

## Data Sheet

Customer:

Product: SMD Power Inductor – VLH Series

Sizes.: 252010/252012/252510/322515/322520/453226/575047

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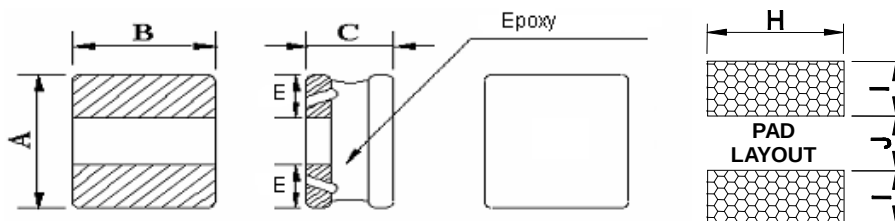
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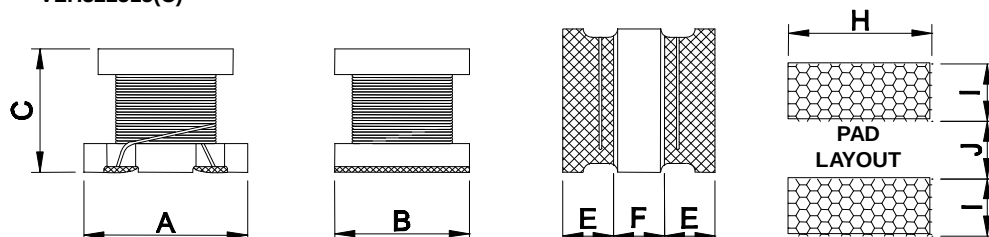
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|---------------------|------------------|---------------------|------------------------|---------------------------|
| 10-Apr-25           | 10-Apr-25        | 10-Apr-25           | 10Apr-25               |                           |
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## SMD Power Inductor

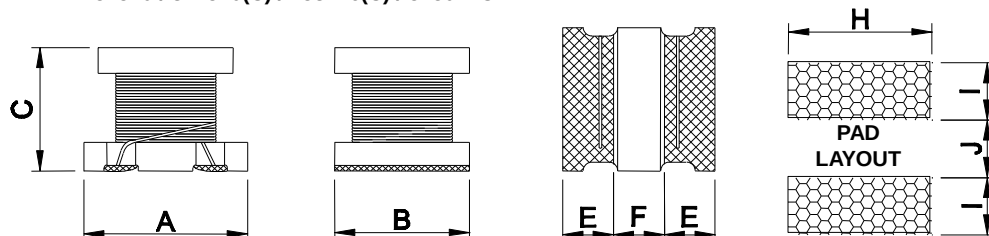
VLH252010E / 252012E



VLH322515(C)



VLH252510 / 322520(C) / 453226(C) / 575047C



### ■ Dimensions

Unit: mm

| Type      | A       | B       | C        | E        | F        | H   | I    | J   |
|-----------|---------|---------|----------|----------|----------|-----|------|-----|
| 252010E   | 2.5±0.2 | 2.0±0.2 | 1.02 max | 0.8 ref  | -        | 2.0 | 0.85 | 0.8 |
| 252012E   | 2.5±0.2 | 2.0±0.2 | 1.20 max | 0.8 ref  | -        | 2.0 | 0.85 | 0.8 |
| 252510    | 2.5±0.2 | 2.5±0.2 | 1.05 max | 0.9 ref  | 0.7 ref  | 2.5 | 1.2  | 0.8 |
| 322515(C) | 3.2±0.3 | 2.5±0.2 | 1.55±0.3 | 1.05±0.3 | 1.05±0.3 | 2.0 | 1.5  | 1.0 |
| 322520(C) | 3.2±0.3 | 2.5±0.2 | 2.0±0.3  | 0.7min.  | 0.7min.  | 2.0 | 1.5  | 1.0 |
| 453226(C) | 4.5±0.3 | 3.2±0.2 | 2.6±0.4  | 1.0min.  | 1.0min.  | 3.0 | 2.0  | 1.2 |
| 575047C   | 5.7±0.3 | 5.0±0.3 | 4.7±0.3  | 1.3min.  | 1.7min.  | 5.0 | 2.0  | 2.0 |

### ■ Features

- The miniature chip inductors is wound on a special ferrite core.
- VLH322515/322520/453226 are low DC resistance.
- VLH322520C/453226C/565047C are low DC resistance, high current capacity, and high impedance characteristics. They are excellent for using as a choke coil in DC power supply circuits.

### ■ Applications

- Pagers, Cordless Phone
- High Frequency Communication Products
- Personal Computers
- Disk Drives And Computer Peripherals
- DC Power Supply Circuits

### ■ Characteristics for 252010E/ 252012E/252510/322515C

- Rated DC Current(I sat): The current when the inductance becomes 30% typical its initial value (Ta=25°C)
- Temperature Rise Current(I rms): The actual current when the temperature of coil becomes Δ T40°C.. (Ta=25°C)
- Operating temperature range: -40~125°C

### ■ Inductance and rated current ranges

|              |              |             |
|--------------|--------------|-------------|
| — VLH252010E | 1.00~22μH    | 2.20~0.50A  |
| — VLH252012E | 1.00~22μH    | 2.80~0.55A  |
| — VLH252510  | 1.00~22μH    | 2.30~0.51A  |
| — VLH322515  | 1.00~100μH   | 1.00~0.1A   |
| — VLH322520  | 1.00~560μH   | 0.445~0.04A |
| — VLH453226  | 1.00~2200μH  | 0.50~0.03A  |
| — VLH322515C | 0.47~120μH   | 3.40~0.17A  |
| — VLH322520C | 1.00~560μH   | 1.00~0.06A  |
| — VLH453226C | 1.00~1000μH  | 1.08~0.05A  |
| — VLH575047C | 0.12~10000μH | 6.00~0.05A  |

— Test equipment:

L&Q: HP4285A Precision LCR meter

DCR: Milli-ohm meter

— Electrical specifications at 25°C

### ■ Characteristics except 252010E/252012E/252510/322515C

- Rated DC Current: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of coil increases Δ T20°C. The smaller one is defined as Rated DC Current. (Ta=25°C)
- Operating temperature range: -40~125°C

**SMD Power Inductor**
**Product Identification**

| VLH          | 453226                                                                                                                                                           | C                             | -                       | 101                                   | K                                       |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------|---------------------------------------|-----------------------------------------|
| Product Type | Dimensions (AxBxC)                                                                                                                                               | Use                           | Appearance              | Inductance                            | Inductance Tolerance                    |
|              | 252010: 2.5x2.0x1.02<br>252012: 2.5x2.0x1.2<br>252510: 2.5x2.5x1.05<br>322515: 3.2x2.5x1.55<br>322520: 3.2x2.5x2.0<br>453226: 4.5x3.2x2.6<br>575047: 5.7x5.0x4.7 | C: Choke Use<br>: General Use | -: Standard<br>E: Epoxy | 1R0: 1.0μH<br>470: 47μH<br>101: 100μH | J: ±5%<br>K: ±10%<br>M: ±20%<br>N: ±30% |

**Electrical Characteristics**

VLH252010E Type(□:Tolerance):

| Part No        | L (μH) | Tolerance | Test Condition | DCR (Ω) max.. | I rms(A) max. | I sat(A) max. |
|----------------|--------|-----------|----------------|---------------|---------------|---------------|
| VLH252010E1R0□ | 1.0    | M         | 1MHz, 0.1V     | 0.121         | 2.20          | 2.20          |
| VLH252010E1R5□ | 1.5    | M         | 1MHz, 0.1V     | 0.193         | 1.80          | 1.90          |
| VLH252010E2R2□ | 2.2    | M         | 1MHz, 0.1V     | 0.232         | 1.68          | 1.60          |
| VLH252010E3R3□ | 3.3    | M         | 1MHz, 0.1V     | 0.372         | 1.34          | 1.20          |
| VLH252010E4R7□ | 4.7    | M         | 1MHz, 0.1V     | 0.548         | 1.00          | 1.00          |
| VLH252010E5R6□ | 5.6    | M         | 1MHz, 0.1V     | 0.626         | 0.90          | 0.90          |
| VLH252010E6R8□ | 6.8    | M         | 1MHz, 0.1V     | 0.778         | 0.90          | 0.90          |
| VLH252010E100□ | 10     | M         | 1MHz, 0.1V     | 1.036         | 0.80          | 0.70          |
| VLH252010E220□ | 22     | M         | 1MHz, 0.1V     | 2.391         | 0.50          | 0.50          |

VLH252012E Type(□:Tolerance):

| Part No          | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | I rms(A) max. | I sat(A) max. |
|------------------|--------|-----------|----------------|--------------|---------------|---------------|
| VLH252012E1R0□   | 1.0    | M         | 1MHz, 0.1V     | 0.137        | 2.20          | 2.80          |
| VLH252012E1R2□-1 | 1.2    | M         | 1MHz, 1V       | 0.0685       | 3.15          | 2.95          |
| VLH252012E1R5□   | 1.5    | M         | 1MHz, 0.1V     | 0.190        | 1.86          | 2.20          |
| VLH252012E2R2□   | 2.2    | M         | 1MHz, 0.1V     | 0.285        | 1.70          | 1.80          |
| VLH252012E3R3□   | 3.3    | M         | 1MHz, 0.1V     | 0.454        | 1.20          | 1.30          |
| VLH252012E4R7□   | 4.7    | M         | 1MHz, 0.1V     | 0.659        | 1.04          | 1.10          |
| VLH252012E5R6□   | 5.6    | M         | 1MHz, 0.1V     | 0.685        | 1.00          | 1.10          |
| VLH252012E6R8□   | 6.8    | M         | 1MHz, 0.1V     | 0.988        | 0.94          | 0.94          |
| VLH252012E100□   | 10     | M         | 1MHz, 0.1V     | 1.190        | 0.84          | 0.82          |
| VLH252012E220□   | 22     | M         | 1MHz, 0.1V     | 2.743        | 0.54          | 0.55          |

VLH252510- Type(□:Tolerance):

| Codes          | L (μH) | Tolerance | Test Condition | DCR (Ω) typical. | I rms(A) typical | I sat(A) typical |
|----------------|--------|-----------|----------------|------------------|------------------|------------------|
| VLH252510-1R0□ | 1.0    | M         | 1MHz, 0.1V     | 0.085            | 1.90             | 2.30             |
| VLH252510-1R5□ | 1.5    | M         | 1MHz, 0.1V     | 0.115            | 1.50             | 1.90             |
| VLH252510-2R2□ | 2.2    | M         | 1MHz, 0.1V     | 0.168            | 1.20             | 1.50             |
| VLH252510-3R3□ | 3.3    | M         | 1MHz, 0.1V     | 0.239            | 1.10             | 1.30             |
| VLH252510-4R7□ | 4.7    | M         | 1MHz, 0.1V     | 0.316            | 0.90             | 1.10             |
| VLH252510-5R6□ | 5.6    | M         | 1MHz, 0.1V     | 0.420            | 0.83             | 0.98             |
| VLH252510-6R8□ | 6.8    | M         | 1MHz, 0.1V     | 0.487            | 0.80             | 0.90             |
| VLH252510-8R2□ | 8.2    | M         | 1MHz, 0.1V     | 0.548            | 0.71             | 0.84             |
| VLH252510-100□ | 10     | M         | 1MHz, 0.1V     | 0.610            | 0.68             | 0.79             |
| VLH252510-220□ | 22     | M         | 1MHz, 0.1V     | 1.552            | 0.40             | 0.51             |

**■Electrical Characteristics**

VLH322515- Type(□:Tolerance):

| Part No        | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. | SRF<br>(MHz) min. |
|----------------|-----------------|-----------|-------------------|--------------------------|-----------------|-------------------|
| VLH322515-1R0□ | 1.0             | N         | 1MHz, 0.1V        | 0.078                    | 1.000           | 100               |
| VLH322515-1R5□ | 1.5             | N         | 1MHz, 0.1V        | 0.068                    | 1.200           | 100               |
| VLH322515-2R2□ | 2.2             | M         | 1MHz, 0.1V        | 0.126                    | 0.790           | 64                |
| VLH322515-3R3□ | 3.3             | M         | 1MHz, 0.1V        | 0.180                    | 0.700           | 50                |
| VLH322515-4R7□ | 4.7             | M         | 1MHz, 0.1V        | 0.195                    | 0.650           | 43                |
| VLH322515-100□ | 10              | K         | 1MHz, 0.1V        | 0.420                    | 0.450           | 26                |
| VLH322515-150□ | 15              | K         | 1MHz, 0.1V        | 0.750                    | 0.300           | 22                |
| VLH322515-220□ | 22              | K         | 1MHz, 0.1V        | 1.000                    | 0.250           | 19                |
| VLH322515-330□ | 33              | K         | 1MHz, 0.1V        | 1.400                    | 0.200           | 17                |
| VLH322515-470□ | 47              | K         | 1MHz, 0.1V        | 2.200                    | 0.170           | 13                |
| VLH322515-680□ | 68              | K         | 1MHz, 0.1V        | 3.200                    | 0.130           | 9                 |
| VLH322515-101□ | 100             | K         | 1MHz, 0.1V        | 4.500                    | 0.100           | 8                 |

VLH322520- Type(□:Tolerance):

| Part No        | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. |
|----------------|-----------------|-----------|-------------------|--------------------------|-----------------|
| VLH322520-1R0□ | 1.0             | M         | 1MHz, 0.1V        | 0.50                     | 0.445           |
| VLH322520-1R2□ | 1.2             | M         | 1MHz, 0.1V        | 0.60                     | 0.425           |
| VLH322520-1R5□ | 1.5             | K, M      | 1MHz, 0.1V        | 0.60                     | 0.400           |
| VLH322520-1R8□ | 1.8             | K, M      | 1MHz, 0.1V        | 0.70                     | 0.390           |
| VLH322520-2R2□ | 2.2             | K, M      | 1MHz, 0.1V        | 0.80                     | 0.370           |
| VLH322520-2R7□ | 2.7             | K, M      | 1MHz, 0.1V        | 0.90                     | 0.320           |
| VLH322520-3R3□ | 3.3             | K, M      | 1MHz, 0.1V        | 1.00                     | 0.300           |
| VLH322520-3R9□ | 3.9             | K, M      | 1MHz, 0.1V        | 1.10                     | 0.290           |
| VLH322520-4R7□ | 4.7             | K, M      | 1MHz, 0.1V        | 1.20                     | 0.270           |
| VLH322520-5R6□ | 5.6             | K, M      | 1MHz, 0.1V        | 1.30                     | 0.250           |
| VLH322520-6R8□ | 6.8             | K, M      | 1MHz, 0.1V        | 1.50                     | 0.240           |
| VLH322520-8R2□ | 8.2             | K, M      | 1MHz, 0.1V        | 1.60                     | 0.225           |
| VLH322520-100□ | 10              | J, K      | 1MHz, 0.1V        | 1.80                     | 0.190           |
| VLH322520-120□ | 12              | J, K      | 1MHz, 0.1V        | 2.00                     | 0.180           |
| VLH322520-150□ | 15              | J, K      | 1MHz, 0.1V        | 2.20                     | 0.170           |
| VLH322520-180□ | 18              | J, K      | 1MHz, 0.1V        | 2.50                     | 0.165           |
| VLH322520-220□ | 22              | J, K      | 1MHz, 0.1V        | 2.80                     | 0.150           |
| VLH322520-270□ | 27              | J, K      | 1MHz, 0.1V        | 3.10                     | 0.125           |
| VLH322520-330□ | 33              | J, K      | 1MHz, 0.1V        | 3.50                     | 0.115           |
| VLH322520-390□ | 39              | J, K      | 1MHz, 0.1V        | 3.90                     | 0.110           |
| VLH322520-470□ | 47              | J, K      | 1MHz, 0.1V        | 4.30                     | 0.100           |
| VLH322520-560□ | 56              | J, K      | 1MHz, 0.1V        | 4.90                     | 0.085           |
| VLH322520-680□ | 68              | J, K      | 1MHz, 0.1V        | 5.50                     | 0.080           |
| VLH322520-820□ | 82              | J, K      | 1MHz, 0.1V        | 6.20                     | 0.070           |
| VLH322520-101□ | 100             | J, K      | 1MHz, 0.1V        | 7.00                     | 0.080           |
| VLH322520-121□ | 120             | J, K      | 1MHz, 0.1V        | 8.00                     | 0.075           |
| VLH322520-151□ | 150             | J, K      | 1MHz, 0.1V        | 9.30                     | 0.070           |
| VLH322520-181□ | 180             | J, K      | 1MHz, 0.1V        | 10.20                    | 0.065           |
| VLH322520-221□ | 220             | J, K      | 1MHz, 0.1V        | 11.80                    | 0.065           |
| VLH322520-271□ | 270             | J, K      | 1MHz, 0.1V        | 12.50                    | 0.065           |
| VLH322520-331□ | 330             | J, K      | 1MHz, 0.1V        | 15.00                    | 0.065           |
| VLH322520-391□ | 390             | J, K      | 1MHz, 0.1V        | 22.00                    | 0.050           |
| VLH322520-471□ | 470             | J, K      | 1KHz, 0.1V        | 25.00                    | 0.045           |
| VLH322520-561□ | 560             | J, K      | 1KHz, 0.1V        | 28.00                    | 0.040           |

**Electrical Characteristics**

VLH453226- Type(□:Tolerance):

| Part No          | L<br>(μH) | Tolerance | Test<br>Condition | DCR<br>(Ω) max. | IDC<br>(A) max. |
|------------------|-----------|-----------|-------------------|-----------------|-----------------|
| VLH453226-1R0□   | 1.0       | M         | 1MHz, 0.1V        | 0.20            | 0.500           |
| VLH453226-1R2□   | 1.2       | M         | 1MHz, 0.1V        | 0.20            | 0.500           |
| VLH453226-1R5□   | 1.5       | M         | 1MHz, 0.1V        | 0.30            | 0.500           |
| VLH453226-1R8□   | 1.8       | M         | 1MHz, 0.1V        | 0.30            | 0.500           |
| VLH453226-2R2□   | 2.2       | M         | 1MHz, 0.1V        | 0.30            | 0.500           |
| VLH453226-2R7□   | 2.7       | M         | 1MHz, 0.1V        | 0.32            | 0.500           |
| VLH453226-3R3□   | 3.3       | M         | 1MHz, 0.1V        | 0.35            | 0.500           |
| VLH453226-3R9□   | 3.9       | M         | 1MHz, 0.1V        | 0.38            | 0.500           |
| VLH453226-4R7□   | 4.7       | K, M      | 1MHz, 0.1V        | 0.40            | 0.500           |
| VLH453226-5R6□   | 5.6       | K, M      | 1MHz, 0.1V        | 0.47            | 0.500           |
| VLH453226-5R6□-1 | 5.6       | M         | 1MHz, 0.25V       | 0.18            | 1.180           |
| VLH453226-6R8□   | 6.8       | K, M      | 1MHz, 0.1V        | 0.50            | 0.450           |
| VLH453226-8R2□   | 8.2       | K, M      | 1MHz, 0.1V        | 0.56            | 0.450           |
| VLH453226-100□   | 10        | J, K      | 1MHz, 0.1V        | 0.56            | 0.400           |
| VLH453226-120□   | 12        | J, K      | 1MHz, 0.1V        | 0.62            | 0.380           |
| VLH453226-150□   | 15        | J, K      | 1MHz, 0.1V        | 0.73            | 0.360           |
| VLH453226-180□   | 18        | J, K      | 1MHz, 0.1V        | 0.82            | 0.340           |
| VLH453226-220□   | 22        | J, K      | 1MHz, 0.1V        | 0.94            | 0.320           |
| VLH453226-270□   | 27        | J, K      | 1MHz, 0.1V        | 1.10            | 0.300           |
| VLH453226-330□   | 33        | J, K      | 1MHz, 0.1V        | 1.20            | 0.270           |
| VLH453226-390□   | 39        | J, K      | 1MHz, 0.1V        | 1.40            | 0.240           |
| VLH453226-470□   | 47        | J, K      | 1MHz, 0.1V        | 1.50            | 0.220           |
| VLH453226-560□   | 56        | J, K      | 1MHz, 0.1V        | 1.70            | 0.200           |
| VLH453226-680□   | 68        | J, K      | 1MHz, 0.1V        | 1.90            | 0.180           |
| VLH453226-820□   | 82        | J, K      | 1MHz, 0.1V        | 2.20            | 0.170           |
| VLH453226-101□   | 100       | J, K      | 1MHz, 0.1V        | 2.50            | 0.160           |
| VLH453226-121□   | 120       | J, K      | 1MHz, 0.1V        | 3.00            | 0.150           |
| VLH453226-151□   | 150       | J, K      | 1MHz, 0.1V        | 3.70            | 0.130           |
| VLH453226-181□   | 180       | J, K      | 1MHz, 0.1V        | 4.50            | 0.120           |
| VLH453226-221□   | 220       | J, K      | 1MHz, 0.1V        | 5.40            | 0.110           |
| VLH453226-271□   | 270       | J, K      | 1MHz, 0.1V        | 6.80            | 0.100           |
| VLH453226-331□   | 330       | J, K      | 1MHz, 0.1V        | 8.20            | 0.095           |
| VLH453226-391□   | 390       | J, K      | 1MHz, 0.1V        | 9.70            | 0.090           |
| VLH453226-471□   | 470       | J, K      | 1KHz, 0.1V        | 11.80           | 0.080           |
| VLH453226-561□   | 560       | J, K      | 1KHz, 0.1V        | 14.50           | 0.070           |
| VLH453226-681□   | 680       | J, K      | 1KHz, 0.1V        | 17.00           | 0.065           |
| VLH453226-821□   | 820       | J, K      | 1KHz, 0.1V        | 20.50           | 0.060           |
| VLH453226-102□   | 1000      | J, K      | 1KHz, 0.1V        | 25.00           | 0.050           |
| VLH453226-122□   | 1200      | J, K      | 1KHz, 0.1V        | 30.00           | 0.045           |
| VLH453226-152□   | 1500      | J, K      | 1KHz, 0.1V        | 37.00           | 0.040           |
| VLH453226-152□-2 | 1500      | K         | 1KHz, 0.1V        | 37.00           | 0.055           |
| VLH453226-182□   | 1800      | J, K      | 1KHz, 0.1V        | 45.00           | 0.035           |
| VLH453226-222□   | 2200      | J, K      | 1KHz, 0.1V        | 50.00           | 0.030           |
| VLH453226-222□-1 | 2200      | K         | 1KHz, 0.1V        | 47.00           | 0.078           |

Note: VLH453226-222□-1 The current when the inductance becomes 30% lower than its initial value.

**Electrical Characteristics**

VLH322515C- Type(□:Tolerance):

| Part No         | L<br>(μH) | Tolerance | Test<br>Condition | DCR<br>(Ω) ±20% | Isat<br>(A) max. | Irms<br>(A) max. | SRF<br>(MHz) min. |
|-----------------|-----------|-----------|-------------------|-----------------|------------------|------------------|-------------------|
| VLH322515C-R47□ | 0.47      | M, N      | 1MHz, 0.1V        | 0.030           | 3.40             | 2.55             | 100               |
| VLH322515C-1R0□ | 1.0       | M, N      | 1MHz, 0.1V        | 0.045           | 2.30             | 2.05             | 100               |
| VLH322515C-1R5□ | 1.5       | M, N      | 1MHz, 0.1V        | 0.057           | 1.75             | 1.75             | 70                |
| VLH322515C-2R2□ | 2.2       | M, N      | 1MHz, 0.1V        | 0.076           | 1.55             | 1.60             | 70                |
| VLH322515C-3R3□ | 3.3       | M, N      | 1MHz, 0.1V        | 0.120           | 1.25             | 1.20             | 50                |
| VLH322515C-4R7□ | 4.7       | M, N      | 1MHz, 0.1V        | 0.180           | 1.00             | 1.00             | 40                |
| VLH322515C-6R8□ | 6.8       | M, N      | 1MHz, 0.1V        | 0.240           | 0.85             | 0.85             | 40                |
| VLH322515C-100□ | 10        | K, M      | 1MHz, 0.1V        | 0.380           | 0.75             | 0.70             | 30                |
| VLH322515C-150□ | 15        | K, M      | 1MHz, 0.1V        | 0.570           | 0.60             | 0.52             | 20                |
| VLH322515C-220□ | 22        | K, M      | 1MHz, 0.1V        | 0.810           | 0.50             | 0.45             | 20                |
| VLH322515C-330□ | 33        | K, M      | 1MHz, 0.1V        | 1.150           | 0.38             | 0.39             | 13                |
| VLH322515C-470□ | 47        | K, M      | 1MHz, 0.1V        | 1.780           | 0.33             | 0.31             | 11                |
| VLH322515C-680□ | 68        | K, M      | 1MHz, 0.1V        | 2.280           | 0.28             | 0.275            | 11                |
| VLH322515C-101□ | 100       | K, M      | 1MHz, 0.1V        | 2.700           | 0.18             | 0.250            | 8                 |
| VLH322515C-121□ | 120       | K, M      | 1MHz, 0.1V        | 4.380           | 0.17             | 0.200            | 8                 |

VLH322520C- Type(□:Tolerance):

| Part No           | L<br>(μH) | Tolerance | Test<br>Condition | DCR<br>(Ω) max. | IDC<br>(A) max. |
|-------------------|-----------|-----------|-------------------|-----------------|-----------------|
| VLH322520C-1R0□   | 1.0       | M         | 1MHz, 0.1V        | 0.078           | 1.000           |
| VLH322520C-2R2□   | 2.2       | M         | 1MHz, 0.1V        | 0.126           | 0.790           |
| VLH322520C-3R3□   | 3.3       | M         | 1MHz, 0.1V        | 0.165           | 0.500           |
| VLH322520C-4R7□   | 4.7       | M         | 1MHz, 0.1V        | 0.195           | 0.450           |
| VLH322520C-4R7□-2 | 4.7       | M         | 100KHz, 0.25V     | 0.195           | 0.650           |
| VLH322520C-6R8□   | 6.8       | M         | 1MHz, 0.1V        | 0.330           | 0.450           |
| VLH322520C-100□   | 10        | M         | 1MHz, 0.1V        | 0.572           | 0.300           |
| VLH322520C-220□   | 22        | K, M      | 1MHz, 0.1V        | 0.923           | 0.250           |
| VLH322520C-470□   | 47        | K, M      | 1MHz, 0.1V        | 1.690           | 0.170           |
| VLH322520C-101□   | 100       | J, K      | 1MHz, 0.1V        | 4.550           | 0.100           |
| VLH322520C-121□   | 120       | K         | 1MHz, 0.1V        | 7.000           | 0.180           |
| VLH322520C-151□   | 150       | J, K      | 1MHz, 0.1V        | 9.100           | 0.080           |
| VLH322520C-221□   | 220       | J, K      | 1MHz, 0.1V        | 10.92           | 0.070           |
| VLH322520C-331□   | 330       | J, K      | 1MHz, 0.1V        | 13.00           | 0.060           |
| VLH322520C-391□   | 390       | J, K      | 1MHz, 0.1V        | 22.10           | 0.060           |
| VLH322520C-471□   | 470       | J, K      | 1MHz, 0.1V        | 24.70           | 0.060           |
| VLH322520C-561□   | 560       | J, K      | 1MHz, 0.1V        | 28.60           | 0.060           |

VLH453226C- Type(□:Tolerance):

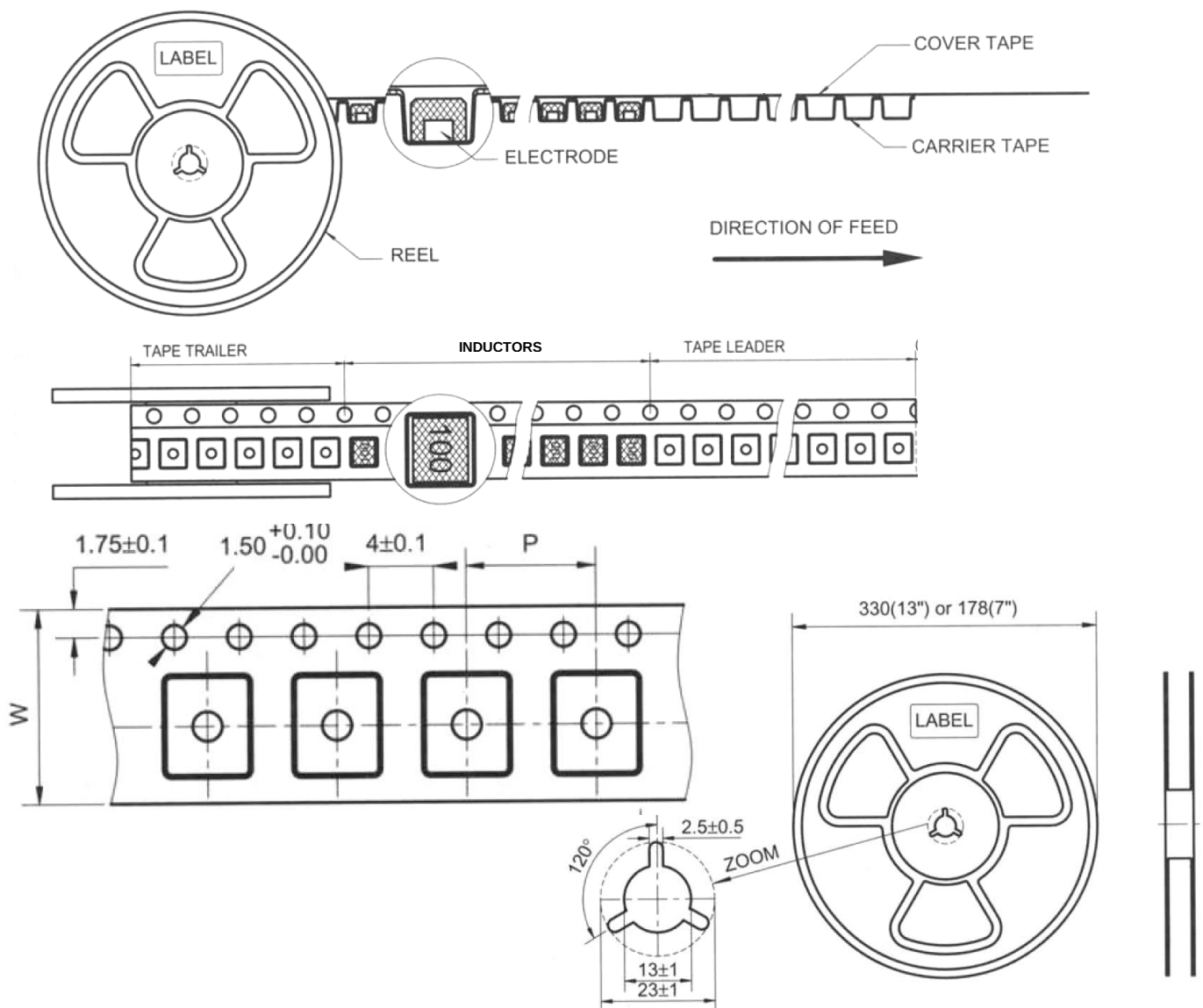
| Part No         | L<br>(μH) | Tolerance | Test<br>Condition | DCR<br>(Ω) max. | IDC<br>(A) max. |
|-----------------|-----------|-----------|-------------------|-----------------|-----------------|
| VLH453226C-1R0□ | 1.0       | M         | 1MHz, 0.1V        | 0.08            | 1.080           |
| VLH453226C-1R5□ | 1.5       | M         | 1MHz, 0.1V        | 0.09            | 1.000           |
| VLH453226C-2R2□ | 2.2       | M         | 1MHz, 0.1V        | 0.11            | 0.900           |
| VLH453226C-3R3□ | 3.3       | M         | 1MHz, 0.1V        | 0.13            | 0.800           |
| VLH453226C-4R7□ | 4.7       | K, M      | 1MHz, 0.1V        | 0.15            | 0.750           |
| VLH453226C-6R8□ | 6.8       | K, M      | 1MHz, 0.1V        | 0.20            | 0.720           |
| VLH453226C-100□ | 10        | J, K      | 1MHz, 0.1V        | 0.24            | 0.650           |
| VLH453226C-150□ | 15        | J, K      | 1MHz, 0.1V        | 0.32            | 0.570           |
| VLH453226C-220□ | 22        | J, K      | 1MHz, 0.1V        | 0.60            | 0.420           |
| VLH453226C-330□ | 33        | J, K      | 1MHz, 0.1V        | 1.00            | 0.310           |
| VLH453226C-470□ | 47        | J, K      | 1MHz, 0.1V        | 1.10            | 0.280           |
| VLH453226C-680□ | 68        | J, K      | 1MHz, 0.1V        | 1.70            | 0.220           |
| VLH453226C-101□ | 100       | J, K      | 1MHz, 0.1V        | 2.20            | 0.190           |
| VLH453226C-151□ | 150       | J, K      | 1MHz, 0.1V        | 3.50            | 0.130           |
| VLH453226C-221□ | 220       | J, K      | 1MHz, 0.1V        | 4.00            | 0.110           |
| VLH453226C-331□ | 330       | J, K      | 1MHz, 0.1V        | 6.80            | 0.100           |
| VLH453226C-471□ | 470       | J, K      | 1KHz, 0.1V        | 8.50            | 0.090           |
| VLH453226C-102□ | 1000      | K         | 1KHz, 0.1V        | 25.00           | 0.050           |

**■Electrical Characteristics**

VLH575047C- Type(□:Tolerance):

| Part No           | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. |
|-------------------|-----------------|-----------|-------------------|--------------------------|-----------------|
| VLH575047C-R12□   | 0.12            | M         | 1MHz, 0.1V        | 0.0098                   | 6.000           |
| VLH575047C-R27□   | 0.27            | M         | 1MHz, 0.1V        | 0.0140                   | 5.300           |
| VLH575047C-R47□   | 0.47            | M         | 1MHz, 0.1V        | 0.0182                   | 4.800           |
| VLH575047C-1R0□   | 1.0             | M         | 1MHz, 0.1V        | 0.0270                   | 4.000           |
| VLH575047C-1R5□   | 1.5             | M         | 1MHz, 0.1V        | 0.0310                   | 3.700           |
| VLH575047C-2R2□   | 2.2             | M         | 1MHz, 0.1V        | 0.0410                   | 3.200           |
| VLH575047C-3R3□   | 3.3             | M         | 1MHz, 0.1V        | 0.0500                   | 2.900           |
| VLH575047C-4R7□   | 4.7             | M         | 1MHz, 0.1V        | 0.0574                   | 2.700           |
| VLH575047C-6R8□   | 6.8             | M         | 1MHz, 0.1V        | 0.1040                   | 2.000           |
| VLH575047C-100□   | 10              | K, M      | 1MHz, 0.1V        | 0.1300                   | 1.700           |
| VLH575047C-100□-1 | 10              | K         | 1MHz, 0.25V       | 0.1300                   | 2.000           |
| VLH575047C-150□   | 15              | K, M      | 1MHz, 0.1V        | 0.210                    | 1.400           |
| VLH575047C-220□   | 22              | K, M      | 1MHz, 0.1V        | 0.266                    | 1.200           |
| VLH575047C-270□   | 27              | K, M      | 1MHz, 0.1V        | 0.300                    | 1.000           |
| VLH575047C-330□   | 33              | K, M      | 1MHz, 0.1V        | 0.448                    | 0.900           |
| VLH575047C-470□   | 47              | K, M      | 1MHz, 0.1V        | 0.560                    | 0.800           |
| VLH575047C-680□   | 68              | K, M      | 1MHz, 0.1V        | 0.938                    | 0.640           |
| VLH575047C-101□   | 100             | K, M      | 100KHz, 0.1V      | 1.204                    | 0.560           |
| VLH575047C-151□   | 150             | K, M      | 100KHz, 0.1V      | 2.660                    | 0.420           |
| VLH575047C-221□   | 220             | K, M      | 100KHz, 0.1V      | 3.360                    | 0.320           |
| VLH575047C-331□   | 330             | K, M      | 100KHz, 0.1V      | 6.160                    | 0.270           |
| VLH575047C-471□   | 470             | K, M      | 100KHz, 0.1V      | 7.560                    | 0.240           |
| VLH575047C-681□   | 680             | K, M      | 100KHz, 0.1V      | 11.34                    | 0.190           |
| VLH575047C-102□   | 1000            | K, M      | 10KHz, 0.1V       | 14.42                    | 0.150           |
| VLH575047C-222□   | 2200            | K, M      | 10KHz, 0.1V       | 30.10                    | 0.100           |
| VLH575047C-472□   | 4700            | K, M      | 10KHz, 0.1V       | 61.04                    | 0.070           |
| VLH575047C-472□-1 | 4700            | M         | 100KHz, 0.25V     | 61.00                    | 0.090           |
| VLH575047C-103□   | 10000           | K, M      | 10KHz, 0.1V       | 140.0                    | 0.050           |

■ Tape and Reel specifications



Unit: mm

| Type    | Tape size |    | Parts Per Reel |      |
|---------|-----------|----|----------------|------|
|         | W         | P  | 7"             | 13"  |
| 252010E | 8         | 4  | 2000           | -    |
| 252012E | 8         | 4  | 2000           | -    |
| 252510  | 8         | 4  | 2000           | -    |
| 322515  | 8         | 4  | 2000           | -    |
| 322520  | 12        | 8  | 1000           | -    |
| 453226  | 12        | 8  | 500            | -    |
| 575047  | 16        | 12 | -              | 1000 |

## SMD Power Inductor

### ■SMD Power Inductor Environmental Specifications

#### Environmental test

| Test Items                    | Specifications                                                         | Test Conditions / Test Methods                                                                                                                                                          |
|-------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High temperature Storage test | No case deformation or change in appearance.<br>$\Delta L/L \leq 10\%$ | Temperature $85 \pm 2^\circ\text{C}$ ,<br>Time: $48 \pm 2$ hours,<br>Tested after 1hour at room temperature.                                                                            |
| Low temperature Storage test  |                                                                        | Temperature $-25 \pm 2^\circ\text{C}$ ,<br>Time: $48 \pm 2$ hours,<br>Tested after 1hour at room temperature.                                                                           |
| Humidity test                 |                                                                        | Temperature $40 \pm 2^\circ\text{C}$ , 90~95% relative humidity<br>Time: $96 \pm 2$ hours<br>Tested after 1hour at room temperature.                                                    |
| Thermal shock test            |                                                                        | First $-25^\circ\text{C}$ 30minutes then $25^\circ\text{C}$ 10 minutes last $85^\circ\text{C}$ 30 minutes, as 1 cycle. Go through 5 cycles.<br>Tested after 1 hour at room temperature. |

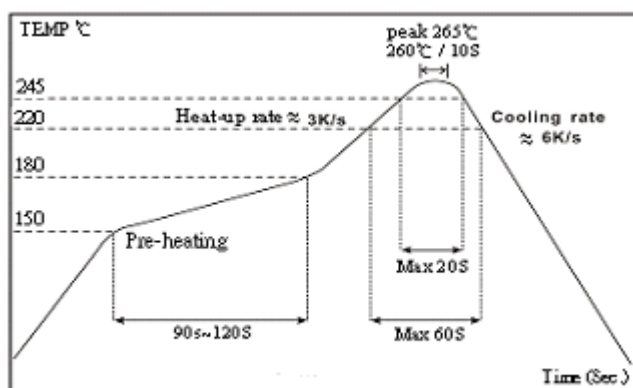
#### Mechanical test

| Test Items                   | Specifications                                                         | Test Conditions / Test Methods                                                                                                                                                                            |
|------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solderability test           | Terminal area must have 90% minimum solder coverage.                   | Product with Lead-free terminal:<br>Dip pads in flux then dip in solder pot at $245 \pm 5^\circ\text{C}$ for 3 seconds.                                                                                   |
| Resistance to Soldering Heat | No case deformation or change in appearance.                           | Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature of $130 \sim 150^\circ\text{C}$ . Immersing to $260 \pm 5^\circ\text{C}$ for 10 seconds. |
| Vibration test               | No case deformation or change in appearance.<br>$\Delta L/L \leq 10\%$ | Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.                                                                                                                  |
| Shock resistance             |                                                                        | Drop down with $981\text{m/s}^2$ (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.                                                       |

■Storage Temperature:  $5^\circ\text{C} \sim 25^\circ\text{C}$ , Humidity:25~80%

■Shelf life: 1 years Max

#### The condition of reflow (recommendation)



**REVISION HISTORY**

| <b><u>REVISION</u></b> | <b><u>DATE</u></b> | <b><u>CHANGE NOTIFICATION</u></b> | <b><u>DESCRIPTION</u></b>                                          |
|------------------------|--------------------|-----------------------------------|--------------------------------------------------------------------|
| Version C8             | Apr 10,2025        |                                   | -Add tolerance for VLH322515C-Type.<br>-Modify Storage conditions. |