



◆ 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 (0.36 mΩ*)
- Supports high D.C. rated current (50 Ap*)
- Use of a Fe-base amorphous core for excellent operation stability at high temperatures
- Automotive grade models available
- Significantly improved safety and reliability because layer short circuits will not occur and because the leakage magnetic flux is extremely small

◆ GENERAL SPECIFICATION

Items	SM Series
Operating temperature range*1	-40 to 130°C
Storage temperature range	-40 to 130°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 F (155°C)
Incombustibility (Housing case)	UL94V-0

*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.

◆ COIL STANDARD SPECIFICATIONS

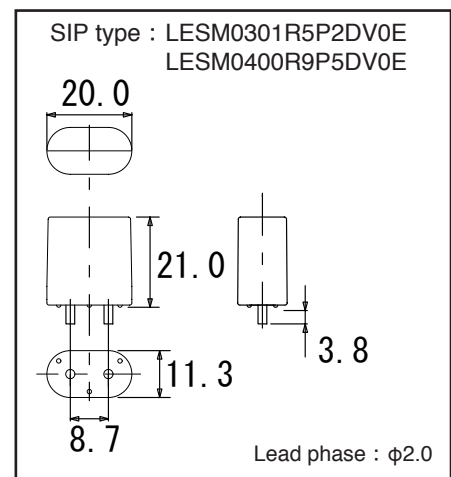
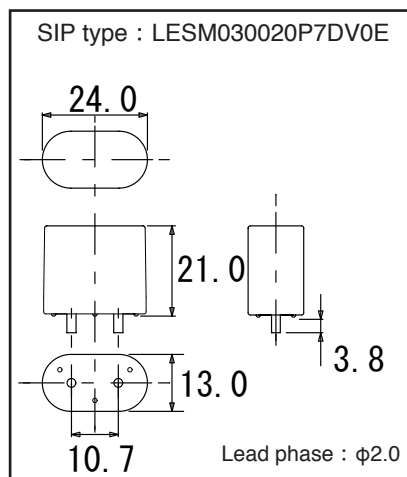
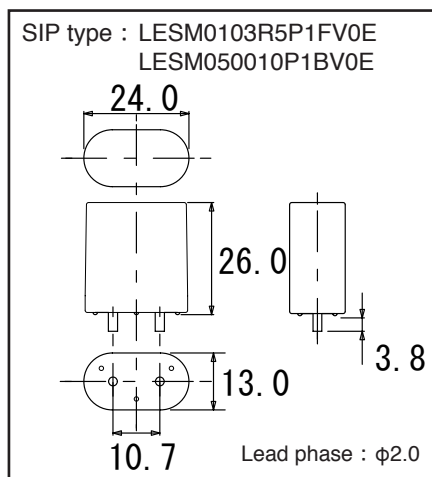
Coil Part No. (Old Coil Part No.)	Rated Current A	Inductance (20kHz)		D.C.R. mΩ (max)	Outside Dimensions		
		0[A] μH	Rating μH		φ mm	w mm	h mm
LESM0103R5P1FV0E (SM103R5P1FPBF)	10	3.7	3.5	0.40	24.0	13.0	26.0
LESM0301R5P2DV0E (SM301R5P2DPBF)	30	2.3	1.3	0.36	20.0	11.3	21.0
LESM030020P7DV0E (SM30020P7DPBF)	30	2.2	1.9	0.40	24.0	13.0	21.0
LESM0400R9P5DV0E (SM400R9P5DPBF)	40	1.5	0.9	0.36	20.0	11.3	21.0
LESM050010P1BV0E (SM50010P1BPBF)	50	2.4	1.2	0.40	24.0	13.0	26.0

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

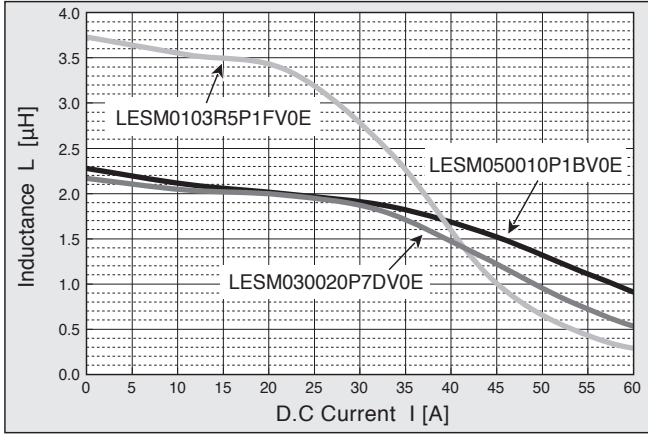
* When using the product for automobiles, check with our representative about the usage conditions and other details before using the product.

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.

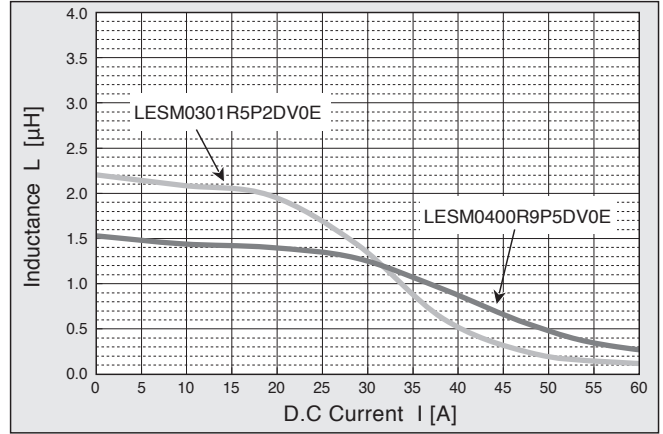
◆ STANDARD DIMENSION DIAGRAM (mm)



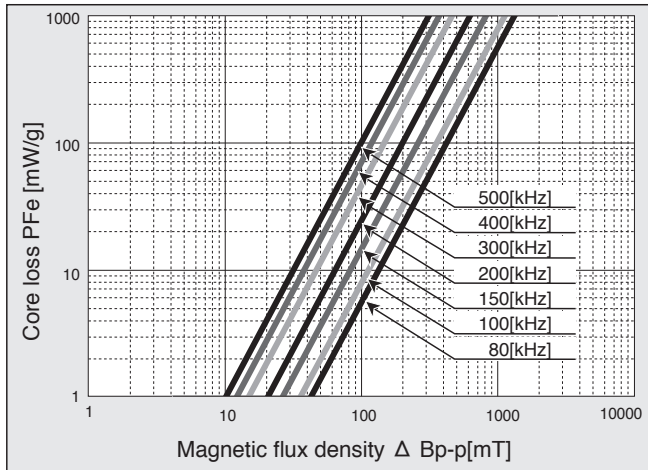
◆ D.C. BIAS CHARACTERISTICS (1)



◆ D.C. BIAS CHARACTERISTICS (2)



◆ CORE LOSS CHARACTERISTICS



◆ FREQUENCY - INDUCTANCE CHARACTERISTICS

