 155           | 100     |
| APH0618T220M | 22         | ±20%                 | 1.46                | 1.80  | 1.91               | 2.30  | 350           | 220     |

## ● APH0620 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |      | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ. | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |      | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |      | I <sub>sat</sub>   |       | DCR           |         |
| APH0620T1R5M | 1.5        | ±20%                 | 7.15                | 8.00 | 10.30              | 12.00 | 26            | 1R5     |
| APH0620T4R7M | 4.7        | ±20%                 | 3.52                | 4.30 | 4.57               | 5.50  | 60            | 4R7     |
| APH0620T100M | 10         | ±20%                 | 2.31                | 2.80 | 3.34               | 4.00  | 145           | 100     |

## ELECTRICAL CHARACTERISTICS

## ● APH0624 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH0624TR22M | 0.22       | ±20%                 | 19.30               | 21.00 | 24.90              | 30.00 | 3             | R22     |
| APH0624TR33M | 0.33       | ±20%                 | 16.30               | 18.00 | 20.34              | 24.50 | 4.1           | R33     |
| APH0624TR47M | 0.47       | ±20%                 | 13.73               | 15.00 | 16.60              | 20.00 | 5.1           | R47     |
| APH0624TR56M | 0.56       | ±20%                 | 11.73               | 13.00 | 14.11              | 17.00 | 6.5           | R56     |
| APH0624TR68M | 0.68       | ±20%                 | 10.73               | 12.00 | 13.28              | 16.00 | 7             | R68     |
| APH0624T1R0M | 1          | ±20%                 | 8.15                | 9.00  | 12.45              | 15.00 | 13.5          | 1R0     |
| APH0624T1R5M | 1.5        | ±20%                 | 7.18                | 8.20  | 11.21              | 13.50 | 20            | 1R5     |
| APH0624T2R2M | 2.2        | ±20%                 | 6.32                | 7.00  | 8.30               | 10.00 | 28            | 2R2     |
| APH0624T3R3M | 3.3        | ±20%                 | 4.91                | 5.50  | 6.64               | 8.00  | 39            | 3R3     |
| APH0624T4R7M | 4.7        | ±20%                 | 4.41                | 5.00  | 5.40               | 6.50  | 50            | 4R7     |
| APH0624T6R8M | 6.8        | ±20%                 | 3.32                | 4.00  | 4.98               | 6.00  | 70            | 6R8     |
| APH0624T100M | 10         | ±20%                 | 2.51                | 3.10  | 3.32               | 4.00  | 101           | 100     |
| APH0624T150M | 15         | ±20%                 | 2.08                | 2.50  | 2.74               | 3.30  | 160           | 150     |
| APH0624T220M | 22         | ±20%                 | 1.66                | 2.00  | 2.08               | 2.50  | 230           | 220     |

## ● APH0630 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH0630TR10M | 0.1        | ±20%                 | 29.10               | 32.50 | 54.05              | 60.00 | 1.7           | R10     |
| APH0630TR12M | 0.12       | ±20%                 | 32.90               | 38.00 | 31.50              | 40.00 | 0.75          | R12     |
| APH0630TR22M | 0.22       | ±20%                 | 21.45               | 24.00 | 28.22              | 34.00 | 3             | R22     |
| APH0630TR24M | 0.24       | ±20%                 | 19.09               | 23.00 | 23.24              | 28.00 | 3.1           | R24     |
| APH0630TR33M | 0.33       | ±20%                 | 19.30               | 21.00 | 20.75              | 25.00 | 3.5           | R33     |
| APH0630TR47M | 0.47       | ±20%                 | 16.73               | 18.00 | 16.60              | 20.00 | 4.1           | R47     |
| APH0630TR56M | 0.56       | ±20%                 | 15.23               | 16.50 | 14.94              | 18.00 | 4.5           | R56     |
| APH0630TR68M | 0.68       | ±20%                 | 14.73               | 16.00 | 14.11              | 17.00 | 5.3           | R68     |
| APH0630TR82M | 0.82       | ±20%                 | 12.73               | 14.00 | 13.28              | 16.00 | 6             | R82     |
| APH0630T1R0M | 1          | ±20%                 | 10.73               | 12.00 | 12.45              | 15.00 | 7.4           | 1R0     |
| APH0630T1R5M | 1.5        | ±20%                 | 10.73               | 12.00 | 9.96               | 12.00 | 12.1          | 1R5     |
| APH0630T1R8M | 1.8        | ±20%                 | 8.37                | 9.30  | 9.76               | 11.80 | 12.6          | 1R8     |
| APH0630T2R2M | 2.2        | ±20%                 | 8.65                | 9.50  | 8.30               | 10.00 | 15            | 2R2     |
| APH0630T3R3M | 3.3        | ±20%                 | 7.65                | 8.50  | 7.89               | 9.50  | 27            | 3R3     |
| APH0630T4R7M | 4.7        | ±20%                 | 5.15                | 6.00  | 7.47               | 9.00  | 33            | 4R7     |
| APH0630T5R6M | 5.6        | ±20%                 | 4.91                | 5.50  | 5.40               | 6.50  | 42            | 5R6     |
| APH0630T6R8M | 6.8        | ±20%                 | 4.32                | 5.00  | 4.98               | 6.00  | 48            | 6R8     |
| APH0630T8R2M | 8.2        | ±20%                 | 4.32                | 5.00  | 4.57               | 5.50  | 60            | 8R2     |
| APH0630T100M | 10         | ±20%                 | 3.91                | 4.50  | 4.57               | 5.50  | 68            | 100     |
| APH0630T150M | 15         | ±20%                 | 2.41                | 3.00  | 3.32               | 4.00  | 113           | 150     |

## ELECTRICAL CHARACTERISTICS

## ● APH0630 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |      | Saturation Current |      | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|------|--------------------|------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ. | Max.               | Typ. | Typ.          |         |
| Units        | μH         | -                    | A                   |      | A                  |      | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |      | I <sub>sat</sub>   |      | DCR           |         |
| APH0630T220M | 22         | ±20%                 | 2.08                | 2.50 | 2.49               | 3.00 | 170           | 220     |
| APH0630T330M | 33         | ±20%                 | 1.66                | 2.00 | 2.08               | 2.50 | 270           | 330     |
| APH0630T470M | 47         | ±20%                 | 1.25                | 1.50 | 1.66               | 2.00 | 385           | 470     |

## ● APH0640 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH0640TR68M | 0.68       | ±20%                 | 13.93               | 17.00 | 15.83              | 19.00 | 4.8           | R68     |
| APH0640T1R0M | 1          | ±20%                 | 11.07               | 13.50 | 13.33              | 16.00 | 6.6           | 1R0     |
| APH0640T1R5M | 1.5        | ±20%                 | 10.16               | 12.40 | 10.42              | 12.50 | 10            | 1R5     |
| APH0640T2R2M | 2.2        | ±20%                 | 8.13                | 10.00 | 9.13               | 11.00 | 14            | 2R2     |
| APH0640T3R3M | 3.3        | ±20%                 | 6.97                | 8.50  | 7.92               | 9.50  | 20            | 3R3     |
| APH0640T4R7M | 4.7        | ±20%                 | 6.08                | 6.50  | 7.47               | 9.00  | 30            | 4R7     |
| APH0640T6R8M | 6.8        | ±20%                 | 4.51                | 5.50  | 5.42               | 6.50  | 45            | 6R8     |
| APH0640T100M | 10         | ±20%                 | 3.93                | 4.80  | 5.00               | 6.00  | 65            | 100     |
| APH0640T150M | 15         | ±20%                 | 2.94                | 3.70  | 3.74               | 4.50  | 95            | 150     |
| APH0640T220M | 22         | ±20%                 | 2.70                | 3.30  | 3.33               | 4.00  | 125           | 220     |
| APH0640T330M | 33         | ±20%                 | 1.80                | 2.20  | 2.50               | 3.00  | 240           | 330     |
| APH0640T470M | 47         | ±20%                 | 1.48                | 1.80  | 2.08               | 2.50  | 320           | 470     |

## ● APH0650 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH0650TR47M | 0.47       | ±20%                 | 17.45               | 20.00 | 17.43              | 21.00 | 3.9           | R47     |
| APH0650TR68M | 0.68       | ±20%                 | 14.80               | 16.50 | 14.94              | 18.00 | 4.5           | R68     |
| APH0650T1R0M | 1          | ±20%                 | 10.30               | 12.00 | 13.28              | 16.00 | 6.6           | 1R0     |
| APH0650T1R5M | 1.5        | ±20%                 | 8.40                | 9.50  | 10.79              | 13.00 | 10            | 1R5     |
| APH0650T2R2M | 2.2        | ±20%                 | 8.15                | 9.00  | 9.13               | 11.00 | 12.5          | 2R2     |
| APH0650T3R3M | 3.3        | ±20%                 | 7.74                | 8.50  | 8.30               | 10.00 | 22            | 3R3     |
| APH0650T4R7M | 4.7        | ±20%                 | 5.15                | 6.00  | 6.64               | 8.00  | 29            | 4R7     |
| APH0650T6R8M | 6.8        | ±20%                 | 4.27                | 5.80  | 5.23               | 6.30  | 41            | 6R8     |
| APH0650T8R2M | 8.2        | ±20%                 | 4.91                | 5.50  | 4.57               | 5.50  | 48            | 8R2     |
| APH0650T100M | 10         | ±20%                 | 3.91                | 4.50  | 4.40               | 5.30  | 60            | 100     |
| APH0650T150M | 15         | ±20%                 | 2.68                | 3.10  | 3.32               | 4.00  | 90            | 150     |
| APH0650T220M | 22         | ±20%                 | 2.09                | 2.60  | 2.91               | 3.50  | 140           | 220     |

## ELECTRICAL CHARACTERISTICS

## ● APH0650 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |      | Saturation Current |      | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|------|--------------------|------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ. | Max.               | Typ. | Typ.          |         |
| Units        | μH         | -                    | A                   |      | A                  |      | mΩ            |         |
| Symbol       | L          | -                    | Irms                |      | Isat               |      | DCR           |         |
| APH0650T330M | 33         | ±20%                 | 1.88                | 2.30 | 2.49               | 3.00 | 190           | 330     |
| APH0650T470M | 47         | ±20%                 | 1.58                | 2.00 | 2.16               | 2.60 | 230           | 470     |
| APH0650T680M | 68         | ±20%                 | 1.48                | 1.80 | 2.05               | 2.50 | 423           | 680     |
| APH0650T101M | 100        | ±20%                 | 1.31                | 1.60 | 1.80               | 2.20 | 515           | 101     |

## ● APH0840 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | Irms                |       | Isat               |       | DCR           |         |
| APH0840TR22M | 0.22       | ±20%                 | 30.90               | 36.00 | 55.75              | 60.00 | 1.8           | R22     |
| APH0840TR33M | 0.33       | ±20%                 | 25.75               | 30.00 | 40.75              | 45.00 | 2.4           | R33     |
| APH0840TR47M | 0.47       | ±20%                 | 25.45               | 28.00 | 36.90              | 42.00 | 2.8           | R47     |
| APH0840TR56M | 0.56       | ±20%                 | 22.30               | 24.00 | 23.45              | 26.00 | 3.2           | R56     |
| APH0840TR68M | 0.68       | ±20%                 | 21.30               | 23.00 | 22.30              | 24.00 | 3.8           | R68     |
| APH0840TR82M | 0.82       | ±20%                 | 19.30               | 21.00 | 19.30              | 21.00 | 4.4           | R82     |
| APH0840T1R0M | 1          | ±20%                 | 17.30               | 19.00 | 17.30              | 19.00 | 4.62          | 1R0     |
| APH0840T1R5M | 1.5        | ±20%                 | 15.30               | 17.00 | 15.30              | 17.00 | 7.6           | 1R5     |
| APH0840T1R8M | 1.8        | ±20%                 | 12.88               | 15.00 | 13.73              | 15.00 | 11            | 1R8     |
| APH0840T2R2M | 2.2        | ±20%                 | 12.30               | 14.00 | 12.30              | 14.00 | 11.4          | 2R2     |
| APH0840T3R3M | 3.3        | ±20%                 | 10.30               | 12.00 | 11.23              | 12.50 | 15            | 3R3     |
| APH0840T4R7M | 4.7        | ±20%                 | 8.65                | 9.50  | 10.65              | 11.50 | 26.5          | 4R7     |
| APH0840T5R6M | 5.6        | ±20%                 | 8.15                | 9.00  | 10.15              | 11.00 | 30            | 5R6     |
| APH0840T6R8M | 6.8        | ±20%                 | 7.15                | 8.00  | 8.15               | 9.00  | 36.8          | 6R8     |
| APH0840T8R2M | 8.2        | ±20%                 | 6.15                | 7.00  | 7.85               | 8.70  | 46            | 8R2     |
| APH0840T100M | 10         | ±20%                 | 5.65                | 6.50  | 7.15               | 8.00  | 59            | 100     |
| APH0840T150M | 15         | ±20%                 | 4.89                | 5.40  | 4.99               | 5.50  | 71            | 150     |
| APH0840T220M | 22         | ±20%                 | 4.29                | 4.80  | 4.58               | 5.00  | 113           | 220     |
| APH0840T330M | 33         | ±20%                 | 3.08                | 3.50  | 3.33               | 3.50  | 156           | 330     |
| APH0840T470M | 47         | ±20%                 | 2.56                | 2.90  | 2.93               | 3.10  | 225           | 470     |

## ● APH0850 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | Irms                |       | Isat               |       | DCR           |         |
| APH0850T2R2M | 2.2        | ±20%                 | 11.05               | 13.00 | 12.75              | 15.00 | 10            | 2R2     |
| APH0850T3R3M | 3.3        | ±20%                 | 9.35                | 11.00 | 11.90              | 14.00 | 15            | 3R3     |
| APH0850T4R7M | 4.7        | ±20%                 | 6.80                | 8.00  | 11.05              | 13.00 | 22            | 4R7     |
| APH0850T6R8M | 6.8        | ±20%                 | 6.38                | 7.50  | 8.93               | 10.50 | 28            | 6R8     |
| APH0850T100M | 10         | ±20%                 | 5.10                | 6.00  | 7.65               | 9.00  | 38            | 100     |



## ELECTRICAL CHARACTERISTICS

## ● APH0850 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |      | Saturation Current |      | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|------|--------------------|------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ. | Max.               | Typ. | Typ.          |         |
| Units        | $\mu$ H    | -                    | A                   |      | A                  |      | m $\Omega$    |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |      | I <sub>sat</sub>   |      | DCR           |         |
| APH0850T150M | 15         | ±20%                 | 4.68                | 5.50 | 5.95               | 7.00 | 52            | 150     |
| APH0850T220M | 22         | ±20%                 | 3.57                | 4.20 | 5.10               | 6.00 | 82            | 220     |
| APH0850T330M | 33         | ±20%                 | 2.98                | 3.50 | 4.68               | 5.50 | 140           | 330     |
| APH0850T470M | 47         | ±20%                 | 1.87                | 2.20 | 3.23               | 3.80 | 190           | 470     |
| APH0850T560M | 56         | ±20%                 | 2.13                | 2.50 | 2.98               | 3.50 | 185           | 560     |
| APH0850T680M | 68         | ±20%                 | 1.70                | 2.00 | 2.98               | 3.50 | 300           | 680     |
| APH0850T101M | 100        | ±20%                 | 1.28                | 1.50 | 2.13               | 2.50 | 400           | 101     |

## ● APH1030 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | $\mu$ H    | -                    | A                   |       | A                  |       | m $\Omega$    |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1030TR22M | 0.22       | ±20%                 | 29.77               | 33.00 | 45.10              | 50.00 | 1.2           | R22     |
| APH1030TR33M | 0.33       | ±20%                 | 20.75               | 23.00 | 28.86              | 32.00 | 1.6           | R33     |
| APH1030TR36M | 0.36       | ±20%                 | 20.75               | 23.00 | 25.28              | 28.00 | 1.6           | R36     |
| APH1030TR47M | 0.47       | ±20%                 | 19.85               | 22.00 | 23.45              | 26.00 | 2.5           | R47     |
| APH1030TR82M | 0.82       | ±20%                 | 16.24               | 18.00 | 20.75              | 23.00 | 3.7           | R82     |
| APH1030T1R0M | 1          | ±20%                 | 13.53               | 15.00 | 18.94              | 21.00 | 6             | 1R0     |
| APH1030T1R5M | 1.5        | ±20%                 | 11.73               | 13.00 | 18.04              | 20.00 | 7.5           | 1R5     |
| APH1030T2R2M | 2.2        | ±20%                 | 9.92                | 11.00 | 12.62              | 14.00 | 9             | 2R2     |
| APH1030T3R3M | 3.3        | ±20%                 | 8.12                | 9.00  | 10.82              | 12.00 | 16            | 3R3     |
| APH1030T4R7M | 4.7        | ±20%                 | 6.31                | 7.00  | 9.01               | 10.00 | 22.5          | 4R7     |
| APH1030T8R2M | 8.2        | ±20%                 | 4.51                | 5.00  | 6.32               | 7.00  | 45            | 8R2     |
| APH1030T100M | 10         | ±20%                 | 4.06                | 4.50  | 5.86               | 6.50  | 55            | 100     |
| APH1030T330M | 33         | ±20%                 | 2.35                | 2.60  | 3.60               | 4.00  | 160           | 330     |

## ● APH1040 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | $\mu$ H    | -                    | A                   |       | A                  |       | m $\Omega$    |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1040TR13M | 0.13       | ±20%                 | 64.35               | 72.00 | 67.35              | 92.00 | 0.52          | R13     |
| APH1040TR15M | 0.15       | ±20%                 | 40.75               | 45.00 | 62.25              | 75.00 | 0.65          | R15     |
| APH1040TR22M | 0.22       | ±20%                 | 30.75               | 35.00 | 49.80              | 60.00 | 1             | R22     |
| APH1040TR30M | 0.3        | ±20%                 | 30.75               | 35.00 | 37.35              | 45.00 | 1.1           | R30     |
| APH1040TR36M | 0.36       | ±20%                 | 25.75               | 30.00 | 37.35              | 45.00 | 1.2           | R36     |
| APH1040TR45M | 0.45       | ±20%                 | 25.75               | 30.00 | 35.35              | 43.00 | 1.5           | R45     |
| APH1040TR47M | 0.47       | ±20%                 | 25.75               | 30.00 | 33.20              | 40.00 | 1.7           | R47     |

## ELECTRICAL CHARACTERISTICS

## ● APH1040 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1040TR56M | 0.56       | ±20%                 | 20.75               | 25.00 | 27.39              | 33.00 | 1.8           | R56     |
| APH1040TR68M | 0.68       | ±20%                 | 19.60               | 23.00 | 24.90              | 30.00 | 2.4           | R68     |
| APH1040TR80M | 0.8        | ±20%                 | 19.60               | 23.00 | 24.07              | 29.00 | 2.7           | R80     |
| APH1040T1R0M | 1          | ±20%                 | 16.45               | 19.00 | 23.24              | 28.00 | 4.3           | 1R0     |
| APH1040T1R5M | 1.5        | ±20%                 | 14.30               | 16.00 | 19.92              | 24.00 | 5.5           | 1R5     |
| APH1040T2R2M | 2.2        | ±20%                 | 10.30               | 12.00 | 13.70              | 16.50 | 8             | 2R2     |
| APH1040T3R3M | 3.3        | ±20%                 | 9.73                | 11.00 | 13.28              | 16.00 | 11.8          | 3R3     |
| APH1040T4R7M | 4.7        | ±20%                 | 7.73                | 9.00  | 10.79              | 13.00 | 20            | 4R7     |
| APH1040T6R8M | 6.8        | ±20%                 | 7.23                | 8.50  | 9.96               | 12.00 | 25            | 6R8     |
| APH1040T8R2M | 8.2        | ±20%                 | 6.98                | 8.00  | 7.47               | 9.00  | 27            | 8R2     |
| APH1040T100M | 10         | ±20%                 | 7.04                | 7.80  | 7.06               | 8.50  | 30            | 100     |
| APH1040T150M | 15         | ±20%                 | 5.74                | 6.50  | 5.81               | 7.00  | 45            | 150     |
| APH1040T220M | 22         | ±20%                 | 4.32                | 5.00  | 4.57               | 5.50  | 66            | 220     |
| APH1040T330M | 33         | ±20%                 | 3.89                | 4.40  | 3.98               | 4.80  | 92            | 330     |
| APH1040T470M | 47         | ±20%                 | 2.88                | 3.30  | 3.16               | 3.50  | 145           | 470     |
| APH1040T680M | 68         | ±20%                 | 2.08                | 2.50  | 2.49               | 3.00  | 195           | 680     |
| APH1040T820M | 82         | ±20%                 | 2.13                | 2.30  | 2.38               | 2.80  | 285           | 820     |
| APH1040T101M | 100        | ±20%                 | 1.83                | 2.00  | 2.13               | 2.30  | 340           | 101     |

## ● APH1050 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1050TR22M | 0.22       | ±20%                 | 33.18               | 37.00 | 58.63              | 65.00 | 0.8           | R22     |
| APH1050TR68M | 0.68       | ±20%                 | 21.30               | 23.00 | 34.45              | 37.00 | 1.95          | R68     |
| APH1050T1R0M | 1          | ±20%                 | 20.71               | 23.00 | 28.30              | 30.00 | 3             | 1R0     |
| APH1050T1R5M | 1.5        | ±20%                 | 18.88               | 21.00 | 22.45              | 25.00 | 3.8           | 1R5     |
| APH1050T2R2M | 2.2        | ±20%                 | 13.47               | 15.00 | 17.13              | 19.00 | 6             | 2R2     |
| APH1050T3R3M | 3.3        | ±20%                 | 11.73               | 13.00 | 14.30              | 16.00 | 10            | 3R3     |
| APH1050T4R7M | 4.7        | ±20%                 | 9.90                | 11.00 | 13.47              | 15.00 | 14            | 4R7     |
| APH1050T5R6M | 5.6        | ±20%                 | 8.65                | 9.50  | 12.56              | 14.00 | 17            | 5R6     |
| APH1050T6R8M | 6.8        | ±20%                 | 8.15                | 9.00  | 12.56              | 14.00 | 18.5          | 6R8     |
| APH1050T100M | 10         | ±20%                 | 7.15                | 8.00  | 8.98               | 10.00 | 28            | 100     |
| APH1050T150M | 15         | ±20%                 | 5.82                | 6.50  | 6.65               | 7.50  | 42            | 150     |
| APH1050T220M | 22         | ±20%                 | 5.08                | 5.50  | 5.41               | 6.00  | 50            | 220     |
| APH1050T330M | 33         | ±20%                 | 4.29                | 4.80  | 4.69               | 5.20  | 86            | 330     |
| APH1050T470M | 47         | ±20%                 | 3.28                | 3.70  | 4.08               | 4.50  | 127           | 470     |
| APH1050T680M | 68         | ±20%                 | 2.45                | 2.70  | 2.86               | 3.20  | 185           | 680     |

## ELECTRICAL CHARACTERISTICS

## ● APH1050 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |      | Saturation Current |      | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|------|--------------------|------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ. | Max.               | Typ. | Typ.          |         |
| Units        | μH         | -                    | A                   |      | A                  |      | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |      | I <sub>sat</sub>   |      | DCR           |         |
| APH1050T820M | 82         | ±20%                 | 1.75                | 2.00 | 3.08               | 3.50 | 280           | 820     |
| APH1050T101M | 100        | ±20%                 | 1.85                | 2.10 | 2.55               | 2.80 | 290           | 101     |

## ● APH1240 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1240TR22M | 0.22       | ±20%                 | 38.60               | 42.00 | 41.50              | 50.00 | 0.9           | R22     |
| APH1240TR47M | 0.47       | ±20%                 | 29.60               | 33.00 | 39.84              | 48.00 | 2             | R47     |
| APH1240TR68M | 0.68       | ±20%                 | 24.60               | 28.00 | 39.01              | 47.00 | 3.5           | R68     |
| APH1240TR82M | 0.82       | ±20%                 | 24.60               | 28.00 | 33.20              | 40.00 | 4.5           | R82     |
| APH1240T1R0M | 1          | ±20%                 | 20.60               | 24.00 | 29.05              | 35.00 | 7.5           | 1R0     |
| APH1240T1R5M | 1.5        | ±20%                 | 17.45               | 20.00 | 25.32              | 30.50 | 9.5           | 1R5     |
| APH1240T2R2M | 2.2        | ±20%                 | 15.45               | 18.00 | 21.58              | 26.00 | 11.5          | 2R2     |
| APH1240T3R3M | 3.3        | ±20%                 | 13.30               | 15.00 | 17.43              | 21.00 | 13            | 3R3     |
| APH1240T4R7M | 4.7        | ±20%                 | 11.30               | 13.00 | 14.94              | 18.00 | 14.5          | 4R7     |
| APH1240T6R8M | 6.8        | ±20%                 | 8.15                | 9.00  | 11.62              | 14.00 | 20            | 6R8     |
| APH1240T100M | 10         | ±20%                 | 7.15                | 8.00  | 8.30               | 10.00 | 25            | 100     |
| APH1240T150M | 15         | ±20%                 | 5.91                | 6.50  | 6.23               | 7.50  | 39            | 150     |
| APH1240T220M | 22         | ±20%                 | 3.91                | 4.50  | 4.98               | 6.00  | 51            | 220     |

## ● APH1250 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1250TR22M | 0.22       | ±20%                 | 45.75               | 50.00 | 62.25              | 75.00 | 0.7           | R22     |
| APH1250TR36M | 0.36       | ±20%                 | 37.75               | 42.00 | 41.50              | 50.00 | 0.85          | R36     |
| APH1250TR50M | 0.5        | ±20%                 | 33.75               | 38.00 | 39.84              | 48.00 | 1.15          | R50     |
| APH1250TR68M | 0.68       | ±20%                 | 29.60               | 33.00 | 38.18              | 46.00 | 1.55          | R68     |
| APH1250TR82M | 0.82       | ±20%                 | 26.60               | 30.00 | 32.37              | 39.00 | 1.67          | R82     |
| APH1250T1R0M | 1          | ±20%                 | 22.60               | 26.00 | 29.05              | 35.00 | 2.2           | 1R0     |
| APH1250T1R5M | 1.5        | ±20%                 | 19.60               | 23.00 | 27.39              | 33.00 | 3.2           | 1R5     |
| APH1250T2R2M | 2.2        | ±20%                 | 13.30               | 15.00 | 19.92              | 24.00 | 5             | 2R2     |
| APH1250T3R3M | 3.3        | ±20%                 | 12.30               | 14.00 | 18.26              | 22.00 | 7             | 3R3     |
| APH1250T4R7M | 4.7        | ±20%                 | 11.30               | 13.00 | 16.60              | 20.00 | 11            | 4R7     |
| APH1250T6R8M | 6.8        | ±20%                 | 10.30               | 12.00 | 13.28              | 16.00 | 18            | 6R8     |
| APH1250T100M | 10         | ±20%                 | 8.15                | 9.00  | 9.96               | 12.00 | 22            | 100     |

## ELECTRICAL CHARACTERISTICS

## ● APH1250 Series

| Part Number  | Inductance    | Inductance Tolerance | Heat Rating Current |      | Saturation Current |       | DC Resistance | Marking |
|--------------|---------------|----------------------|---------------------|------|--------------------|-------|---------------|---------|
|              | @100kHz,1V    |                      | Max.                | Typ. | Max.               | Typ.  | Typ.          |         |
| Units        | $\mu\text{H}$ | -                    | A                   |      | A                  |       | m $\Omega$    |         |
| Symbol       | L             | -                    | I <sub>rms</sub>    |      | I <sub>sat</sub>   |       | DCR           |         |
| APH1250T150M | 15            | ±20%                 | 7.15                | 8.00 | 8.30               | 10.00 | 30            | 150     |
| APH1250T220M | 22            | ±20%                 | 3.91                | 4.50 | 5.40               | 6.50  | 58            | 220     |
| APH1250T330M | 33            | ±20%                 | 2.91                | 3.50 | 4.98               | 6.00  | 84            | 330     |
| APH1250T470M | 47            | ±20%                 | 2.66                | 3.00 | 4.15               | 5.00  | 130           | 470     |
| APH1250T680M | 68            | ±20%                 | 2.05                | 2.40 | 3.50               | 4.10  | 183           | 680     |

## ● APH1260 Series

| Part Number  | Inductance    | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|---------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V    |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | $\mu\text{H}$ | -                    | A                   |       | A                  |       | m $\Omega$    |         |
| Symbol       | L             | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1260T1R5M | 1.5           | ±20%                 | 23.60               | 27.00 | 27.45              | 30.00 | 2.9           | 1R5     |
| APH1260T2R2M | 2.2           | ±20%                 | 18.60               | 22.00 | 24.60              | 28.00 | 4.2           | 2R2     |
| APH1260T3R3M | 3.3           | ±20%                 | 14.45               | 17.00 | 21.60              | 25.00 | 6.8           | 3R3     |
| APH1260T4R7M | 4.7           | ±20%                 | 12.45               | 15.00 | 19.92              | 24.00 | 9             | 4R7     |
| APH1260T5R6M | 5.6           | ±20%                 | 11.30               | 13.00 | 18.68              | 22.50 | 11            | 5R6     |
| APH1260T6R8M | 6.8           | ±20%                 | 10.30               | 12.00 | 15.77              | 19.00 | 13.5          | 6R8     |
| APH1260T8R2M | 8.2           | ±20%                 | 9.30                | 11.00 | 11.21              | 13.50 | 16            | 8R2     |
| APH1260T100M | 10            | ±20%                 | 8.73                | 10.00 | 11.31              | 12.50 | 20.7          | 100     |
| APH1260T120M | 12            | ±20%                 | 7.98                | 9.00  | 8.30               | 10.00 | 23            | 120     |
| APH1260T150M | 15            | ±20%                 | 7.65                | 8.50  | 7.47               | 9.00  | 29            | 150     |
| APH1260T180M | 18            | ±20%                 | 6.65                | 7.50  | 6.64               | 8.00  | 35            | 180     |
| APH1260T220M | 22            | ±20%                 | 6.15                | 7.00  | 6.23               | 7.50  | 39.5          | 220     |
| APH1260T270M | 27            | ±20%                 | 5.15                | 6.00  | 5.40               | 6.50  | 56            | 270     |
| APH1260T330M | 33            | ±20%                 | 4.91                | 5.50  | 4.98               | 6.00  | 75            | 330     |
| APH1260T470M | 47            | ±20%                 | 4.32                | 5.00  | 4.57               | 5.50  | 90            | 470     |
| APH1260T680M | 68            | ±20%                 | 3.32                | 4.00  | 3.74               | 4.50  | 140           | 680     |
| APH1260T101M | 100           | ±20%                 | 2.58                | 3.00  | 2.91               | 3.50  | 200           | 101     |
| APH1260T121M | 120           | ±20%                 | 1.75                | 2.00  | 2.66               | 3.20  | 235           | 121     |
| APH1260T151M | 150           | ±20%                 | 1.25                | 1.50  | 2.24               | 2.70  | 350           | 151     |

## ● APH1265 Series

| Part Number  | Inductance    | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|---------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V    |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | $\mu\text{H}$ | -                    | A                   |       | A                  |       | m $\Omega$    |         |
| Symbol       | L             | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1265TR33M | 0.33          | ±20%                 | 38.50               | 43.00 | 47.50              | 57.00 | 0.84          | R33     |
| APH1265TR47M | 0.47          | ±20%                 | 34.80               | 39.00 | 43.30              | 52.00 | 1.1           | R47     |
| APH1265TR68M | 0.68          | ±20%                 | 30.10               | 34.00 | 39.20              | 47.00 | 1.5           | R68     |

## ELECTRICAL CHARACTERISTICS

## ● APH1265 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1265TR82M | 0.82       | ±20%                 | 27.50               | 31.00 | 35.00              | 42.00 | 1.65          | R82     |
| APH1265T1R0M | 1          | ±20%                 | 24.80               | 29.00 | 32.10              | 38.50 | 2.1           | 1R0     |
| APH1265T1R5M | 1.5        | ±20%                 | 23.50               | 27.50 | 28.30              | 34.00 | 2.9           | 1R5     |
| APH1265T2R2M | 2.2        | ±20%                 | 19.20               | 22.50 | 25.80              | 31.00 | 4.2           | 2R2     |
| APH1265T3R3M | 3.3        | ±20%                 | 16.70               | 19.50 | 24.20              | 29.00 | 6.4           | 3R3     |
| APH1265T4R7M | 4.7        | ±20%                 | 13.70               | 16.00 | 20.00              | 24.00 | 8.5           | 4R7     |
| APH1265T5R6M | 5.6        | ±20%                 | 12.00               | 14.00 | 18.80              | 22.50 | 10.5          | 5R6     |
| APH1265T6R8M | 6.8        | ±20%                 | 11.10               | 13.00 | 15.80              | 19.00 | 13            | 6R8     |
| APH1265T8R2M | 8.2        | ±20%                 | 10.30               | 12.00 | 13.30              | 16.00 | 14            | 8R2     |
| APH1265T100M | 10         | ±20%                 | 9.40                | 11.00 | 12.50              | 15.00 | 16.5          | 100     |
| APH1265T150M | 15         | ±20%                 | 8.10                | 9.50  | 9.20               | 11.00 | 37            | 150     |
| APH1265T220M | 22         | ±20%                 | 6.80                | 8.00  | 7.50               | 9.00  | 44            | 220     |
| APH1265T330M | 33         | ±20%                 | 5.60                | 6.50  | 6.70               | 8.00  | 65            | 330     |
| APH1265T470M | 47         | ±20%                 | 4.70                | 5.50  | 5.70               | 6.80  | 90            | 470     |
| APH1265T680M | 68         | ±20%                 | 4.10                | 4.80  | 4.30               | 5.20  | 120           | 680     |
| APH1265T820M | 82         | ±20%                 | 3.40                | 4.00  | 3.80               | 4.50  | 135           | 820     |
| APH1265T101M | 100        | ±20%                 | 3.00                | 3.50  | 3.30               | 4.00  | 170           | 101     |
| APH1265T151M | 150        | ±20%                 | 1.50                | 1.70  | 2.30               | 2.80  | 257           | 151     |

## ● APH1770 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH1770T1R0M | 1          | ±20%                 | 26.50               | 31.00 | 34.80              | 40.00 | 2             | 1R0     |
| APH1770T2R2M | 2.2        | ±20%                 | 24.80               | 29.00 | 28.30              | 34.00 | 2.5           | 2R2     |
| APH1770T3R3M | 3.3        | ±20%                 | 20.50               | 24.00 | 25.00              | 30.00 | 3.95          | 3R3     |
| APH1770T4R7M | 4.7        | ±20%                 | 17.90               | 21.00 | 20.00              | 24.00 | 4.75          | 4R7     |
| APH1770T6R8M | 6.8        | ±20%                 | 14.50               | 17.00 | 18.30              | 22.00 | 7.5           | 6R8     |
| APH1770T8R2M | 8.2        | ±20%                 | 11.10               | 13.00 | 16.70              | 20.00 | 8.7           | 8R2     |
| APH1770T100M | 10         | ±20%                 | 10.30               | 12.00 | 15.80              | 19.00 | 9.9           | 100     |
| APH1770T150M | 15         | ±20%                 | 9.40                | 11.00 | 12.10              | 14.50 | 17            | 150     |
| APH1770T220M | 22         | ±20%                 | 7.30                | 8.50  | 9.60               | 11.50 | 23            | 220     |
| APH1770T330M | 33         | ±20%                 | 6.80                | 8.00  | 8.30               | 10.00 | 37            | 330     |
| APH1770T470M | 47         | ±20%                 | 5.10                | 6.00  | 6.30               | 7.50  | 47            | 470     |
| APH1770T680M | 68         | ±20%                 | 4.40                | 5.20  | 5.40               | 6.50  | 85            | 680     |
| APH1770T101M | 100        | ±20%                 | 3.20                | 3.70  | 4.20               | 5.00  | 130           | 101     |

## ELECTRICAL CHARACTERISTICS

## ● APH2213 Series

| Part Number  | Inductance | Inductance Tolerance | Heat Rating Current |       | Saturation Current |       | DC Resistance | Marking |
|--------------|------------|----------------------|---------------------|-------|--------------------|-------|---------------|---------|
|              | @100kHz,1V |                      | Max.                | Typ.  | Max.               | Typ.  | Typ.          |         |
| Units        | μH         | -                    | A                   |       | A                  |       | mΩ            |         |
| Symbol       | L          | -                    | I <sub>rms</sub>    |       | I <sub>sat</sub>   |       | DCR           |         |
| APH2213T2R2M | 2.2        | ±20%                 | 52.00               | 52.90 | 43.75              | 48.00 | 1.25          | 2R2     |
| APH2213T4R7M | 4.7        | ±20%                 | 44.00               | 44.45 | 34.60              | 38.00 | 2.2           | 4R7     |
| APH2213T100M | 10         | ±20%                 | 30.00               | 30.45 | 21.20              | 28.00 | 4.15          | 100     |
| APH2213T150M | 15         | ±20%                 | 23.00               | 23.45 | 18.75              | 23.00 | 6.12          | 150     |
| APH2213T680M | 68         | ±20%                 | 12.00               | 12.30 | 9.45               | 12.00 | 29.5          | 680     |

△All test data is referenced to 20°C ambient;

△Rated current: I<sub>sat</sub> or I<sub>rms</sub>, whichever is smaller;

△I<sub>sat</sub>: DC current at which the inductance drops approximate 30% from its value without current;

△The DC Resistance maximum from typical +30%;

△I<sub>rms</sub>: DC current that causes the temperature rise (ΔT=40°C) from 20°C ambient.

## Note:

**This series product is not applies in automotive or related products. Otherwise, we will shall not bear than the resulting all the problems of quality and responsibility.**

Please be sure to request approval specifications that provide further details of the products. Kindly not that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without APV approval.