

Automotive grade models have been added.

◆ MAJOR USES

- Normal mode choke coils for noise/ripple control
- Choke coils for DC-DC converters
- Output choke coils for Switching Mode Power Supply

◆ FEATURES

- Feedthrough core with a single-turn lead wire for remarkably small D.C. resistance (0.3 mΩ*)
- Minimum device thickness of 6.8 mm with high D.C. rated current (100 Ap*)
- Use of a Fe-base amorphous core for excellent operation stability at high temperatures
- Availability of automotive grade models
- Significantly improved safety and reliability because layer short circuits will not occur and because the leakage magnetic flux is extremely small
- Preparation of both SMD and SIP types

(*The minimum and maximum values, respectively, within all our product series)

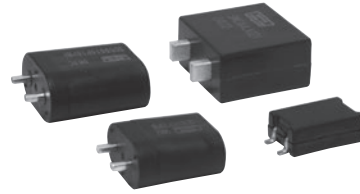
◆ GENERAL SPECIFICATION

| Items | Standard Specifications | Automotive grade models |
|---------------------------------|-------------------------|-------------------------|
| Operating temperature range*1 | -40 to 130°C | -40 to 150°C |
| Storage temperature range | -40 to 130°C | -40 to 150°C |
| Operating humidity range | 20 to 95%RH | |
| Storage humidity range | 20 to 80%RH | |
| Operating frequency range*2 | 20kHz to 500kHz | |
| Insulating Type (Housing case) | Type B (130°C) | Type F (155°C) |
| Incombustibility (Housing case) | UL94V-0 | |

New!

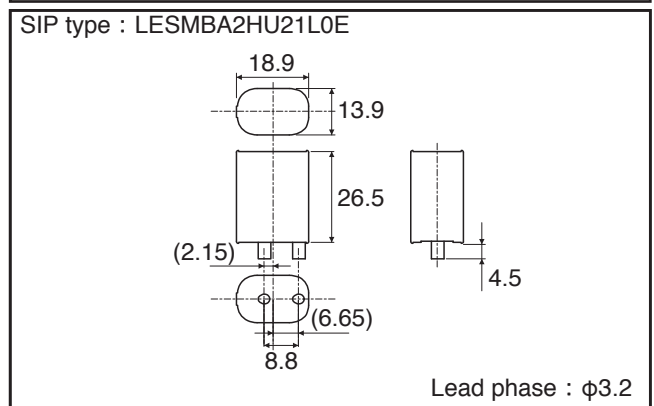
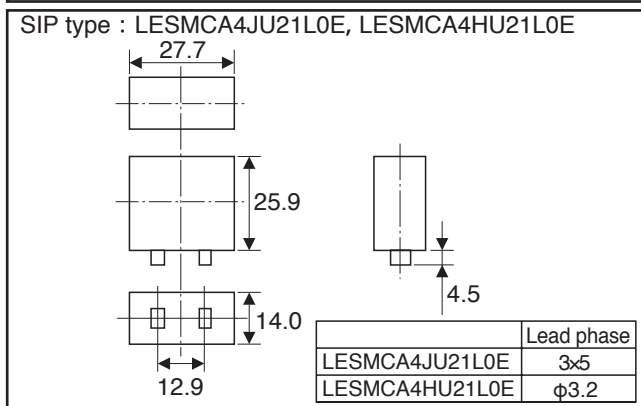
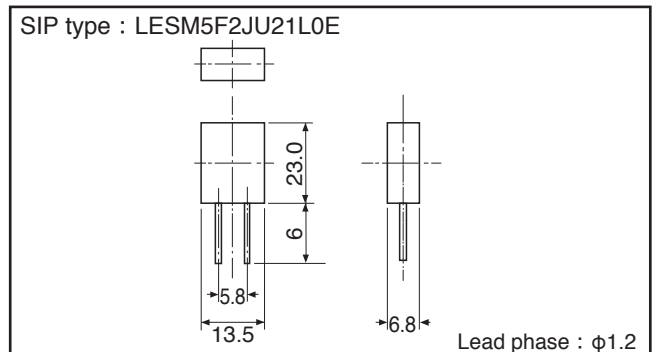
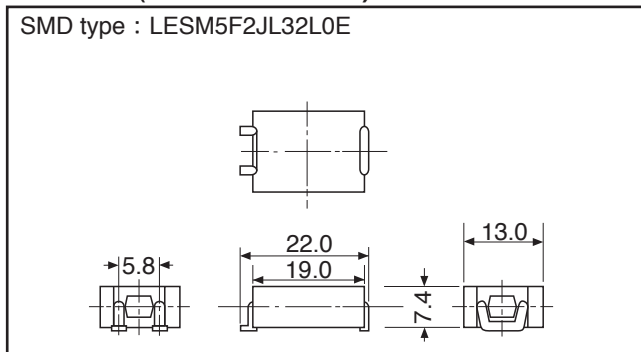
*1 Temperature on the coil surface including the temperature rise in installation. Never use the coil at a temperature exceeding the rated temperature range.

*2 Recommended range. When infra-acoustic frequency component is impressed, a beat sound sometimes occurs.

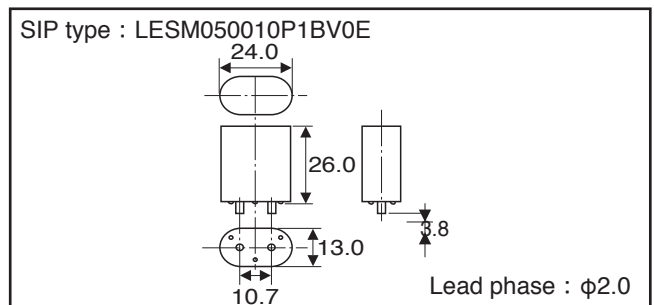
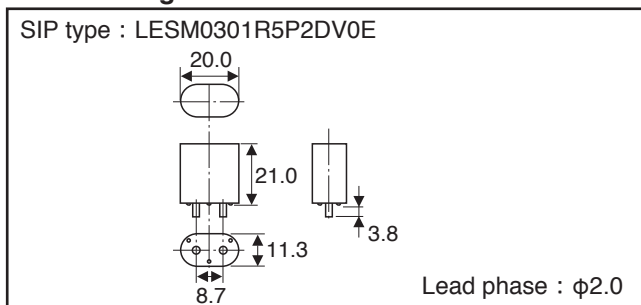


◆ STANDARD DIMENSION DIAGRAM (mm)

SM series (Standard models)



Automotive grade models



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◆ COIL STANDARD SPECIFICATIONS

| Coil Part No. (Old Coil Part No.) | Rated Current A | Inductance* | | D.C.R. mΩ (max) | Mounting Direction | Outside Dimensions | | |
|---------------------------------------|--------------------|-------------|--------------|-----------------------|-----------------------|--------------------|---------|---------|
| | | 0[A] μH | Rating μH | | | φ mm | w mm | h mm |
| LESM5F2JU21L0E (SM5F2JU21PBF) | 10 | 4.8 | 2.6 | 1.0 | Vertical | 13.5 | 6.8 | 23.0 |
| LESM5F2JL32L0E (SM5F2JL32PBF) | 10 | 4.8 | 2.6 | 1.0 | Horizontal | 22.0 | 13.0 | 7.4 |
| LESMCA4HU21L0E (SMCA4HU21ZPBF) | 30 | 3.5 | 2.2 | 0.3 | Vertical | 27.7 | 14.0 | 25.9 |
| LESMBA2HU21L0E (SMBA2HU21ZPBF) | 35 | 1.2 | 0.9 | 0.3 | Vertical | 18.9 | 13.9 | 26.5 |
| LESMCA4JU21L0E (SMCA4JU21PBF) | 70 | 1.6 | 0.9 | 0.2 | Vertical | 27.7 | 14.0 | 25.9 |
| ★ LESM0301R5P2DV0E (SM301R5P2DPBF) | 30 | 2.3 | 1.3 | 0.36 | Vertical | 20.0 | 11.3 | 21.0 |
| ★ LESM0400R9P5DV0E (SM400R9P5DPBF) | 40 | 1.5 | 0.9 | 0.36 | Vertical | 20.0 | 11.3 | 21 |
| ★ LESM050010P1BV0E (SM50010P1BPBF) | 50 | 2.4 | 1.2 | 0.40 | Vertical | 24.0 | 13.0 | 26.0 |

*The inductance at current 0[A] indicates the reference value.

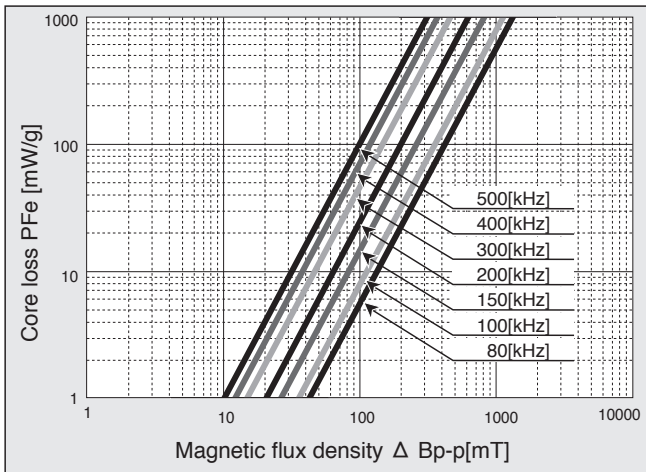
*Inductance measurement condition: 200kHz for LESMCA4HU21L0E and LESMBA2HU21L0E, 100kHz for other models
The inductance measurement condition for ★Automotive grade models is 20 kHz.

*Before using ★Automotive grade models, contact our sales representative for information about operating conditions, etc.

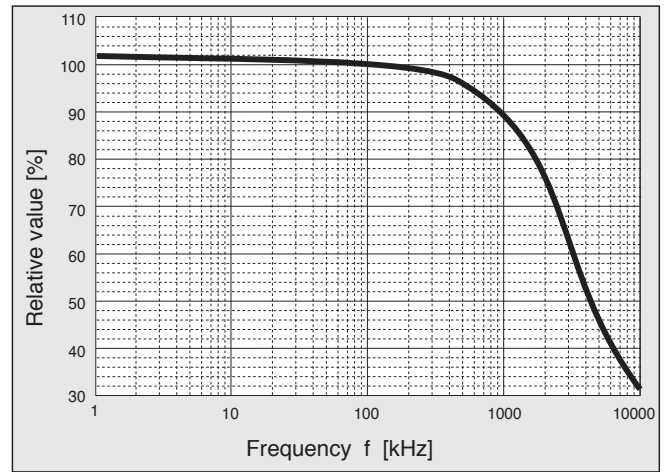
Note that the rated current refers to the current that flows under the rated inductance condition. Be sure to use the product below the maximum operating temperature.

*Automotive grade models can be used in systems that run on a normal power supply.

◆ CORE LOSS CHARACTERISTICS

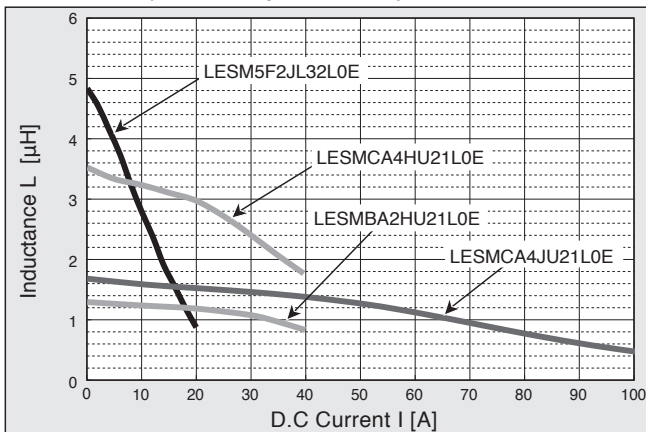


◆ FREQUENCY - INDUCTANCE CHARACTERISTICS



◆ D.C. BIAS CHARACTERISTICS (1)

● SM series (Standard Specifications)



◆ D.C. BIAS CHARACTERISTICS (2)

● SM series (Automotive grade models)

New!

