

Inductors for Power Circuits

Wound Ferrite

SLF series

SLF6025

SLF6028

SLF6045

SLF7032

SLF7045

SLF7055

SLF10145

SLF10165

SLF12555

SLF12565

SLF12575

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

REMINDERS

- The storage period is less than 6 months. Be sure to follow the storage conditions (Temperature: 5 to 30°C, Humidity: 10 to 75% RH or less).
If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Carefully lay out the coil for the circuit board design of the non-magnetic shield type.
A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.
The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.
If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

- (1) Aerospace/Aviation equipment
- (2) Transportation equipment (cars, electric trains, ships, etc.)
- (3) Medical equipment
- (4) Power-generation control equipment
- (5) Atomic energy-related equipment
- (6) Seabed equipment
- (7) Transportation control equipment

- (8) Public information-processing equipment
- (9) Military equipment
- (10) Electric heating apparatus, burning equipment
- (11) Disaster prevention/crime prevention equipment
- (12) Safety equipment
- (13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

Inductors for Power Circuits

Product compatible with RoHS directive
Compatible with lead-free solders

Wound Ferrite

Overview of the SLF Series



FEATURES

- Magnetic shield type wound inductor for power circuits.
- Product lineup allows for various usages.

APPLICATION

Thin-screen TV, LCDs, AV equipment, gaming equipment, other electrical devices

PART NUMBER CONSTRUCTION

| SLF | 6025 | T | - | 4R7 | M | 1R5 | - | PF | | | |
|-------------|-----------------------|---|-----------------|--------|-----------------|-----|----------------------|------|-------------------|------|---------------|
| Series name | LxWxH Dimensions (mm) | | Packaging style | | Inductance (μH) | | Inductance tolerance | | Rated current (A) | | Internal code |
| 6025 | 6.0x6.0x2.5 | | T | Taping | 1R0 | 1.0 | M | ±20% | R47 | 0.47 | |
| 6028 | 6.0x6.0x2.8 | | | | 100 | 10 | N | ±30% | 2R2 | 2.2 | |
| 6045 | 6.0x6.0x4.5 | | | | 101 | 100 | | | 150 | 15 | |
| 7032 | 7.0x7.0x3.2 | | | | | | | | | | |
| 7045 | 7.0x7.0x4.5 | | | | | | | | | | |
| 7055 | 7.0x7.0x5.5 | | | | | | | | | | |
| 10145 | 10.1x10.1x4.5 | | | | | | | | | | |
| 10165 | 10.1x10.1x6.8 | | | | | | | | | | |
| 12555 | 12.5x12.5x5.5 | | | | | | | | | | |
| 12565 | 12.5x12.5x6.5 | | | | | | | | | | |
| 12575 | 12.5x12.5x7.5 | | | | | | | | | | |

OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY, PRODUCT WEIGHT

| Type | Temperature range | | Package quantity (pieces/reel) | Individual weight (g) |
|----------|------------------------|-----------------------|-----------------------------------|--------------------------|
| | Operating temperature* | Storage temperature** | | |
| | (°C) | (°C) | | |
| SLF6025 | -40 to +105 | -40 to +105 | 1000 | 0.3 |
| SLF6028 | -40 to +105 | -40 to +105 | 1000 | 0.3 |
| SLF6045 | -40 to +105 | -40 to +105 | 1000 | 0.4 |
| SLF7032 | -40 to +105 | -40 to +105 | 1000 | 0.4 |
| SLF7045 | -40 to +105 | -40 to +105 | 1000 | 0.6 |
| SLF7055 | -40 to +105 | -40 to +105 | 1000 | 0.8 |
| SLF10145 | -40 to +105 | -40 to +105 | 500 | 1.3 |
| SLF10165 | -40 to +105 | -40 to +105 | 500 | 1.9 |
| SLF12555 | -40 to +105 | -40 to +105 | 500 | 2.6 |
| SLF12565 | -40 to +105 | -40 to +105 | 500 | 3.2 |
| SLF12575 | -40 to +105 | -40 to +105 | 500 | 3.6 |

* Operating temperature range includes self-temperature rise.

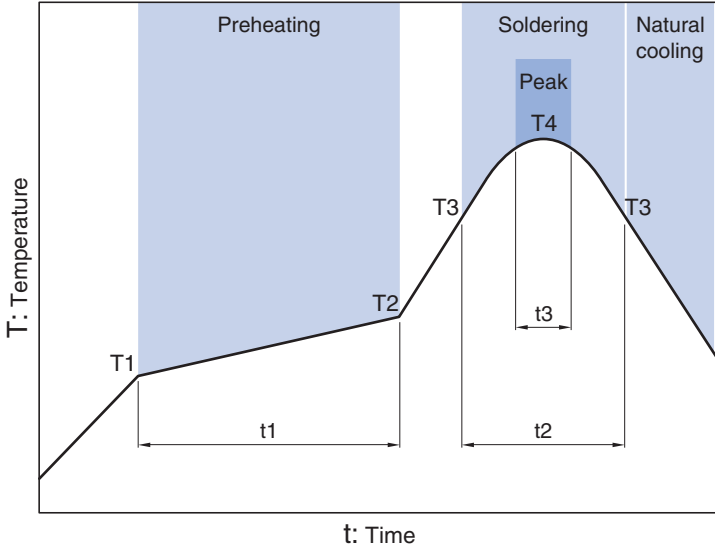
** The Storage temperature range is for after the circuit board is mounted.

○ RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. <http://www.tdk.co.jp/rohs/>

• All specifications are subject to change without notice.

Overview of the SLF Series

RECOMMENDED REFLOW PROFILE



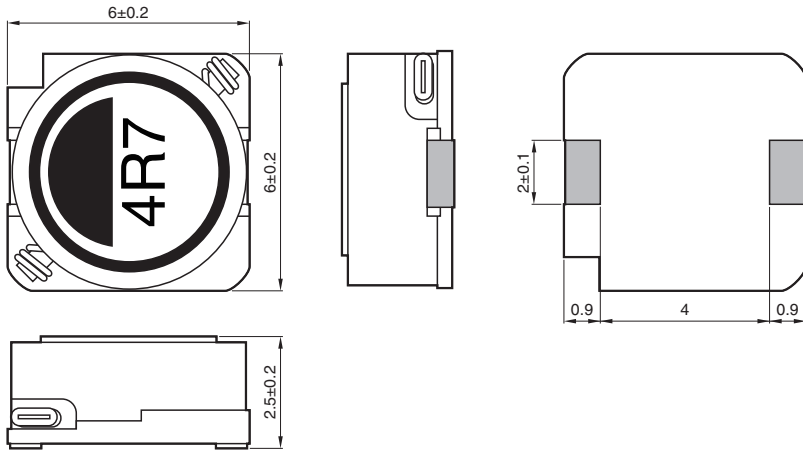
| Preheating | | | Soldering | | Peak | |
|------------|-------|------------|-----------|------|-------|------|
| Temp. | Temp. | Time | Temp. | Time | Temp. | Time |
| T1 | T2 | t1 | T3 | t2 | T4 | t3 |
| 150°C | 180°C | 60 to 120s | 230°C | 30s | 250°C | 5s |

• All specifications are subject to change without notice.

SLF series

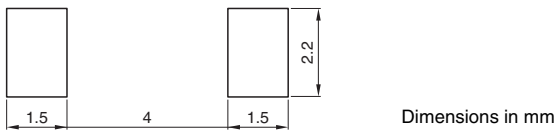
SLF6025 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



• All specifications are subject to change without notice.

SLF series SLF6025 Type

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | Tolerance | L measuring frequency (kHz) | DC resistance (Ω) \pm 20% | Rated current(A)* | | Part No. |
|-----------------|-----------|-----------------------------------|---|-------------------|------|---------------------|
| | | | | max. Idc1 | Idc2 | |
| 4.7 | \pm 20% | 100 | 0.0306 | 1.5 | 1.8 | SLF6025T-4R7M1R5-PF |
| 6.8 | \pm 20% | 100 | 0.0442 | 1.3 | 1.5 | SLF6025T-6R8M1R3-PF |
| 10 | \pm 20% | 100 | 0.0573 | 1 | 1.3 | SLF6025T-100M1R0-PF |
| 15 | \pm 20% | 100 | 0.085 | 0.88 | 1.1 | SLF6025T-150MR88-PF |
| 22 | \pm 20% | 100 | 0.122 | 0.73 | 0.94 | SLF6025T-220MR73-PF |
| 33 | \pm 20% | 100 | 0.18 | 0.59 | 0.79 | SLF6025T-330MR59-PF |
| 47 | \pm 20% | 100 | 0.24 | 0.48 | 0.67 | SLF6025T-470MR48-PF |
| 68 | \pm 20% | 100 | 0.37 | 0.42 | 0.54 | SLF6025T-680MR42-PF |
| 100 | \pm 20% | 100 | 0.5 | 0.33 | 0.47 | SLF6025T-101MR33-PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (30% below the nominal value)

Idc2: When based on the temperature increase (Temperature increase of 25°C by self heating)

○ Measurement equipment

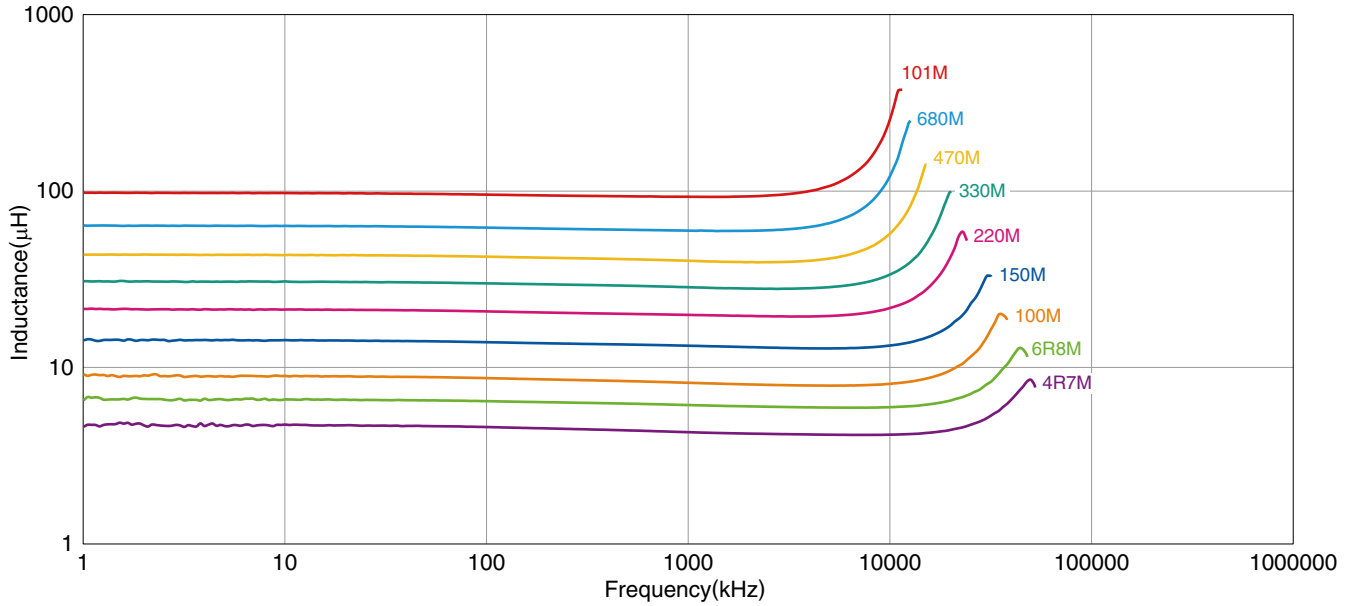
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF6025 Type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

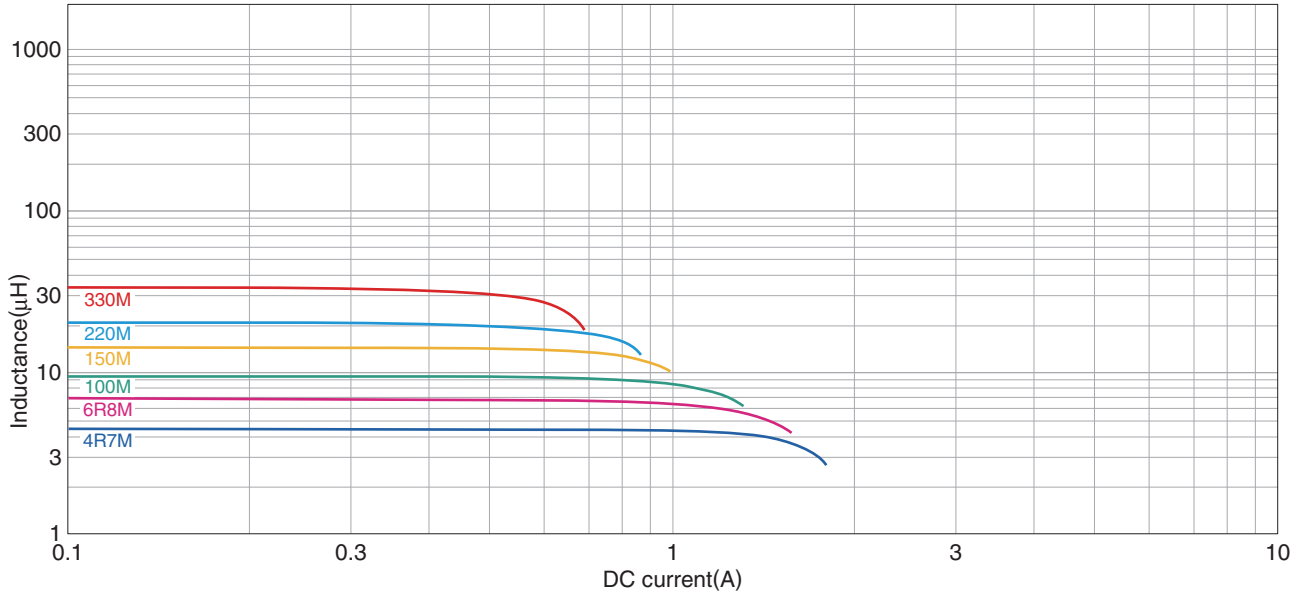
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series **SLF6025 Type**

■ ELECTRICAL CHARACTERISTICS

□ INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

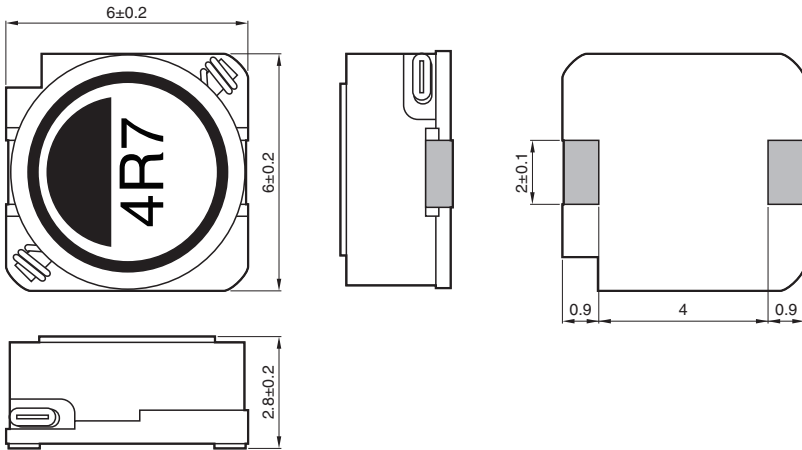
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

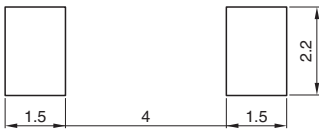
SLF6028 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series **SLF6028 Type**

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | tolerance | L measuring frequency (kHz) | DC resistance (Ω) \pm 20% | Rated current(A)* | | Part No. |
|-----------------|-----------|-----------------------------------|---|-------------------|------|---------------------|
| | | | | max. Idc1 | Idc2 | |
| 4.7 | \pm 20% | 100 | 0.0284 | 1.6 | 2.5 | SLF6028T-4R7M1R6-PF |
| 6.8 | \pm 20% | 100 | 0.0354 | 1.5 | 2.2 | SLF6028T-6R8M1R5-PF |
| 10 | \pm 20% | 100 | 0.0532 | 1.3 | 1.8 | SLF6028T-100M1R3-PF |
| 15 | \pm 20% | 100 | 0.0745 | 1 | 1.4 | SLF6028T-150M1R0-PF |
| 22 | \pm 20% | 100 | 0.104 | 0.77 | 1.3 | SLF6028T-220MR77-PF |
| 33 | \pm 20% | 100 | 0.148 | 0.69 | 1.1 | SLF6028T-330MR69-PF |
| 47 | \pm 20% | 100 | 0.21 | 0.59 | 0.92 | SLF6028T-470MR59-PF |
| 68 | \pm 20% | 100 | 0.29 | 0.5 | 0.78 | SLF6028T-680MR50-PF |
| 100 | \pm 20% | 100 | 0.43 | 0.42 | 0.64 | SLF6028T-101MR42-PF |
| 150 | \pm 20% | 100 | 0.65 | 0.34 | 0.5 | SLF6028T-151MR34-PF |
| 220 | \pm 20% | 100 | 0.98 | 0.26 | 0.38 | SLF6028T-221MR26-PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (30% below the nominal value)

Idc2: When based on the temperature increase (Temperature increase of 25°C by self heating)

○ Measurement equipment

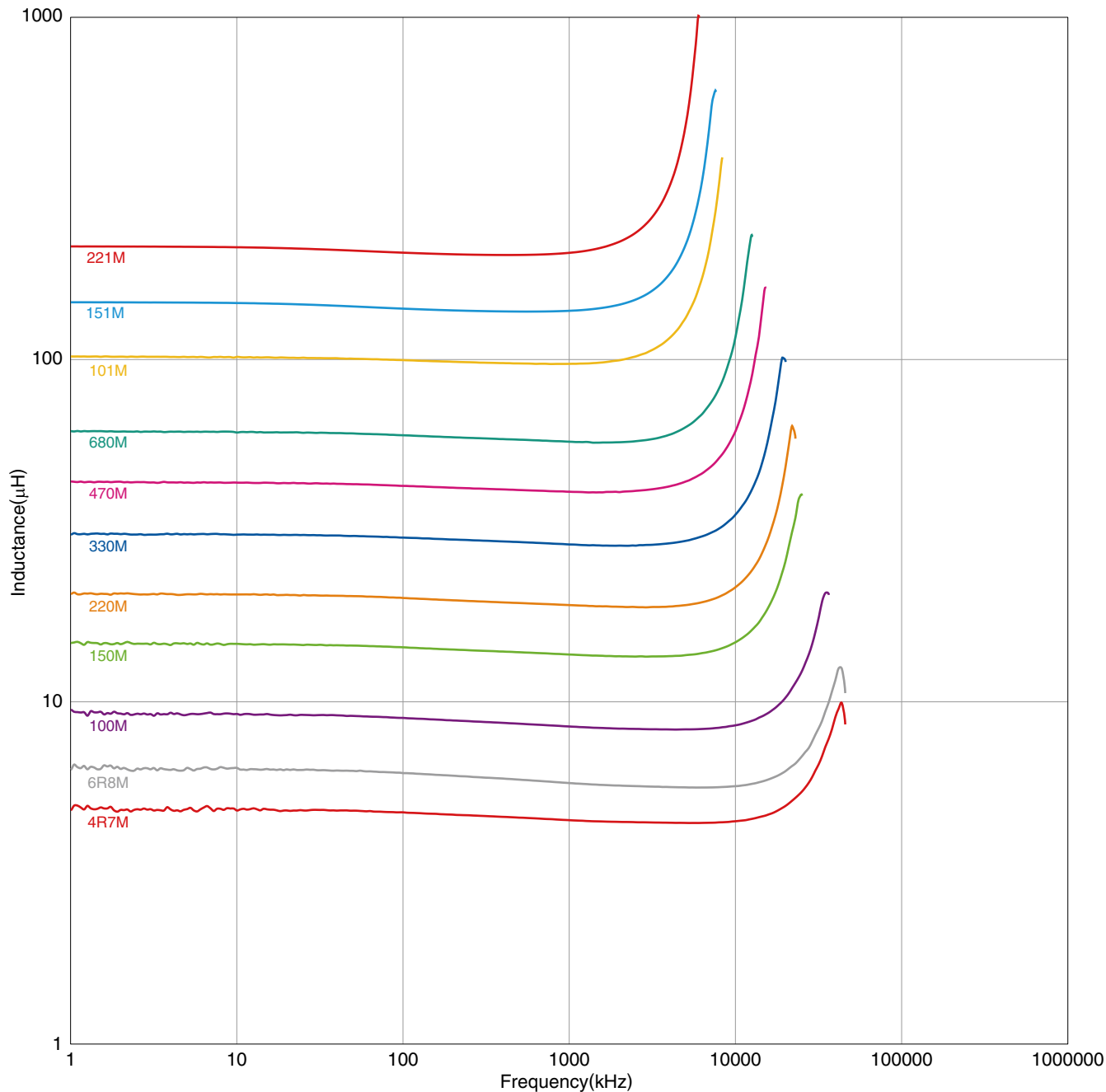
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF6028 Type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

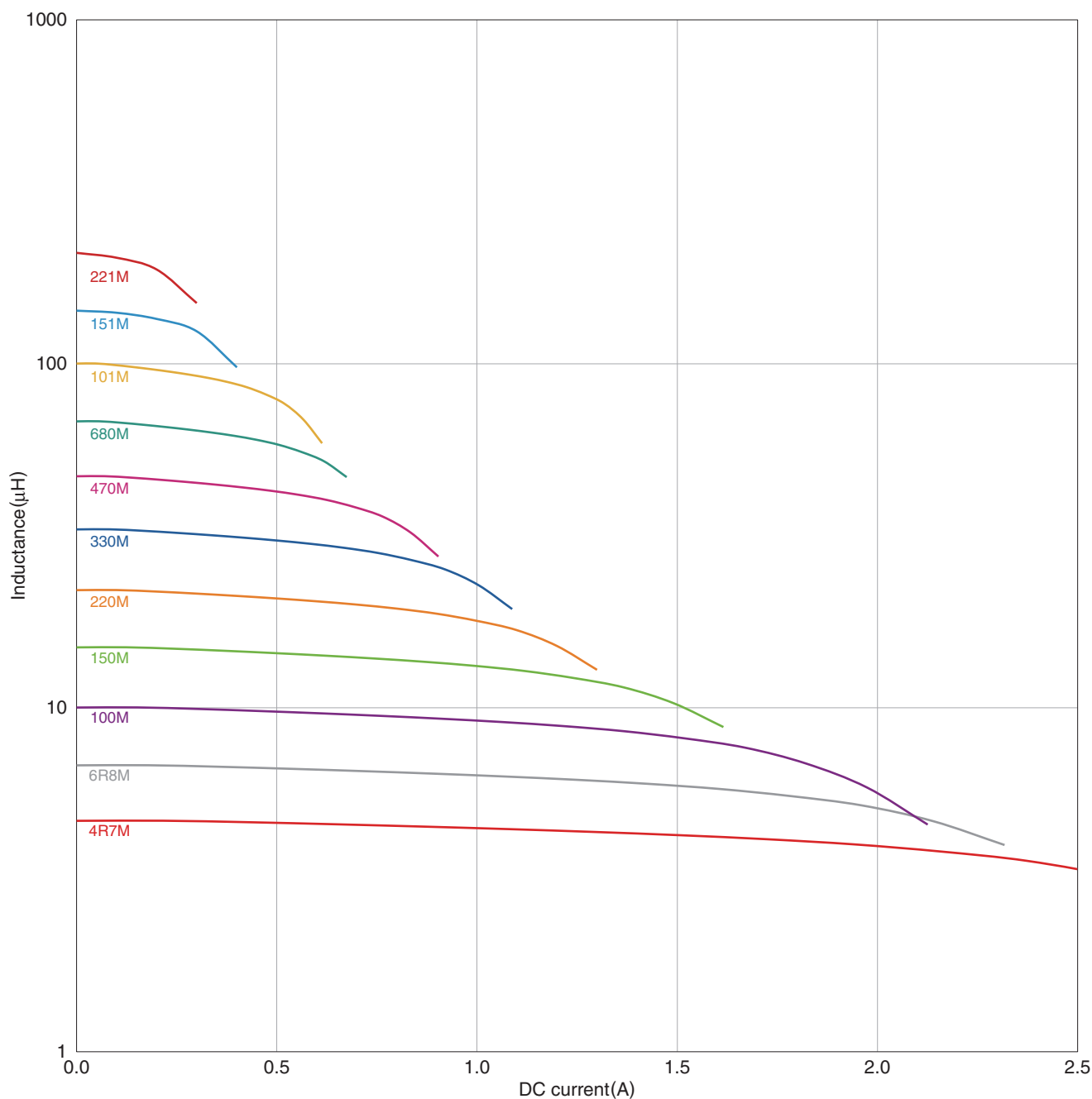
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF6028 Type

ELECTRICAL CHARACTERISTICS

INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

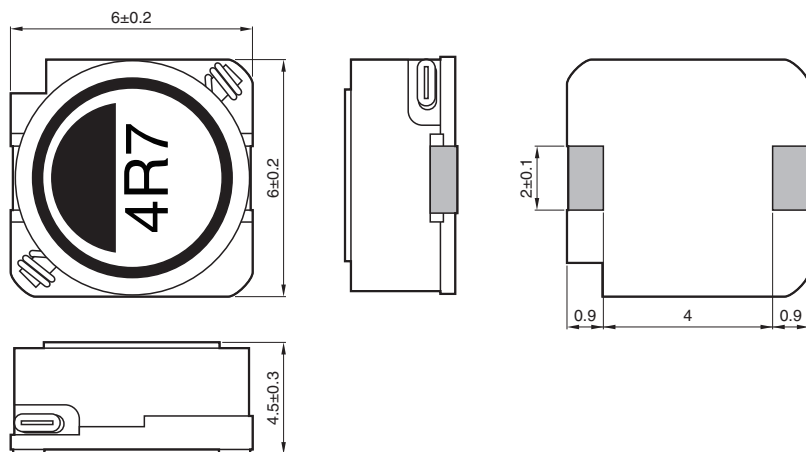
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

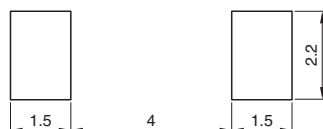
SLF6045 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series **SLF6045 Type**

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μH) | Tolerance | L measuring frequency (kHz) | DC resistance ($\text{m}\Omega$) | Rated current(A)* max. | | Part No. |
|------------------------|------------|-----------------------------------|---------------------------------------|---------------------------|------|----------------------|
| | | | | Idc1 | Idc2 | |
| 1.5 | $\pm 30\%$ | 100 | $16\pm 30\%$ | 4 | 4.1 | SLF6045T-1R5N4R0-3PF |
| 2.2 | $\pm 30\%$ | 100 | $18\pm 30\%$ | 3.3 | 3.8 | SLF6045T-2R2N3R3-3PF |
| 3.3 | $\pm 30\%$ | 100 | $21.5\pm 30\%$ | 2.8 | 3.4 | SLF6045T-3R3N2R8-3PF |
| 4.7 | $\pm 30\%$ | 100 | $26.5\pm 30\%$ | 2.4 | 3.2 | SLF6045T-4R7N2R4-3PF |
| 6.8 | $\pm 30\%$ | 100 | $33\pm 30\%$ | 2 | 2.8 | SLF6045T-6R8N2R0-3PF |
| 10 | $\pm 20\%$ | 100 | $39\pm 20\%$ | 1.6 | 2.7 | SLF6045T-100M1R6-3PF |
| 15 | $\pm 20\%$ | 100 | $59.5\pm 20\%$ | 1.3 | 2.2 | SLF6045T-150M1R3-3PF |
| 22 | $\pm 20\%$ | 100 | $82\pm 20\%$ | 1.1 | 1.8 | SLF6045T-220M1R1-3PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (10% below the initial value)

Idc2: When based on the temperature increase (Temperature increase of 30°C by self heating)

○ Measurement equipment

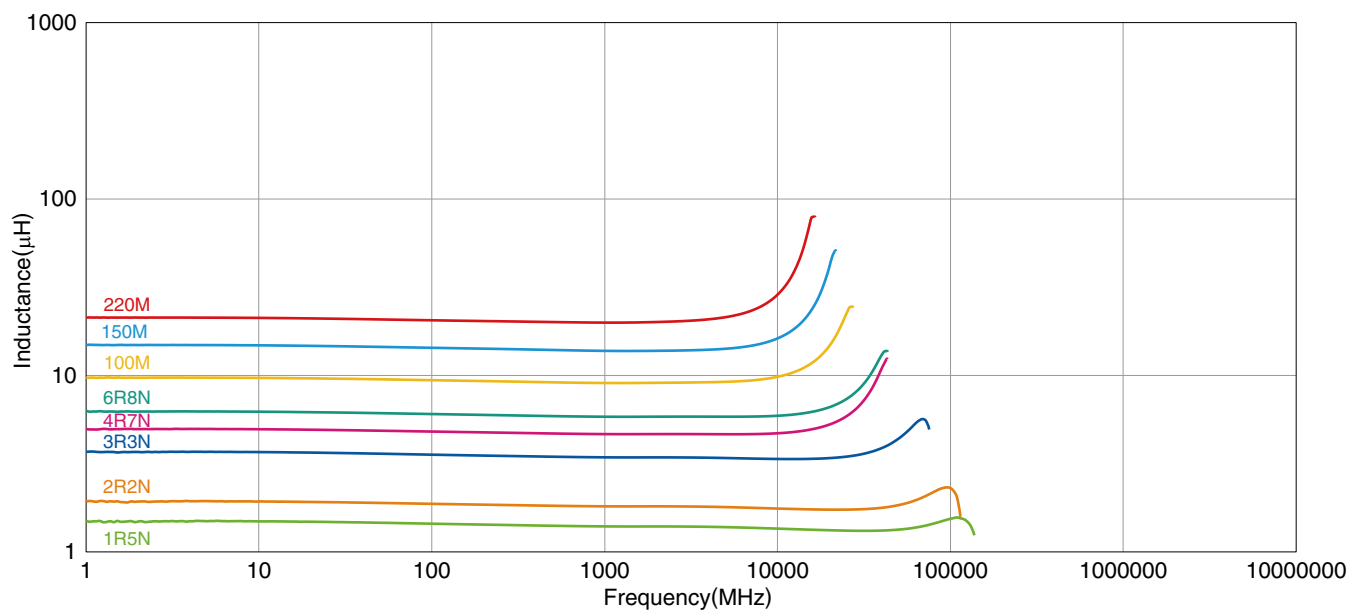
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series **SLF6045 Type**

■ ELECTRICAL CHARACTERISTICS

□ L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

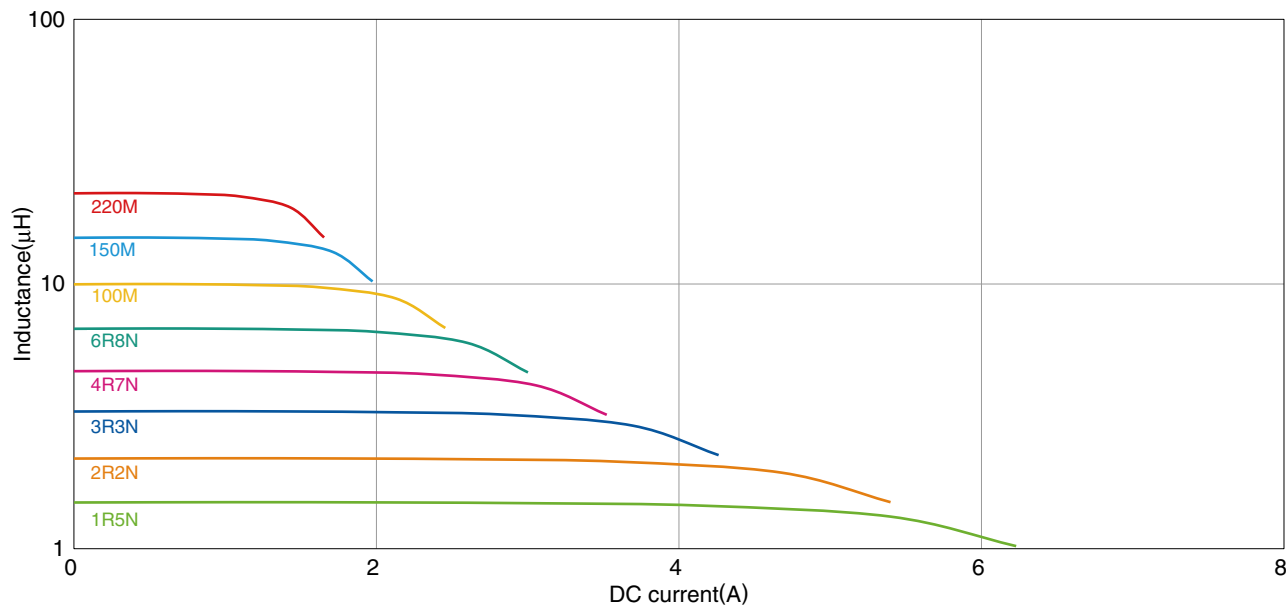
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF6045 Type

ELECTRICAL CHARACTERISTICS

INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

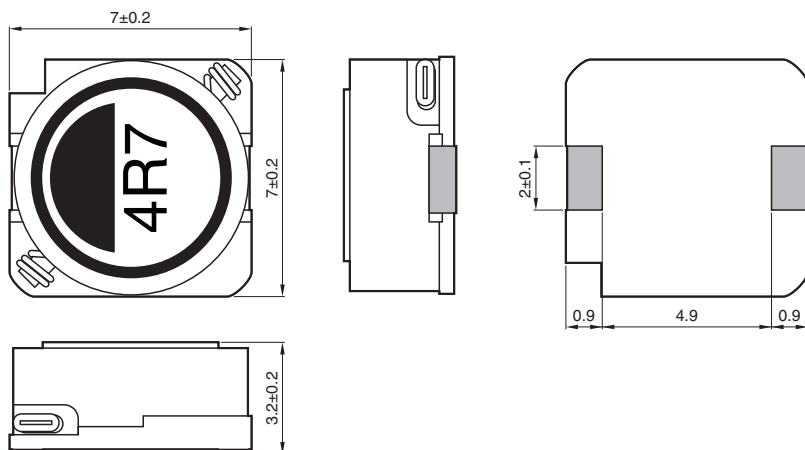
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

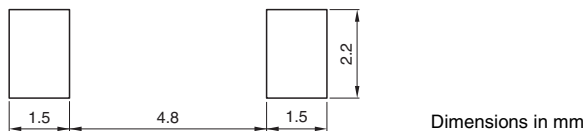
SLF7032 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series **SLF7032 Type**

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μH) | Tolerance | L measuring frequency (kHz) | DC resistance (Ω) $\pm 20\%$ | Rated current(A) max. | Part No. |
|------------------------|------------|-----------------------------------|--|--------------------------|----------------------|
| 3.3 | $\pm 20\%$ | 100 | 0.023 | 1.9 | SLF7032T-3R3M1R9-2PF |
| 4.7 | $\pm 20\%$ | 100 | 0.030 | 1.7 | SLF7032T-4R7M1R7-2PF |
| 6.8 | $\pm 20\%$ | 100 | 0.041 | 1.6 | SLF7032T-6R8M1R6-2PF |
| 10 | $\pm 20\%$ | 100 | 0.053 | 1.4 | SLF7032T-100M1R4-2PF |
| 15 | $\pm 20\%$ | 100 | 0.075 | 1.1 | SLF7032T-150M1R1-2PF |
| 22 | $\pm 20\%$ | 100 | 0.11 | 0.96 | SLF7032T-220MR96-2PF |
| 33 | $\pm 20\%$ | 100 | 0.16 | 0.75 | SLF7032T-330MR75-2PF |
| 47 | $\pm 20\%$ | 100 | 0.24 | 0.67 | SLF7032T-470MR67-2PF |
| 68 | $\pm 20\%$ | 100 | 0.31 | 0.59 | SLF7032T-680MR59-2PF |
| 100 | $\pm 20\%$ | 100 | 0.45 | 0.45 | SLF7032T-101MR45-2PF |
| 150 | $\pm 20\%$ | 100 | 0.65 | 0.37 | SLF7032T-151MR37-2PF |
| 220 | $\pm 20\%$ | 100 | 1.05 | 0.29 | SLF7032T-221MR29-2PF |
| 330 | $\pm 20\%$ | 100 | 1.67 | 0.22 | SLF7032T-331MR22-2PF |
| 470 | $\pm 20\%$ | 100 | 2.05 | 0.2 | SLF7032T-471MR20-2PF |
| 680 | $\pm 20\%$ | 100 | 3.15 | 0.16 | SLF7032T-681MR16-2PF |
| 1000 | $\pm 20\%$ | 100 | 4.78 | 0.13 | SLF7032T-102MR13-2PF |

○ Measurement equipment

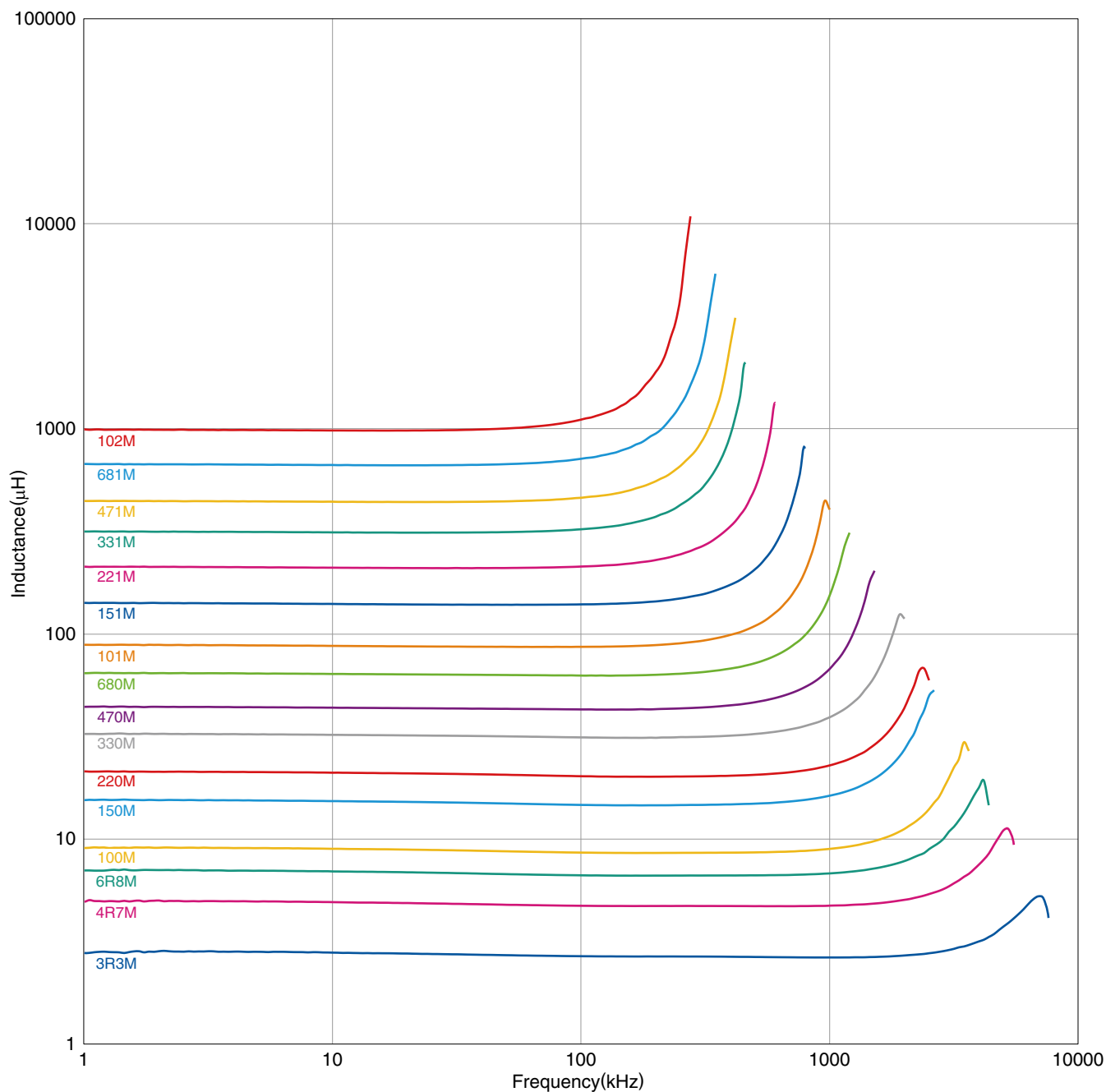
| Measurement item | Product No. | Manufacturer |
|--------------------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current I _{dc1} | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF7032 Type

ELECTRICAL CHARACTERISTICS

FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

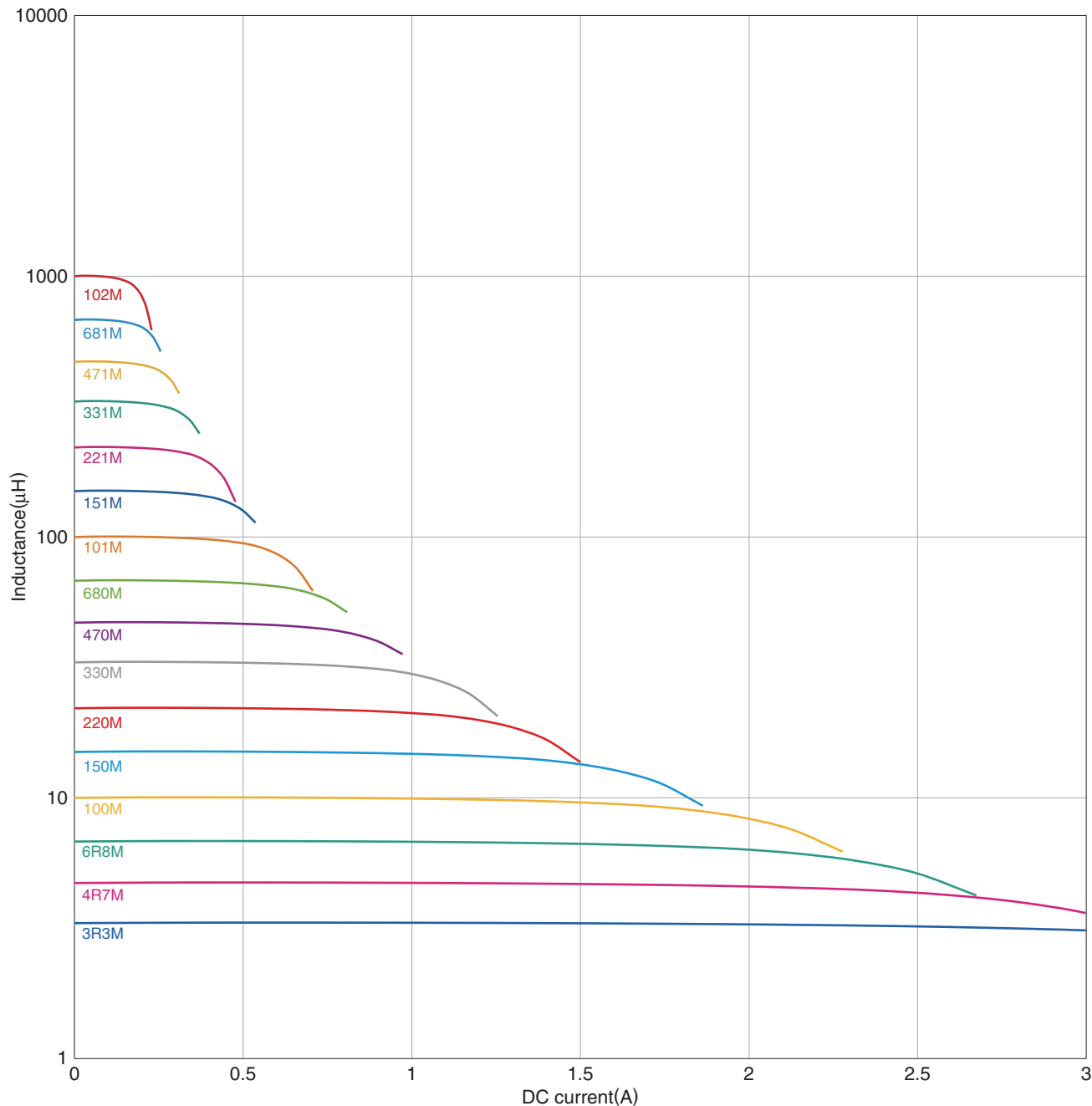
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF7032 Type

ELECTRICAL CHARACTERISTICS

INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

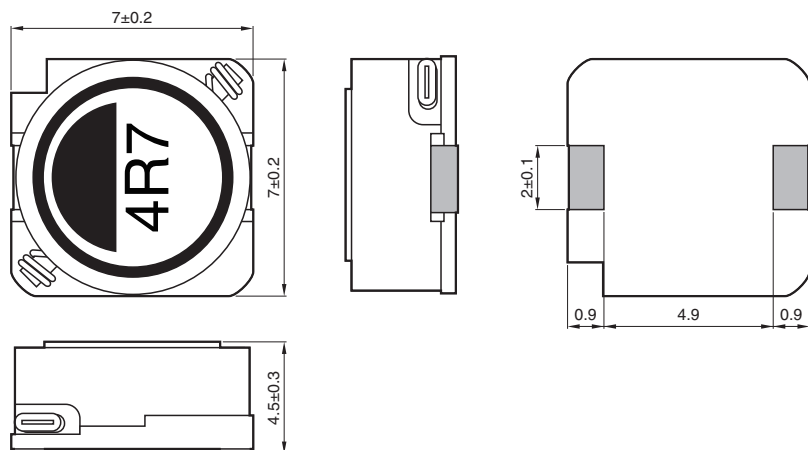
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

SLF7045 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series **SLF7045 Type**

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | Tolerance | L measuring frequency (kHz) | DC resistance (Ω) \pm 20% | Rated current(A)* max. | | Part No. |
|-----------------|-----------|-----------------------------------|---|---------------------------|------|---------------------|
| | | | | Idc1 | Idc2 | |
| 3.3 | \pm 20% | 100 | 0.02 | 2.5 | 2.3 | SLF7045T-3R3M2R5-PF |
| 4.7 | \pm 20% | 100 | 0.03 | 2 | 2.1 | SLF7045T-4R7M2R0-PF |
| 6.8 | \pm 20% | 100 | 0.039 | 1.7 | 1.74 | SLF7045T-6R8M1R7-PF |
| 10 | \pm 20% | 100 | 0.036 | 1.3 | 1.78 | SLF7045T-100M1R3-PF |
| 15 | \pm 20% | 100 | 0.052 | 1.1 | 1.53 | SLF7045T-150M1R1-PF |
| 22 | \pm 20% | 100 | 0.061 | 0.9 | 1.34 | SLF7045T-220MR90-PF |
| 33 | \pm 20% | 100 | 0.096 | 0.82 | 1.09 | SLF7045T-330MR82-PF |
| 47 | \pm 20% | 100 | 0.125 | 0.75 | 0.92 | SLF7045T-470MR75-PF |
| 68 | \pm 20% | 100 | 0.175 | 0.6 | 0.77 | SLF7045T-680MR60-PF |
| 100 | \pm 20% | 100 | 0.25 | 0.5 | 0.65 | SLF7045T-101MR50-PF |
| 150 | \pm 20% | 100 | 0.34 | 0.4 | 0.55 | SLF7045T-151MR40-PF |
| 220 | \pm 20% | 100 | 0.52 | 0.33 | 0.45 | SLF7045T-221MR33-PF |
| 330 | \pm 20% | 100 | 0.74 | 0.25 | 0.37 | SLF7045T-331MR25-PF |
| 470 | \pm 20% | 100 | 1.05 | 0.22 | 0.31 | SLF7045T-471MR22-PF |
| 680 | \pm 20% | 100 | 1.48 | 0.2 | 0.27 | SLF7045T-681MR20-PF |
| 1000 | \pm 20% | 100 | 2.28 | 0.14 | 0.25 | SLF7045T-102MR14-PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (10% below the initial value)

Idc2: When based on the temperature increase (Temperature increase of 20°C by self heating)

○ Measurement equipment

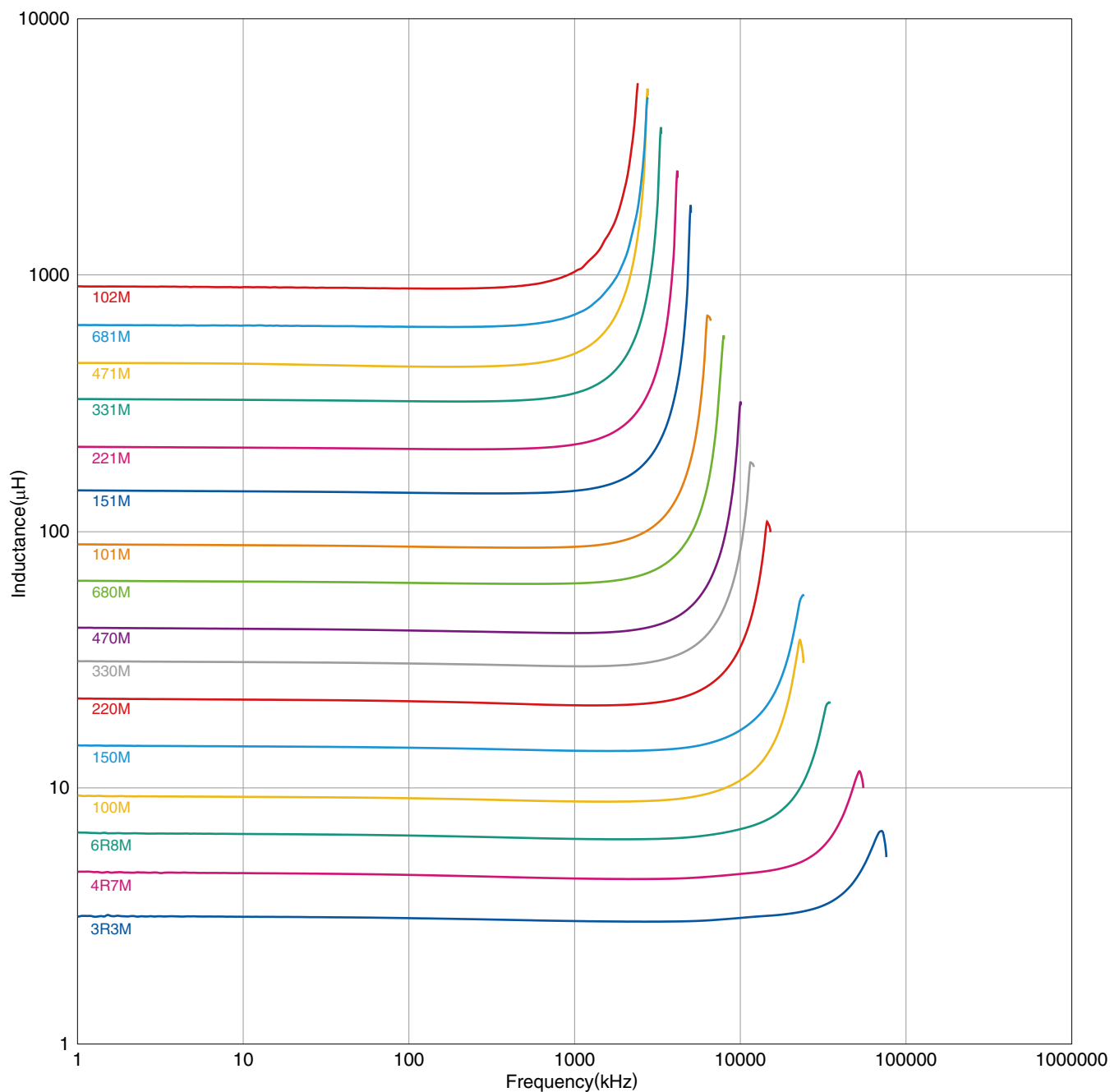
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF7045 Type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

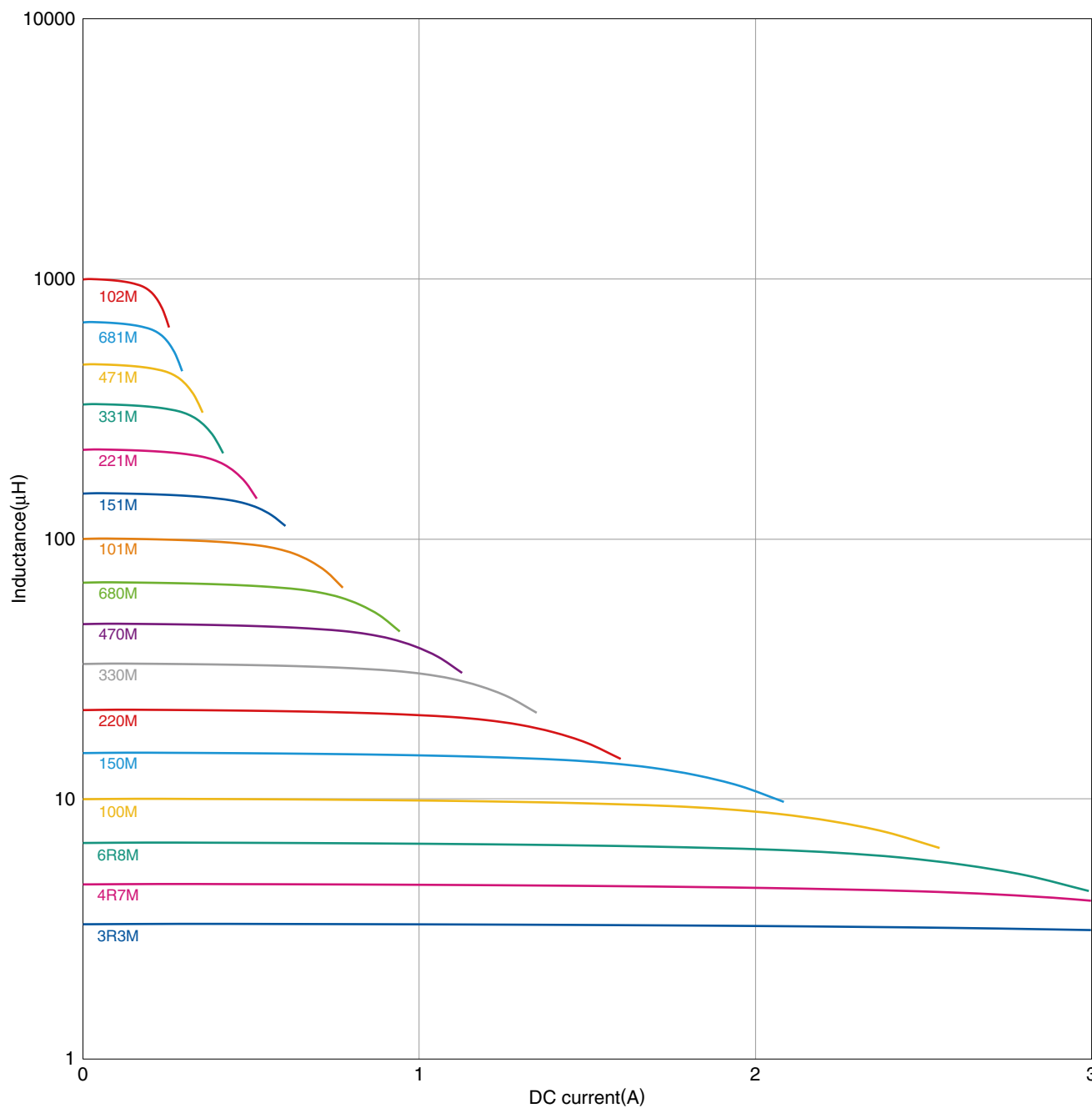
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF7045 Type

ELECTRICAL CHARACTERISTICS

INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

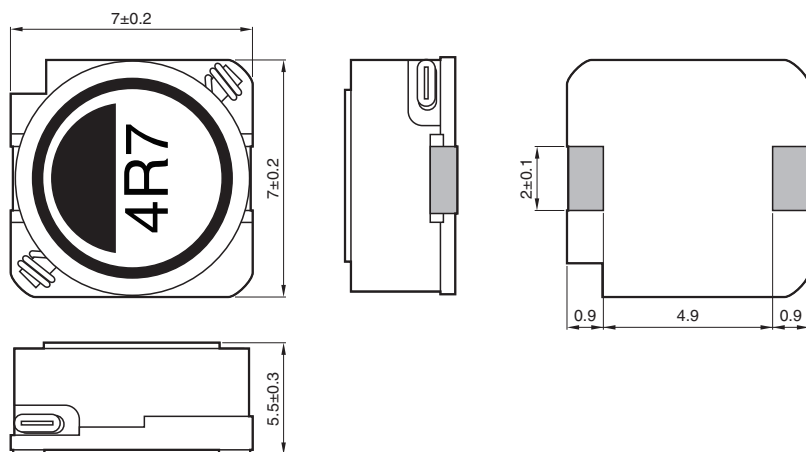
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

SLF7055 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series SLF7055 Type

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | Tolerance | L measuring frequency (kHz) | DC resistance (m Ω) | Rated current(A)* max. | | Part No. |
|-----------------|------------|-----------------------------------|--------------------------------|---------------------------|------|----------------------|
| | | | | Idc1 | Idc2 | |
| 1.5 | $\pm 30\%$ | 100 | 17.4 $\pm 30\%$ | 6.2 | 4 | SLF7055T-1R5N4R0-3PF |
| 2.2 | $\pm 30\%$ | 100 | 21.7 $\pm 30\%$ | 5.3 | 3.5 | SLF7055T-2R2N3R5-3PF |
| 3.3 | $\pm 30\%$ | 100 | 24 $\pm 30\%$ | 4.3 | 3.3 | SLF7055T-3R3N3R3-3PF |
| 4.7 | $\pm 30\%$ | 100 | 28 $\pm 30\%$ | 3.6 | 3.1 | SLF7055T-4R7N3R1-3PF |
| 6.8 | $\pm 30\%$ | 100 | 34 $\pm 30\%$ | 3 | 2.8 | SLF7055T-6R8N2R8-3PF |
| 10 | $\pm 20\%$ | 100 | 39.1 $\pm 20\%$ | 2.6 | 2.5 | SLF7055T-100M2R5-3PF |
| 15 | $\pm 20\%$ | 100 | 50.8 $\pm 20\%$ | 2.1 | 2.2 | SLF7055T-150M2R1-3PF |
| 22 | $\pm 20\%$ | 100 | 64.3 $\pm 20\%$ | 1.7 | 2 | SLF7055T-220M1R7-3PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (10% below the initial value)

Idc2: When based on the temperature increase (Temperature increase of 30°C by self heating)

○ Measurement equipment

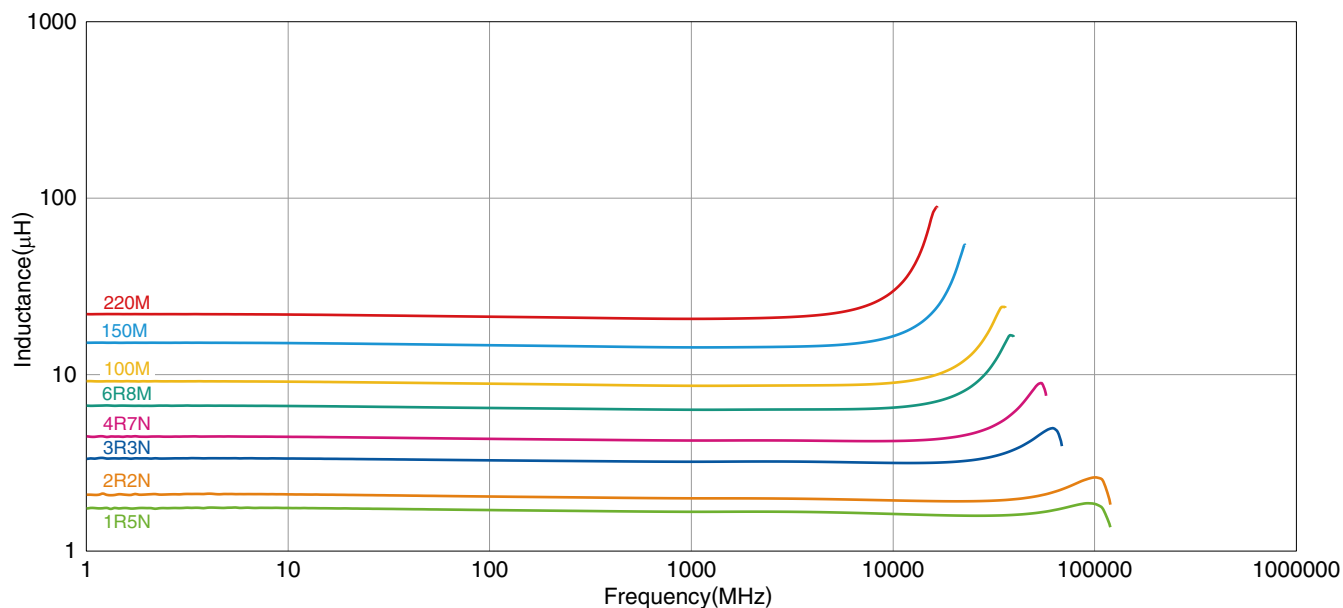
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF7055 Type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

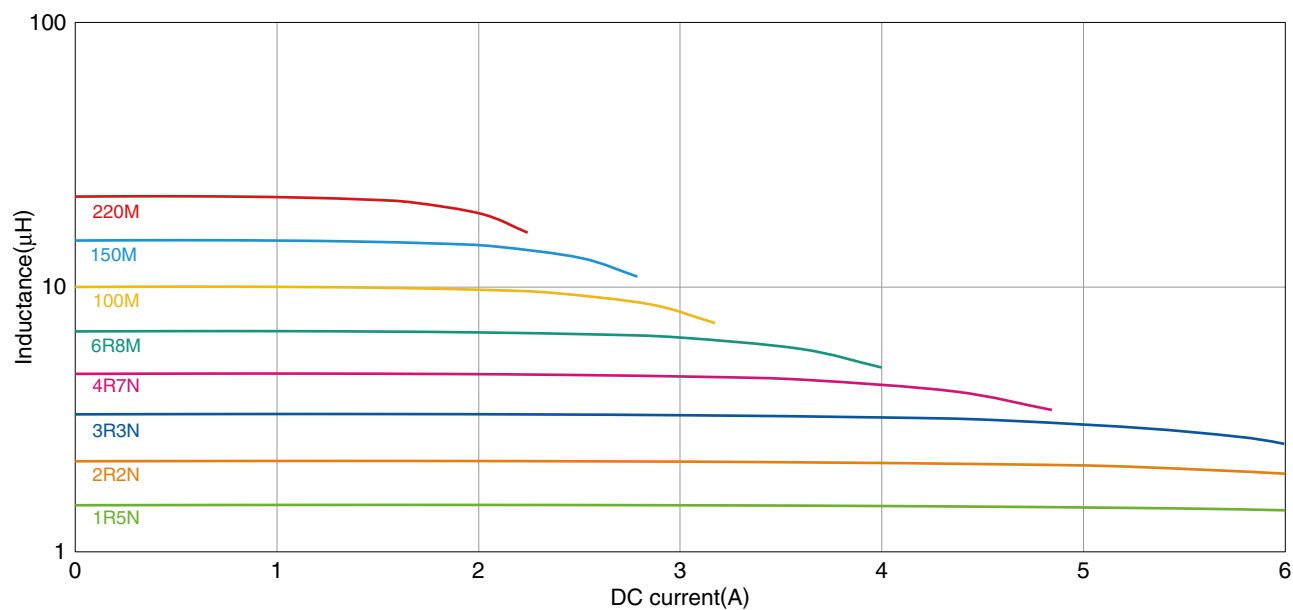
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series **SLF7055 Type**

■ ELECTRICAL CHARACTERISTICS

□ INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

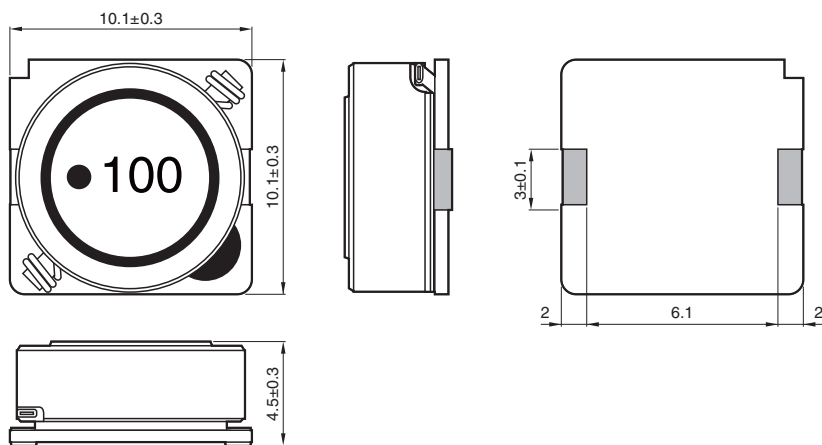
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

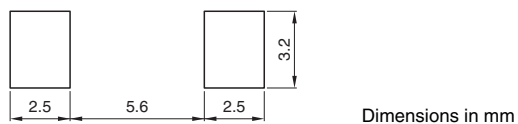
SLF10145 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series **SLF10145 Type**

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | Tolerance | L measuring frequency (kHz) | DC resistance (Ω) \pm 20% | Rated current(A)* | | Part No. |
|-----------------|-----------|-----------------------------------|---|-------------------|------|----------------------|
| | | | | max. Idc1 | Idc2 | |
| 3.3 | \pm 30% | 1 | 0.0161 | 4.9 | 3.7 | SLF10145T-3R3N3R7-PF |
| 5.6 | \pm 20% | 1 | 0.0220 | 3.8 | 3.2 | SLF10145T-5R6M3R2-PF |
| 10 | \pm 20% | 1 | 0.0364 | 3 | 2.5 | SLF10145T-100M2R5-PF |
| 15 | \pm 20% | 1 | 0.0472 | 2.4 | 2.2 | SLF10145T-150M2R2-PF |
| 22 | \pm 20% | 1 | 0.0591 | 2.1 | 1.9 | SLF10145T-220M1R9-PF |
| 33 | \pm 20% | 1 | 0.0815 | 1.6 | 1.7 | SLF10145T-330M1R6-PF |
| 47 | \pm 20% | 1 | 0.1 | 1.4 | 1.5 | SLF10145T-470M1R4-PF |
| 68 | \pm 20% | 1 | 0.14 | 1.2 | 1.3 | SLF10145T-680M1R2-PF |
| 100 | \pm 20% | 1 | 0.2 | 1 | 1.1 | SLF10145T-101M1R0-PF |
| 150 | \pm 20% | 1 | 0.35 | 0.79 | 0.81 | SLF10145T-151MR79-PF |
| 220 | \pm 20% | 1 | 0.47 | 0.65 | 0.7 | SLF10145T-221MR65-PF |
| 330 | \pm 20% | 1 | 0.68 | 0.54 | 0.58 | SLF10145T-331MR54-PF |
| 470 | \pm 20% | 1 | 1.03 | 0.47 | 0.47 | SLF10145T-471MR47-PF |
| 680 | \pm 20% | 1 | 1.6 | 0.38 | 0.38 | SLF10145T-681MR38-PF |
| 1000 | \pm 20% | 1 | 2.8 | 0.32 | 0.29 | SLF10145T-102MR29-PF |
| 1500 | \pm 20% | 1 | 3.4 | 0.22 | 0.26 | SLF10145T-152MR22-PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (10% below the initial value)

Idc2: When based on the temperature increase (Temperature increase of 30°C by self heating)

○ Measurement equipment

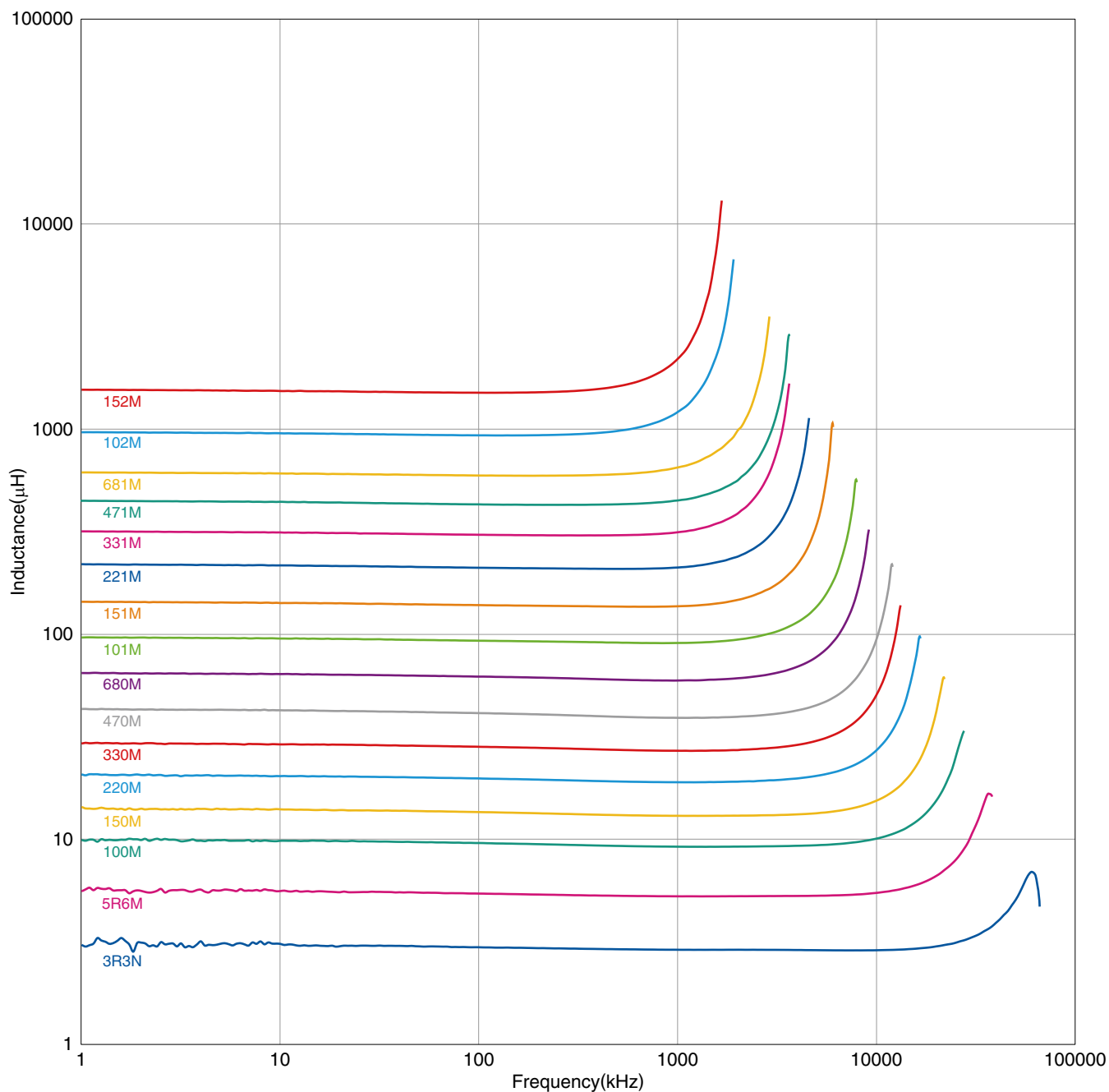
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF10145 Type

ELECTRICAL CHARACTERISTICS

FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

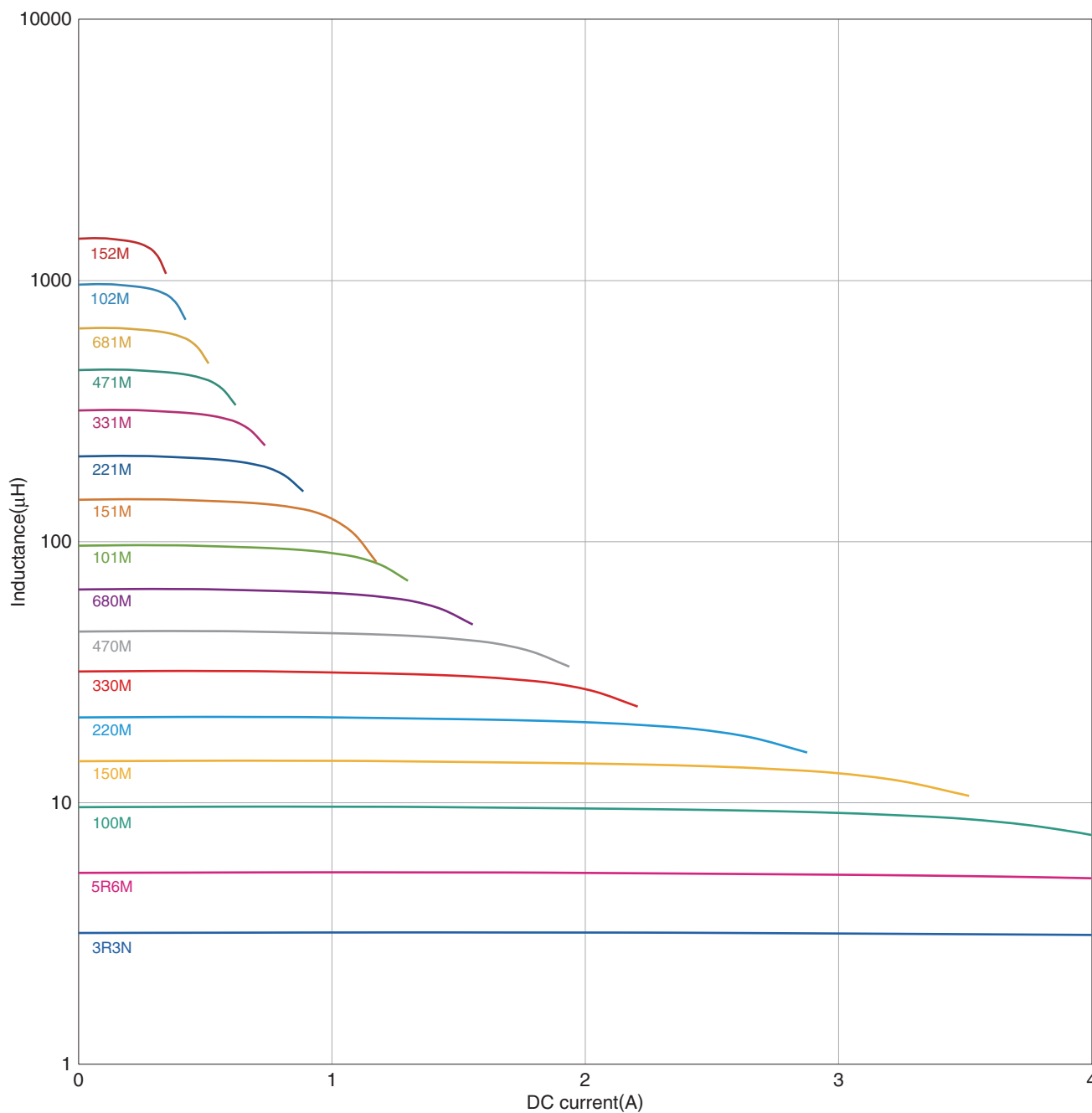
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF10145 Type

ELECTRICAL CHARACTERISTICS

INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

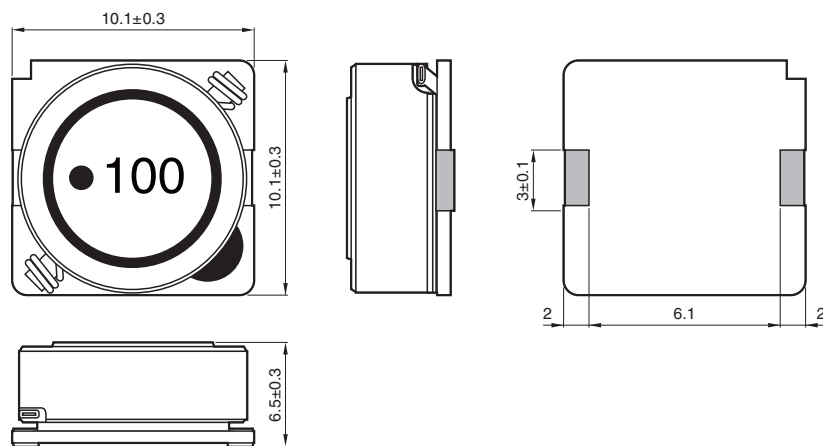
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

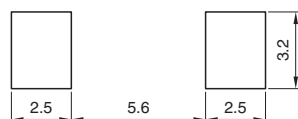
SLF10165 Type

■ SHAPE & DIMENSIONS



Dimensions in mm

■ RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series **SLF10165 Type**

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | Tolerance | L measuring frequency (kHz) | DC resistance ($m\Omega$) | Rated current(A)* max. | | Part No. |
|-----------------|------------|-----------------------------------|--------------------------------|---------------------------|------|----------------------|
| | | | | Idc1 | Idc2 | |
| 1.5 | $\pm 30\%$ | 100 | 6.7 $\pm 30\%$ | 10.7 | 6.8 | SLF10165T-1R5N6R83PF |
| 2.2 | $\pm 30\%$ | 100 | 8.4 $\pm 30\%$ | 8.9 | 6.3 | SLF10165T-2R2N6R33PF |
| 3.3 | $\pm 30\%$ | 100 | 9.6 $\pm 30\%$ | 7.8 | 5.8 | SLF10165T-3R3N5R83PF |
| 4.7 | $\pm 30\%$ | 100 | 11.7 $\pm 30\%$ | 6.1 | 4.7 | SLF10165T-4R7N4R73PF |
| 6.8 | $\pm 30\%$ | 100 | 14 $\pm 30\%$ | 4.6 | 4.3 | SLF10165T-6R8N4R33PF |
| 10 | $\pm 20\%$ | 100 | 18.5 $\pm 20\%$ | 4.1 | 3.8 | SLF10165T-100M3R83PF |
| 15 | $\pm 20\%$ | 100 | 27 $\pm 20\%$ | 3.1 | 3.1 | SLF10165T-150M3R13PF |
| 22 | $\pm 20\%$ | 100 | 44.8 $\pm 20\%$ | 2.7 | 2.4 | SLF10165T-220M2R43PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (10% below the initial value)

Idc2: When based on the temperature increase (Temperature increase of 30°C by self heating)

○ Measurement equipment

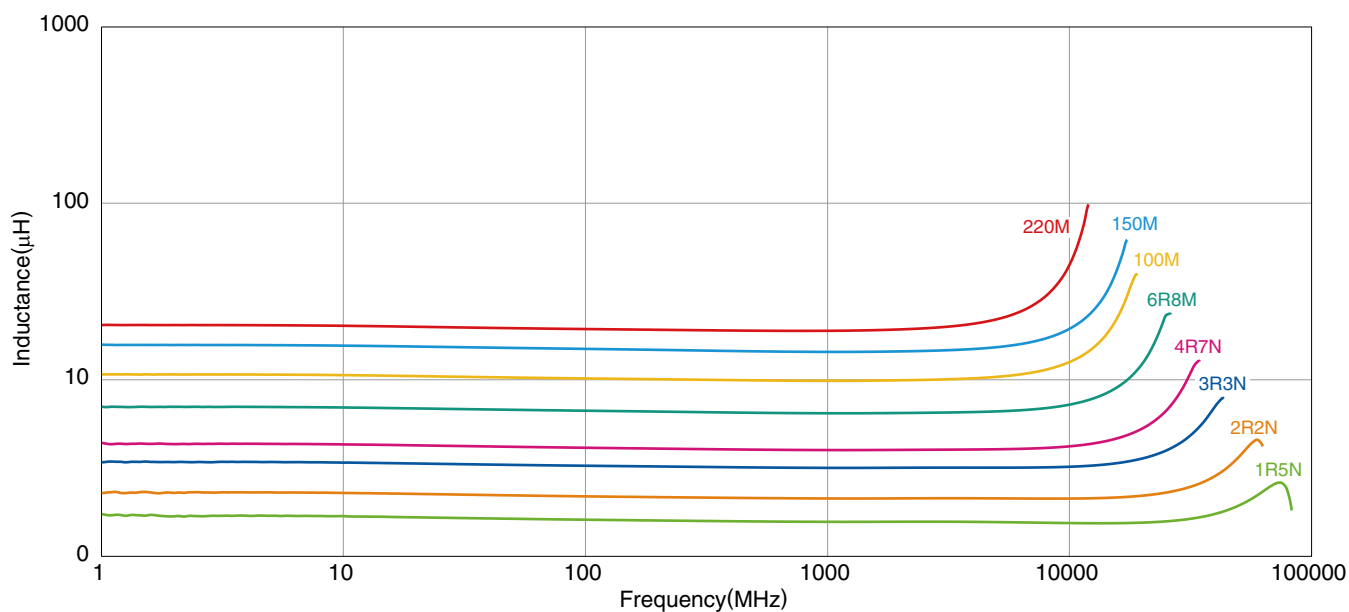
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF10165 Type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

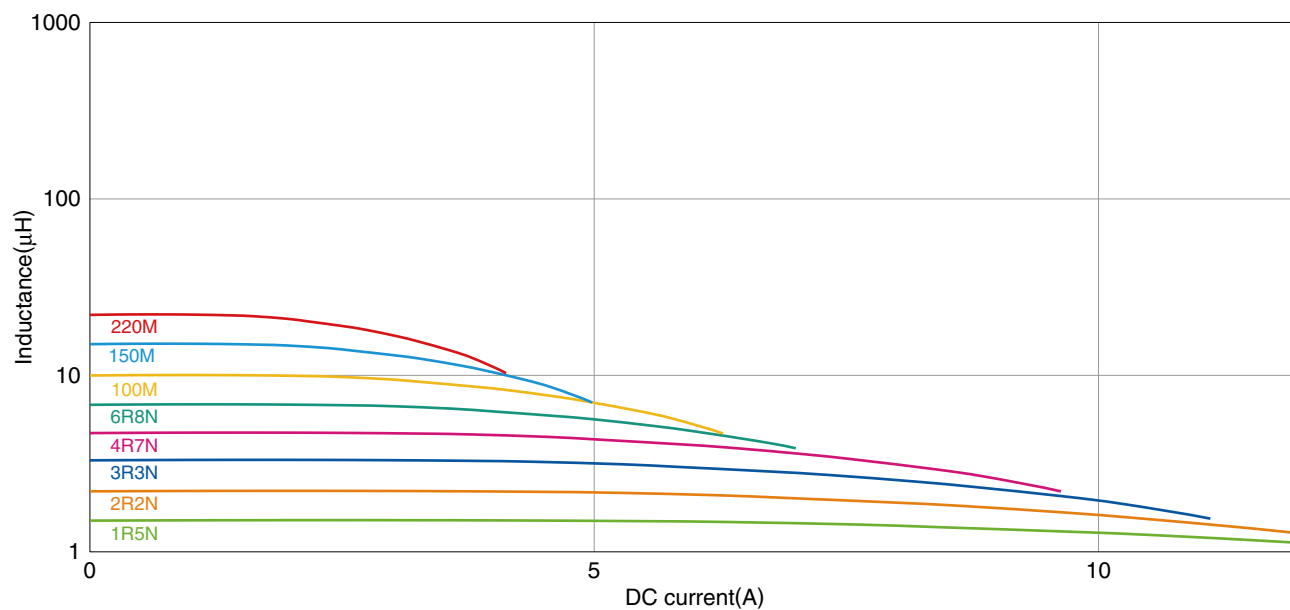
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF10165 Type

■ ELECTRICAL CHARACTERISTICS

□ INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

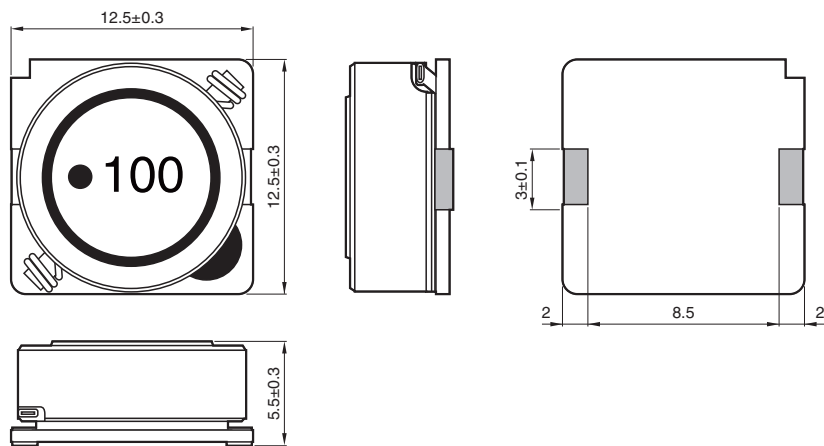
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

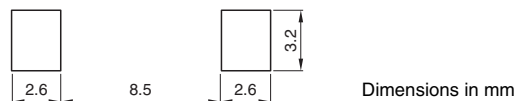
SLF12555 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series SLF12555 Type

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | Tolerance | L measuring frequency (kHz) | DC resistance (Ω) \pm 20% | Rated current(A)* | | Part No. |
|-----------------|-----------|-----------------------------------|---|-------------------|------|----------------------|
| | | | | max. Idc1 | Idc2 | |
| 6 | \pm 30% | 1 | 0.0164 | 3.6 | 4.9 | SLF12555T-6R0N3R6-PF |
| 10 | \pm 20% | 1 | 0.0215 | 3.4 | 4.3 | SLF12555T-100M3R4-PF |
| 15 | \pm 20% | 1 | 0.0259 | 2.8 | 3.9 | SLF12555T-150M2R8-PF |
| 22 | \pm 20% | 1 | 0.0338 | 2.3 | 3.4 | SLF12555T-220M2R3-PF |
| 33 | \pm 20% | 1 | 0.0415 | 1.9 | 3.1 | SLF12555T-330M1R9-PF |
| 47 | \pm 20% | 1 | 0.0618 | 1.6 | 2.5 | SLF12555T-470M1R6-PF |
| 68 | \pm 20% | 1 | 0.0832 | 1.3 | 2.2 | SLF12555T-680M1R3-PF |
| 100 | \pm 20% | 1 | 0.117 | 1.1 | 1.8 | SLF12555T-101M1R1-PF |
| 150 | \pm 20% | 1 | 0.19 | 0.88 | 1.4 | SLF12555T-151MR88-PF |
| 220 | \pm 20% | 1 | 0.27 | 0.72 | 1.2 | SLF12555T-221MR72-PF |
| 330 | \pm 20% | 1 | 0.41 | 0.59 | 1 | SLF12555T-331MR59-PF |
| 470 | \pm 20% | 1 | 0.52 | 0.49 | 0.88 | SLF12555T-471MR49-PF |
| 680 | \pm 20% | 1 | 0.76 | 0.43 | 0.73 | SLF12555T-681MR43-PF |
| 1000 | \pm 20% | 1 | 1.12 | 0.34 | 0.6 | SLF12555T-102MR34-PF |
| 1500 | \pm 20% | 1 | 1.73 | 0.29 | 0.48 | SLF12555T-152MR29-PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (10% below the initial value)

Idc2: When based on the temperature increase (Temperature increase of 30°C by self heating)

○ Measurement equipment

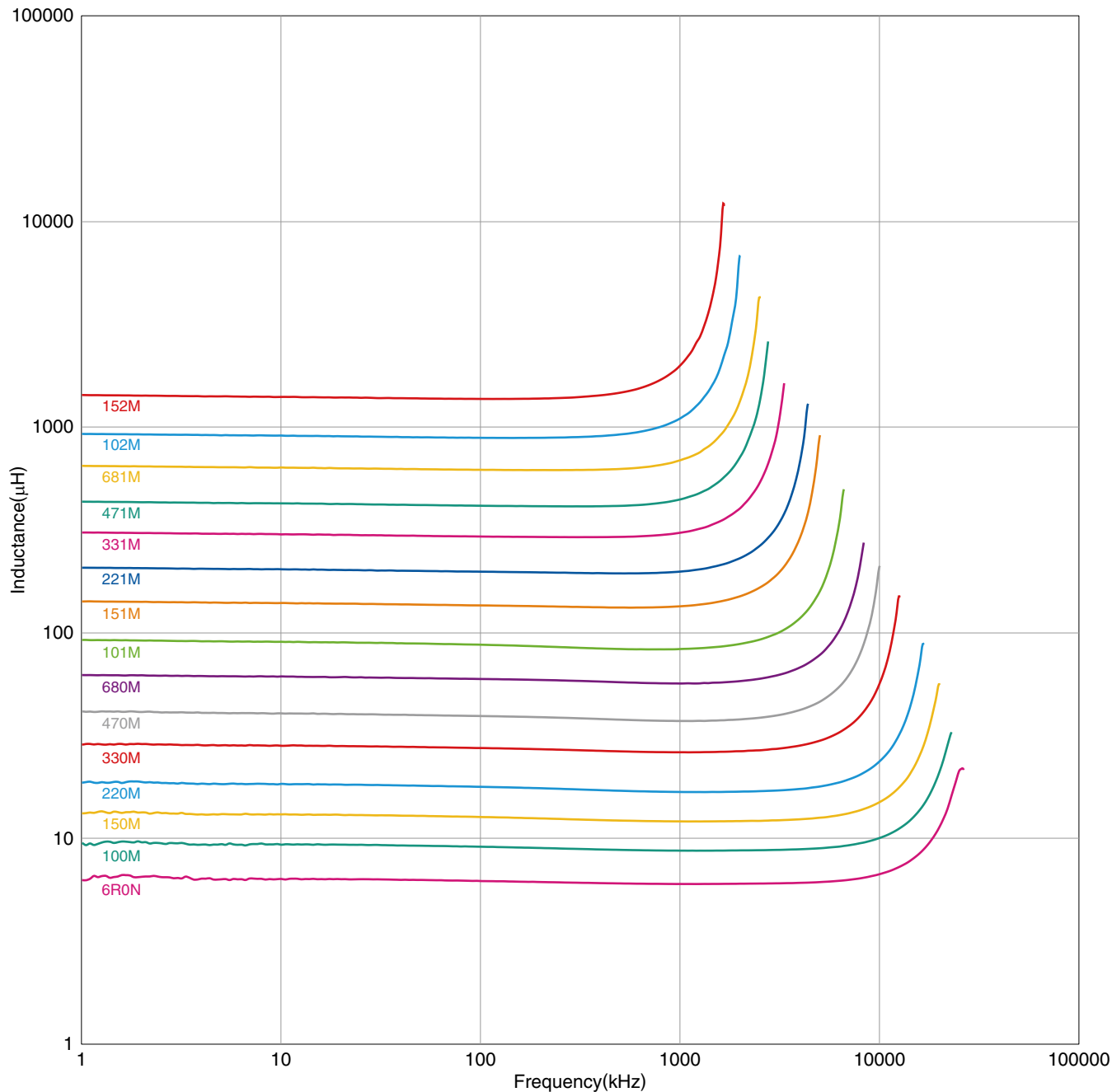
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF12555 Type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

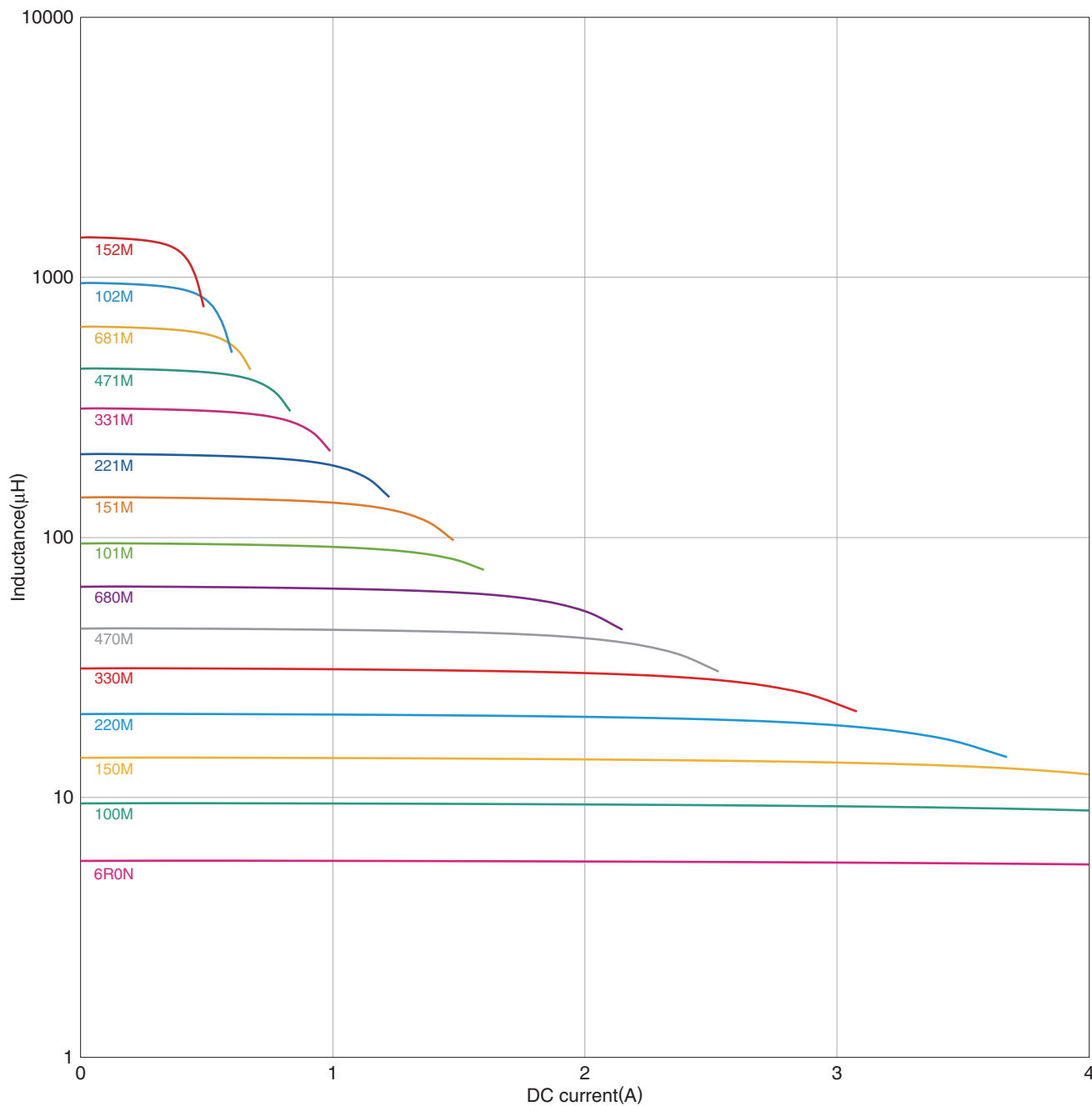
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF12555 Type

ELECTRICAL CHARACTERISTICS

INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

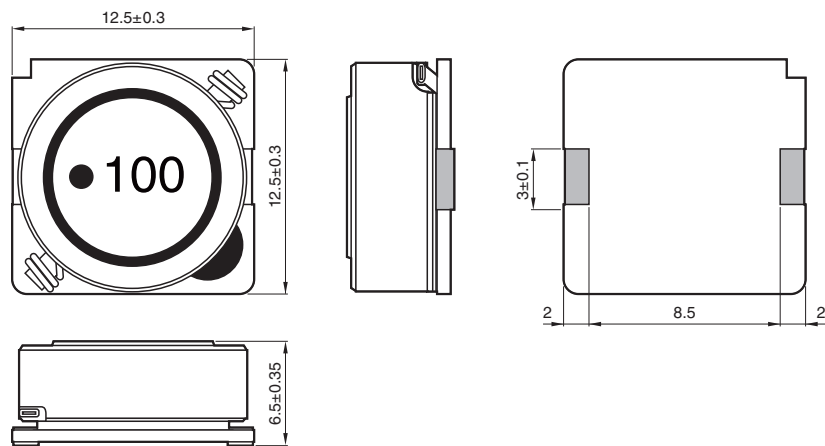
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

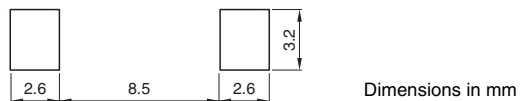
SLF12565 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series SLF12565 Type

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | Tolerance | L measuring frequency (kHz) | DC resistance (Ω) \pm 20% | Rated current(A)* | | Part No. |
|-----------------|-----------|-----------------------------------|---|-------------------|------|----------------------|
| | | | | max. Idc1 | Idc2 | |
| 2 | \pm 30% | 1 | 0.0117 | 10 | 6.2 | SLF12565T-2R0N6R2-PF |
| 4.2 | \pm 30% | 1 | 0.015 | 7.3 | 5.5 | SLF12565T-4R2N5R5-PF |
| 7 | \pm 30% | 1 | 0.0177 | 5.7 | 5 | SLF12565T-7R0N5R0-PF |
| 10 | \pm 20% | 1 | 0.0202 | 5 | 4.8 | SLF12565T-100M4R8-PF |
| 15 | \pm 20% | 1 | 0.0237 | 4.2 | 4.4 | SLF12565T-150M4R2-PF |
| 22 | \pm 20% | 1 | 0.0316 | 3.5 | 3.8 | SLF12565T-220M3R5-PF |
| 33 | \pm 20% | 1 | 0.0406 | 2.8 | 3.4 | SLF12565T-330M2R8-PF |
| 47 | \pm 20% | 1 | 0.0578 | 2.4 | 2.8 | SLF12565T-470M2R4-PF |
| 68 | \pm 20% | 1 | 0.0787 | 2 | 2.4 | SLF12565T-680M2R0-PF |
| 100 | \pm 20% | 1 | 0.123 | 1.6 | 1.9 | SLF12565T-101M1R6-PF |
| 220 | \pm 20% | 1 | 0.273 | 1 | 1.2 | SLF12565T-221M1R0-PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (10% below the initial value)

Idc2: When based on the temperature increase (Temperature increase of 40°C by self heating)

○ Measurement equipment

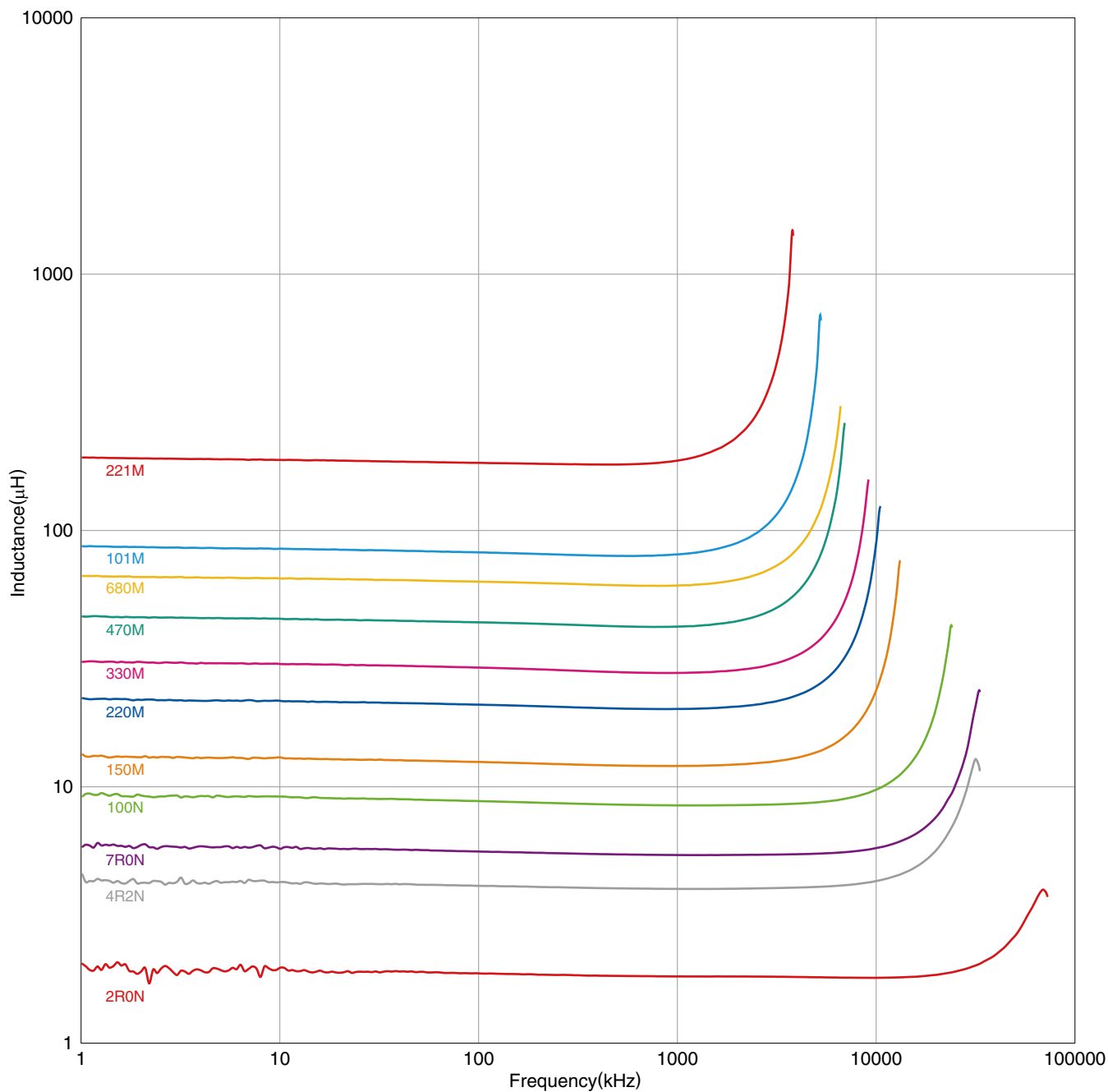
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF12565 Type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

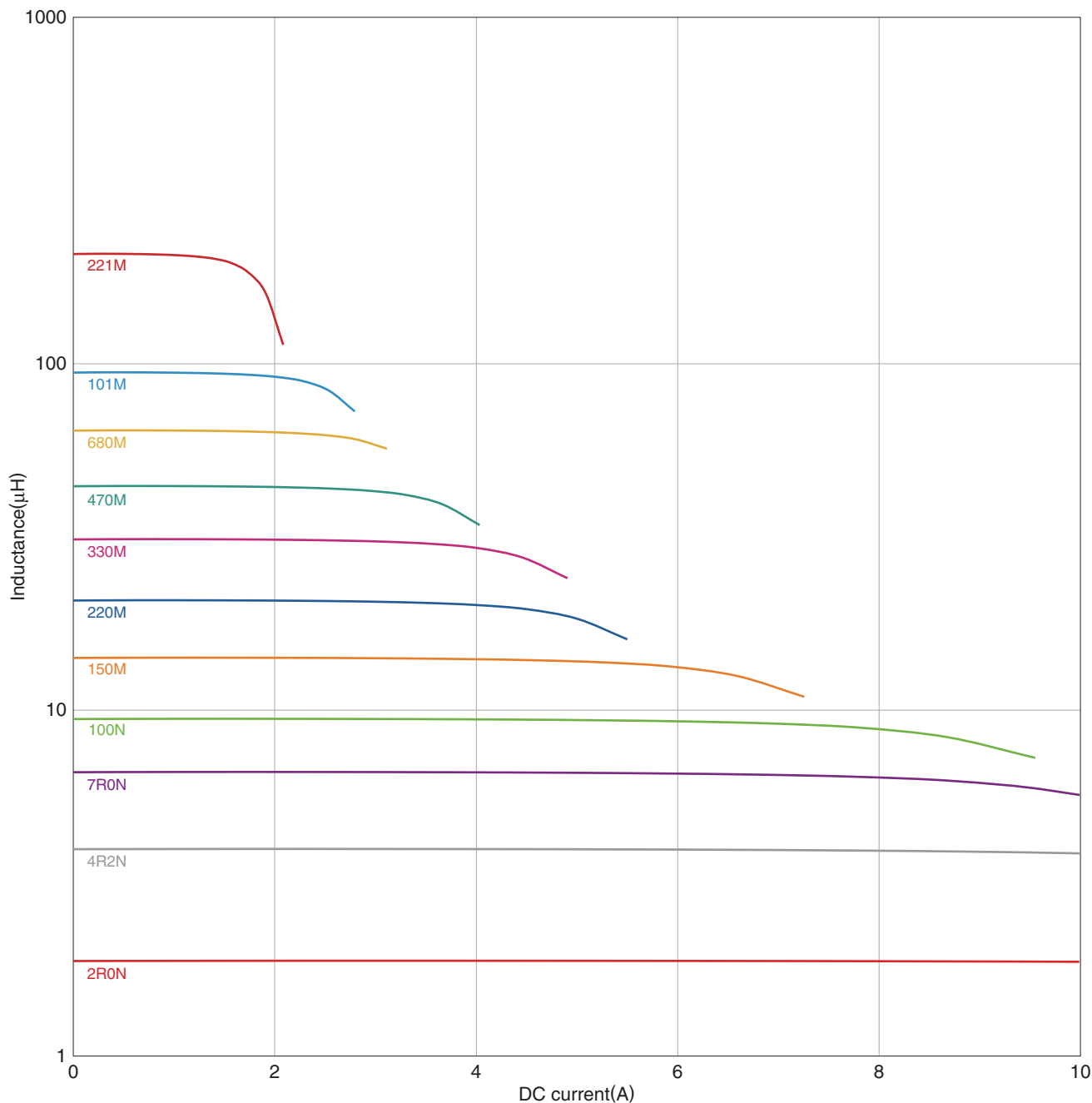
| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF12565 Type

ELECTRICAL CHARACTERISTICS

INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

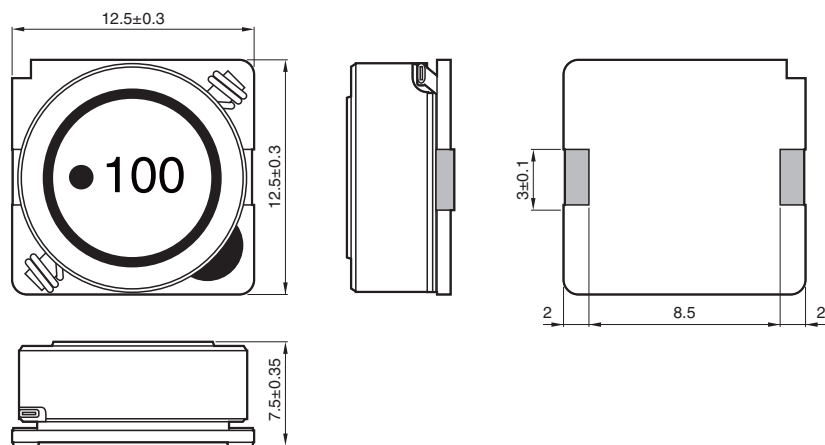
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series

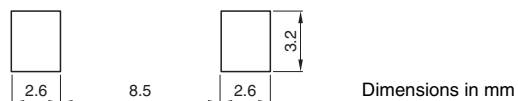
SLF12575 Type

SHAPE & DIMENSIONS



Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

SLF series SLF12575 Type

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

| L (μ H) | Tolerance | L measuring frequency (kHz) | DC resistance (Ω) \pm 20% | Rated current(A)* | | Part No. |
|-----------------|-----------|-----------------------------------|---|-------------------|------|----------------------|
| | | | | max. Idc1 | Idc2 | |
| 1.2 | \pm 30% | 1 | 0.0069 | 13 | 8.2 | SLF12575T-1R2N8R2-PF |
| 2.7 | \pm 30% | 1 | 0.0094 | 10 | 7 | SLF12575T-2R7N7R0-PF |
| 3.9 | \pm 30% | 1 | 0.0104 | 9 | 6.7 | SLF12575T-3R9N6R7-PF |
| 5.6 | \pm 30% | 1 | 0.0116 | 7.8 | 6.3 | SLF12575T-5R6N6R3-PF |
| 6.8 | \pm 30% | 1 | 0.0131 | 7.2 | 5.9 | SLF12575T-6R8N5R9-PF |
| 10 | \pm 20% | 1 | 0.0156 | 5.5 | 5.4 | SLF12575T-100M5R4-PF |
| 15 | \pm 20% | 1 | 0.0184 | 4.7 | 5 | SLF12575T-150M4R7-PF |
| 22 | \pm 20% | 1 | 0.0263 | 4 | 4 | SLF12575T-220M4R0-PF |
| 33 | \pm 20% | 1 | 0.0395 | 3.2 | 3.4 | SLF12575T-330M3R2-PF |
| 47 | \pm 20% | 1 | 0.0528 | 2.7 | 3 | SLF12575T-470M2R7-PF |
| 68 | \pm 20% | 1 | 0.0778 | 2 | 2.4 | SLF12575T-680M2R0-PF |
| 100 | \pm 20% | 1 | 0.125 | 1.9 | 1.9 | SLF12575T-101M1R9-PF |
| 150 | \pm 20% | 1 | 0.175 | 1.5 | 1.6 | SLF12575T-151M1R5-PF |
| 220 | \pm 20% | 1 | 0.258 | 1.3 | 1.3 | SLF12575T-221M1R3-PF |

* Rated current: smaller value of either Idc1 or Idc2.

Idc1: When based on the inductance change rate (10% below the initial value)

Idc2: When based on the temperature increase (Temperature increase of 40°C by self heating)

○ Measurement equipment

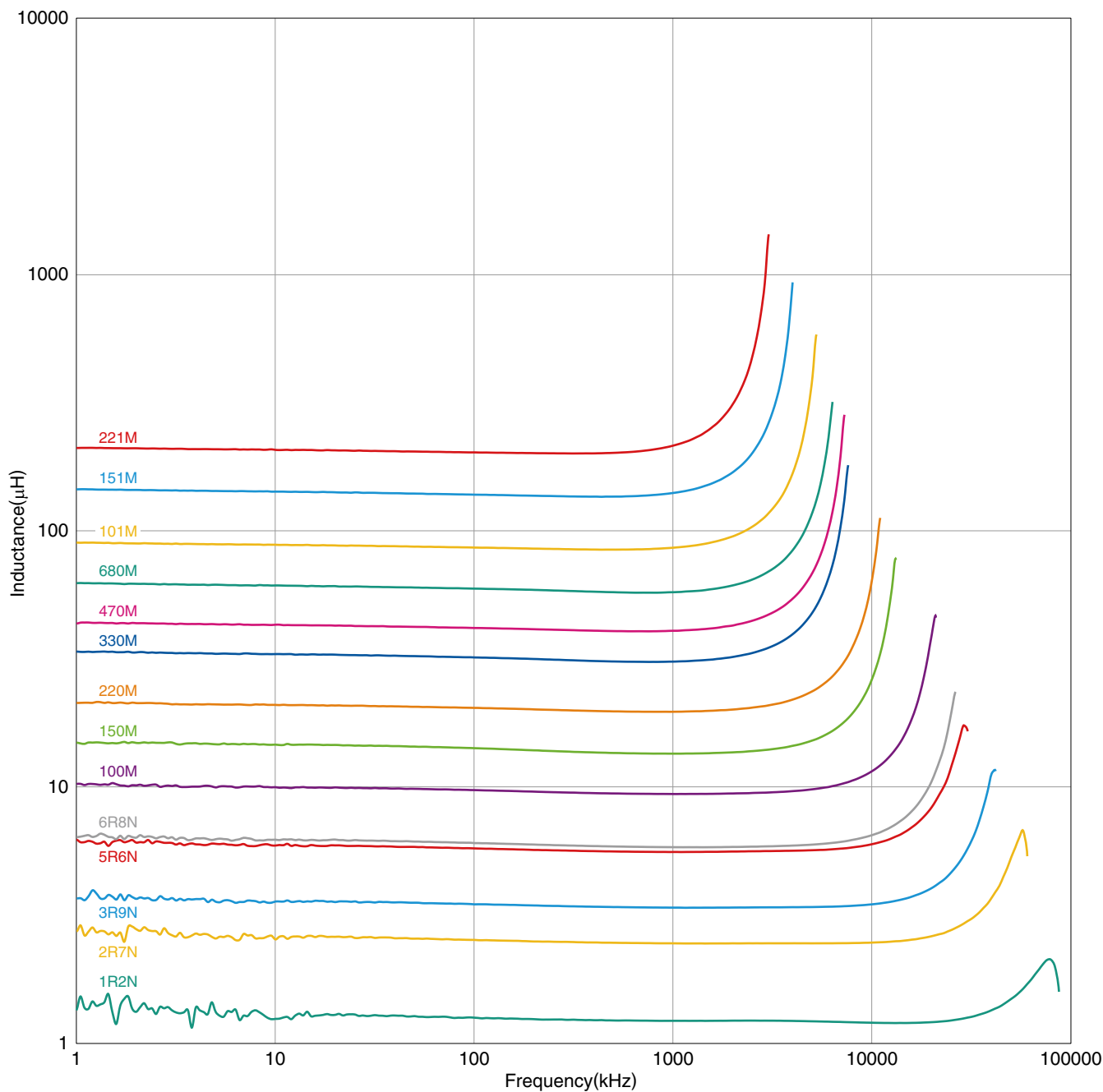
| Measurement item | Product No. | Manufacturer |
|--------------------|---------------------|----------------------|
| L | 4194A | Agilent Technologies |
| DC resistance | VP-2941A | Panasonic |
| Rated current Idc1 | 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF series SLF12575 Type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



○ Measurement equipment

| Product No. | Manufacturer |
|-------------|----------------------|
| 4294A | Agilent Technologies |

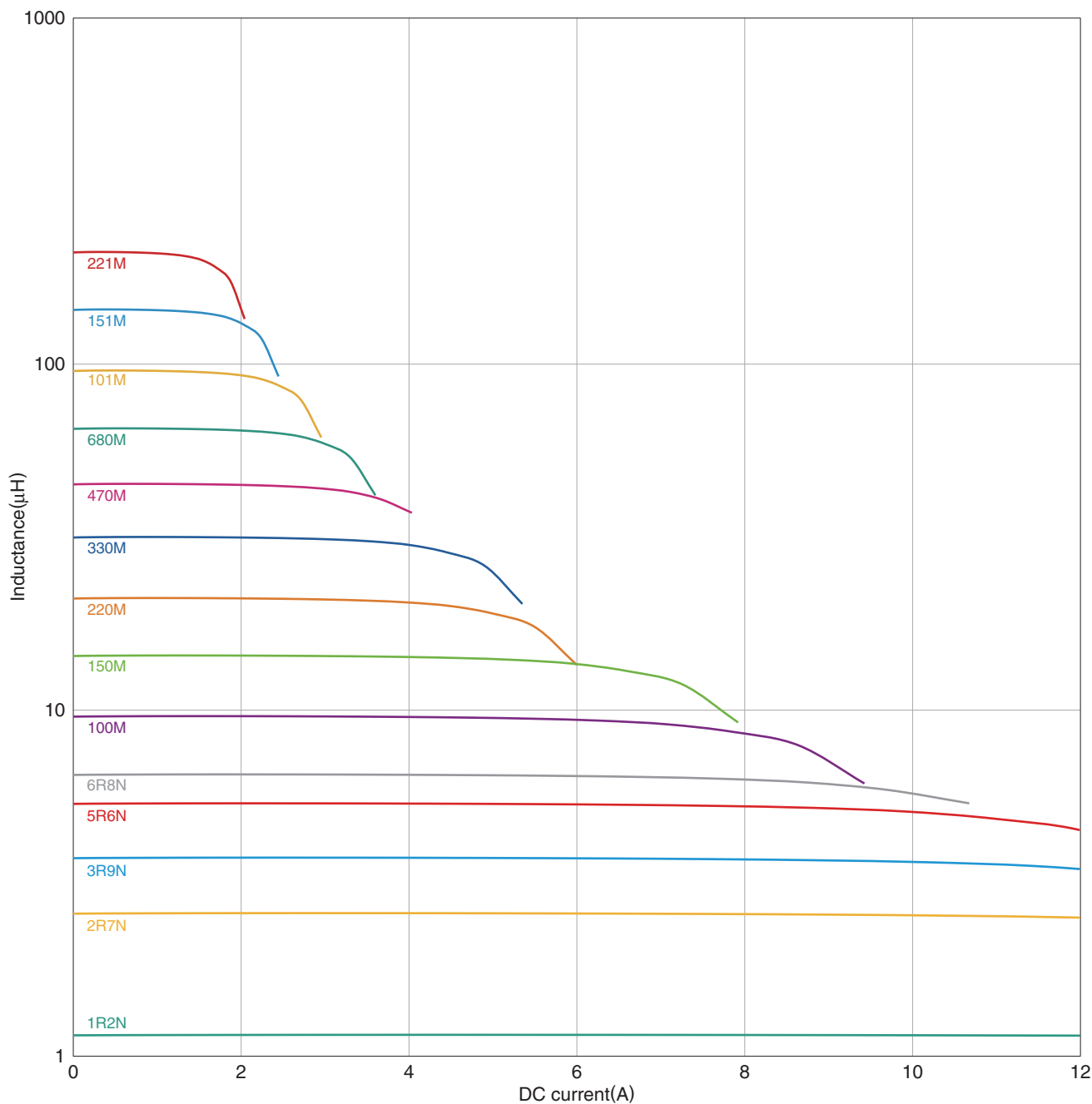
* Equivalent measurement equipment may be used.

• All specifications are subject to change without notice.

SLF series SLF12575 Type

ELECTRICAL CHARACTERISTICS

INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



○ Measurement equipment

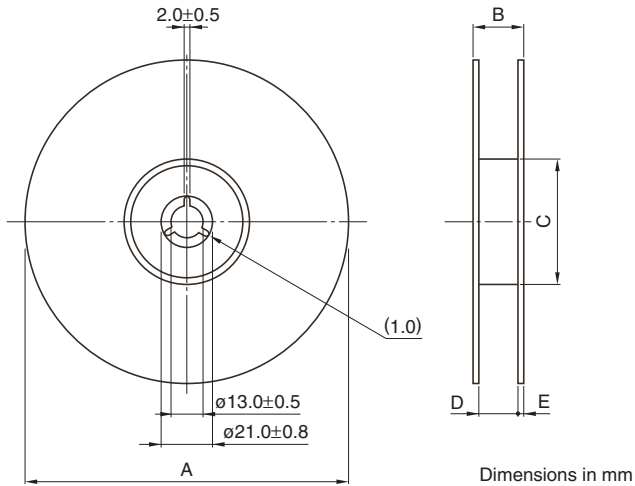
| Product No. | Manufacturer |
|---------------------|----------------------|
| 4284A+42841A+42842C | Agilent Technologies |

* Equivalent measurement equipment may be used.

SLF_{series}

Packaging Style

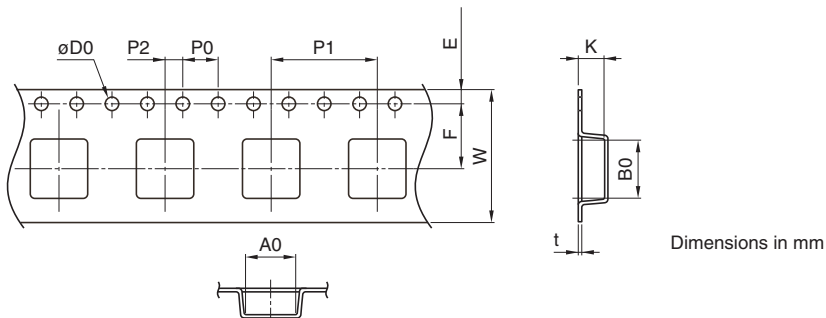
REEL DIMENSIONS



| Type | A | B | C | D | E |
|----------|------|------|-----|------|---|
| SLF6025 | ø330 | 22.4 | ø50 | 16.4 | 2 |
| SLF6028 | ø330 | 22.4 | ø50 | 16.4 | 2 |
| SLF6045 | ø330 | 22.4 | ø50 | 16.4 | 2 |
| SLF7032 | ø330 | 22.4 | ø50 | 16.4 | 2 |
| SLF7045 | ø330 | 22.4 | ø50 | 16.4 | 2 |
| SLF7055 | ø330 | 22.4 | ø50 | 16.4 | 2 |
| SLF10145 | ø330 | 30.4 | ø50 | 24.4 | 2 |
| SLF10165 | ø330 | 30.4 | ø50 | 24.4 | 2 |
| SLF12555 | ø330 | 30.4 | ø50 | 24.4 | 2 |
| SLF12565 | ø330 | 30.4 | ø50 | 24.4 | 2 |
| SLF12575 | ø330 | 30.4 | ø50 | 24.4 | 2 |

* These values are typical values.

TAPE DIMENSIONS



| Type | A0 | B0 | øD0 | E | F | P0 | P1 | P2 | W | K | t |
|----------|------|------|------------|----------|----------|---------|----------|----------|----------|-----|------|
| SLF6025 | 6.4 | 6.4 | 1.5+0.1/-0 | 1.75±0.1 | 7.5±0.1 | 4.0±0.1 | 12.0±0.1 | 2.0±0.05 | 16.0±0.3 | 3.1 | 0.4 |
| SLF6028 | 6.4 | 6.4 | 1.5+0.1/-0 | 1.75±0.1 | 7.5±0.1 | 4.0±0.1 | 12.0±0.1 | 2.0±0.05 | 16.0±0.3 | 3.1 | 0.4 |
| SLF6045 | 6.4 | 6.4 | 1.5+0.1/-0 | 1.75±0.1 | 7.5±0.1 | 4.0±0.1 | 12.0±0.1 | 2.0±0.05 | 16.0±0.3 | 4.9 | 0.4 |
| SLF7032 | 7.4 | 7.6 | 1.5+0.1/-0 | 1.75±0.1 | 7.5±0.1 | 4.0±0.1 | 12.0±0.1 | 2.0±0.05 | 16.0±0.3 | 3.6 | 0.4 |
| SLF7045 | 7.4 | 7.6 | 1.5+0.1/-0 | 1.75±0.1 | 7.5±0.1 | 4.0±0.1 | 12.0±0.1 | 2.0±0.05 | 16.0±0.3 | 4.8 | 0.4 |
| SLF7055 | 7.4 | 7.6 | 1.5+0.1/-0 | 1.75±0.1 | 7.5±0.1 | 4.0±0.1 | 12.0±0.1 | 2.0±0.05 | 16.0±0.3 | 5.5 | 0.4 |
| SLF10145 | 10.5 | 10.5 | 1.5+0.1/-0 | 1.75±0.1 | 11.5±0.1 | 4.0±0.1 | 16.0±0.1 | 2.0±0.05 | 24.0±0.3 | 5.0 | 0.4 |
| SLF10165 | 10.5 | 10.5 | 1.5+0.1/-0 | 1.75±0.1 | 11.5±0.1 | 4.0±0.1 | 16.0±0.1 | 2.0±0.05 | 24.0±0.3 | 7.1 | 0.4 |
| SLF12555 | 13 | 13 | 1.5+0.1/-0 | 1.75±0.1 | 11.5±0.1 | 4.0±0.1 | 16.0±0.1 | 2.0±0.05 | 24.0±0.3 | 6.0 | 0.4 |
| SLF12565 | 13 | 13 | 1.5+0.1/-0 | 1.75±0.1 | 11.5±0.1 | 4.0±0.1 | 16.0±0.1 | 2.0±0.05 | 24.0±0.3 | 7.0 | 0.34 |
| SLF12575 | 13 | 13 | 1.5+0.1/-0 | 1.75±0.1 | 11.5±0.1 | 4.0±0.1 | 16.0±0.1 | 2.0±0.05 | 24.0±0.3 | 8.0 | 0.34 |

• All specifications are subject to change without notice.