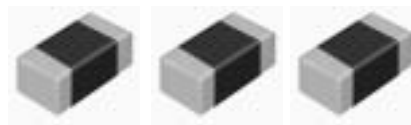


巻線チップインダクタ

WOUND CHIP INDUCTORS

LB SERIES



OPERATING TEMP. -25~+85°C

リフロー/REFLOW

特長 FEATURES

- ・超小型、低直流抵抗の巻線チップインダクタ
- ・実装性、特性において方向性のない形状

- ・ Small size wound chip inductor with low DC resistance.
- ・ Dimension without directional influence on mountability and characteristics.

用途 APPLICATIONS

- ・ DVC, MD, PDA等の携帯AV機器, デジタル機器

- ・ DVC, MD, PDA and other portable digital equipment.

形名表記法 ORDERING CODE

1

形式	
LB	巻線チップインダクタ

3

外径寸法 (mm)	
1608(0603)	1.6×0.8
2016(0806)	2.0×1.6
2012(0805)	2.0×1.25
2518(1007)	2.5×1.8

5

公称インダクタンス [μH]	
例	
1R0	1
100	10
101	100

※R= 小数点

6

インダクタンス許容差 [%]	
M	±20

2

形状	
△	低 Rdc
C	大電流

4

包装	
B	単品
T	テーピング

7

当社管理記号	
△△△	標準品

△= スペース

LB △ 2016 T 100 M △△△△

1 2 3 4 5 6 7

1

Type	
LB	Wound chip inductor

3

External Dimensions (mm)	
1608(0603)	1.6×0.8
2016(0806)	2.0×1.6
2012(0805)	2.0×1.25
2518(1007)	2.5×1.8

5

Nominal Inductance(μH)	
example	
1R0	1
100	10
101	100

*R=decimal point

6

Inductance Tolerances [%]	
M	±20

2

Shape	
△	Low Rdc
C	High current Type

4

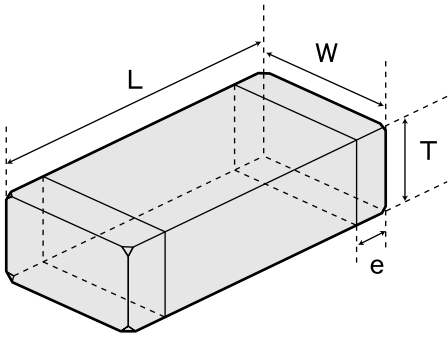
Packaging	
B	Bulk
T	Tape & Reel

7

Internal code	
△△△	Standard Products

△=Blank space

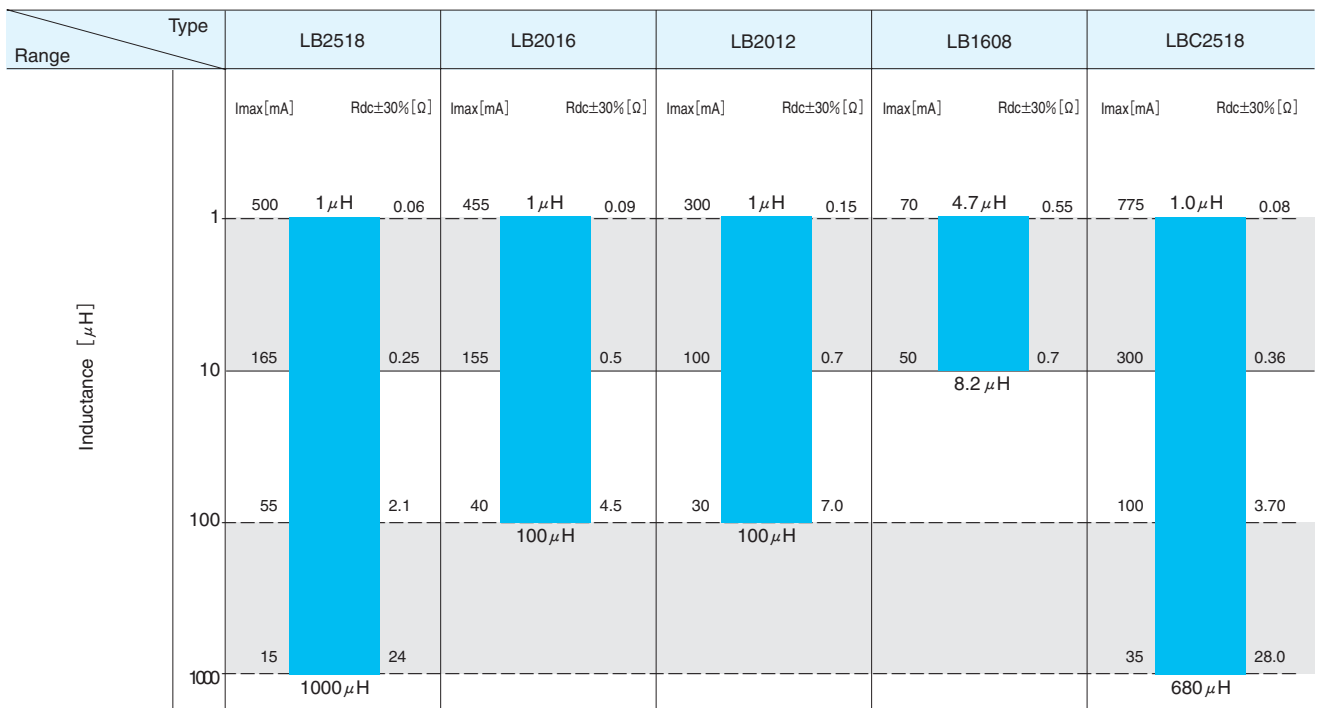
外形寸法 EXTERNAL DIMENSIONS



Type	L	W	T	E
LB2518/ LBC2518	2.5±0.2 (0.098±0.008)	1.8±0.2 (0.071±0.008)	1.8±0.2 (0.071±0.008)	0.5±0.2 (0.020±0.012)
LB2016	2.0±0.2 (0.079±0.008)	1.6±0.2 (0.063±0.008)	1.6±0.2 (0.063±0.008)	0.5±0.2 (0.020±0.012)
LB2012	2.0±0.2 (0.079±0.008)	1.25±0.2 (0.049±0.008)	1.25±0.2 (0.049±0.008)	0.5±0.2 (0.020±0.012)
LB1608	1.6±0.1 (0.063±0.008)	0.8±0.1 (0.031±0.004)	0.8±0.1 (0.031±0.004)	0.35±0.2 (0.014±0.010)

Unit : mm(inch)

概略バリエーション AVAILABLE INDUCTANCE RANGE



代表値 Examples	Inductance	Imax[mA]	Rdc±30%[Ω]	Imax[mA]	Rdc±30%[Ω]	Imax[mA]	Rdc±30%[Ω]	Imax[mA]	Rdc±30%[Ω]	Imax[mA]	Rdc±30%[Ω]
	1 μH	500	0.06	455	0.09	300	0.15	70(4.7 μH)	0.55(4.7 μH)	775	0.08
	10 μH	165	0.25	155	0.5	100	0.7	50(8.2 μH)	0.70(8.2 μH)	300	0.36
	100 μH	55	2.1	40	4.5	30	7.0	—	—	100	3.70
	1000 μH	15	24	—	—	—	—	—	—	—	—

セレクトションガイド
Selection Guide



etc

アイテム一覧
Part Numbers



特性図
Electrical Characteristics



梱包
Packaging



信頼性
Reliability Data



使用上の注意
Precautions



アイテム一覧 PART NUMBERS

LB1608 TYPE

形名 Ordering code	公称 インダクタンス Inductance [μH]	インダクタンス 許容差 Inductance Tolerance	Q 値 Typical Value	数 Self-resonant frequency [MHz] min.	直流抵抗 DC Resistance [Ω] (±30%)	電流 Rated current [mA] max.	数 Measuring frequency [MHz]
LB1608□4R7M	4.7	20%	5	45	0.55	70	7.96
LB1608□8R2M	8.2			32	0.70	50	2.52

・注：形名の□に 包装記号 Please specify the packaging code.(T : Tape&Reel, B : Bulk)

LB2012 TYPE

形名 Ordering code	公称 インダクタンス Inductance [μH]	インダクタンス 許容差 Inductance Tolerance	Q 値 Typical Value	数 Self-resonant frequency [MHz] min.	直流抵抗 DC Resistance [Ω] (±30%)	電流 Rated current [mA] max.	数 Measuring frequency [MHz]		
LB2012□1R0M	1.0	±20%	5	100	0.15	300	7.96		
LB2012□2R2M	2.2			80	0.23	240			
LB2012□4R7M	4.7			45	0.4	140			
LB2012□100M	10			32	0.7	100			
LB2012□100MR	10			32	0.5	100			
LB2012□220M	22		10	10	16	1.7	75	2.52	
LB2012□470M	47				11	3.7	50		
LB2012□101M	100				8	7.0	30		0.796

・注：形名の□に 包装記号 Please specify the packaging code.(T : Tape&Reel, B : Bulk)

K公差品

LB2016 TYPE

形名 Ordering code	公称 インダクタンス Inductance [μH]	インダクタンス 許容差 Inductance Tolerance	Q 値 Typical Value	数 Self-resonant frequency [MHz] min.	直流抵抗 DC Resistance [Ω] (±30%)	電流 Rated current [mA] max.	数 Measuring frequency [MHz]	
LB2016□1R0M	1	±20%	10	100	0.09	455	7.96	
LB2016□1R5M	1.5			80	0.11	350		
LB2016□2R2M	2.2			70	0.13	315		
LB2016□3R3M	3.3			55	0.2	280		
LB2016□4R7M	4.7			45	0.25	210		
LB2016□6R8M	6.8			38	0.35	175		
LB2016□100M	10			32	0.5	155		
LB2016□150M	15			28	0.7	130		
LB2016□220M	22			16	1.0	105		
LB2016□330M	33			14	1.7	85	2.52	
LB2016□470M	47			11	2.4	60		
LB2016□680M	68			10	3	50		
LB2016□101M	100			8	4.5	40		0.796

・注：形名の□に 包装記号 Please specify the packaging code.(T : Tape&Reel, B : Bulk)

K公差品

LB2518 TYPE

形名 Ordering code	公称 インダクタンス Inductance [μH]	インダクタンス 許容差 Inductance Tolerance	Q 値 Typical Value	数 Self-resonant frequency [MHz] min.	直流抵抗 DC Resistance [Ω] (±30%)	電流 Rated current [mA] max.	数 Measuring frequency [MHz]
LB2518□1R0M	1	±20%	10	100	0.06	500	7.96
LB2518□1R5M	1.5			80	0.07	400	
LB2518□2R2M	2.2			68	0.09	340	
LB2518□3R3M	3.3			54	0.11	270	
LB2518□4R7M	4.7			46	0.13	240	
LB2518□6R8M	6.8			38	0.15	195	
LB2518□100M	10			30	0.25	165	
LB2518□150M	15			23	0.32	145	
LB2518□220M	22			19	0.5	115	
LB2518□330M	33			15	0.7	95	
LB2518□470M	47			12	0.95	85	
LB2518□680M	68			9.5	1.5	70	
LB2518□101M	100			9	2.1	55	
LB2518□151M	150			7	3.2	45	
LB2518□221M	220			5.5	4.5	35	
LB2518□331M	330			4.5	7	30	
LB2518□471M	470			3.5	10	25	
LB2518□681M	680			3	17	20	
LB2518□102M	1000			2.4	24	15	0.252

・注：形名の□に 包装記号 Please specify the packaging code.(T : Tape&Reel, B : Bulk)

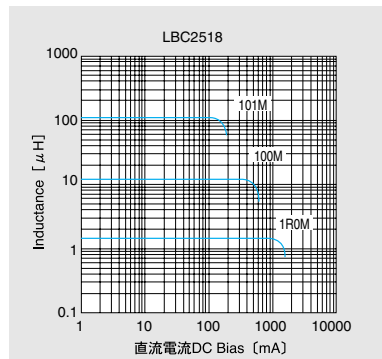
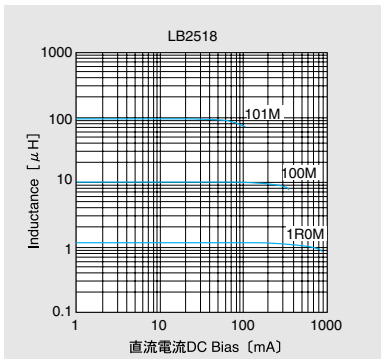
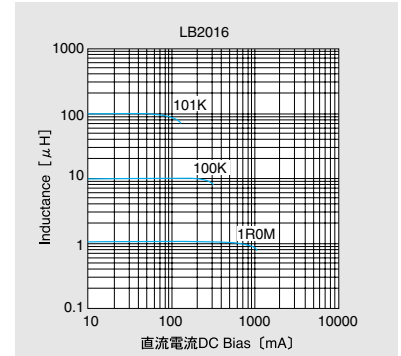
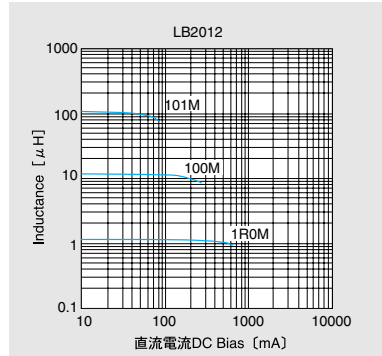
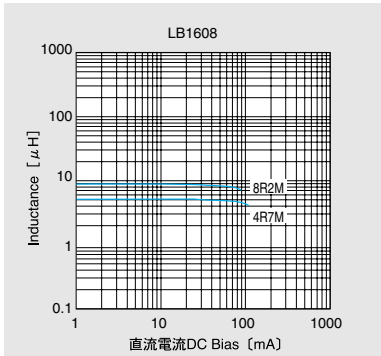
K公差品

LBC2518TYPE

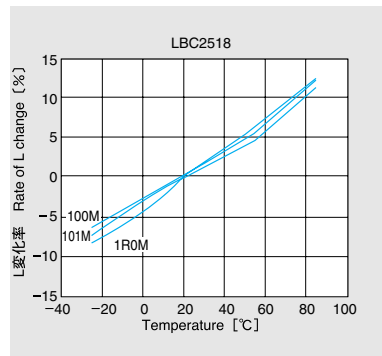
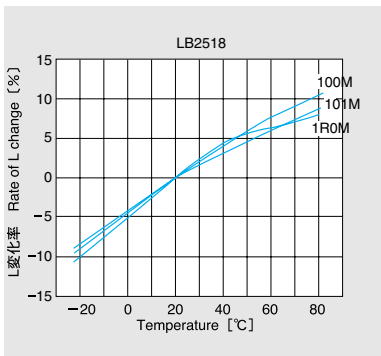
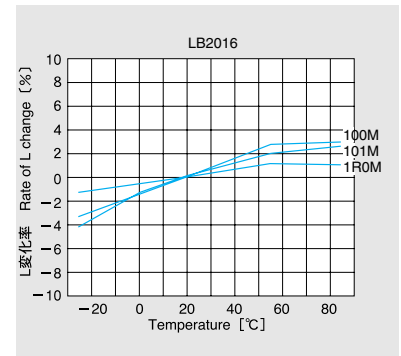
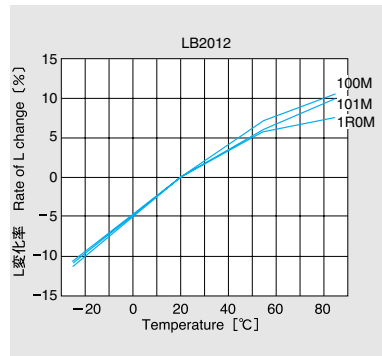
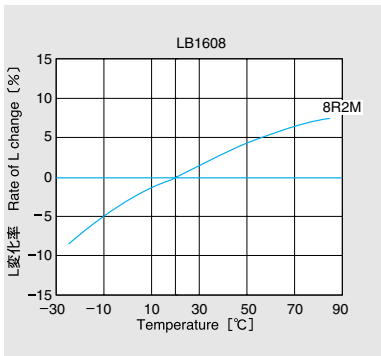
形名 Ordering code	公称 インダクタンス Inductance [μH]	インダクタンス 許容差 Inductance Tolerance	Q 値 Typical Value	数 Self-resonant frequency [MHz] min.	直流抵抗 DC Resistance [Ω] (±30%)	電流 Rated current [mA] max.	数 Measuring frequency [MHz]
LBC2518□1R0M	1.0	±20%	5	100	0.08	775	7.96
LBC2518□1R5M	1.5			80	0.11	660	
LBC2518□2R2M	2.2			68	0.13	600	
LBC2518□3R3M	3.3			54	0.16	500	
LBC2518□4R7M	4.7			41	0.20	430	
LBC2518□6R8M	6.8			38	0.30	360	
LBC2518□100M	10			30	0.36	300	
LBC2518□150M	15			23	0.65	250	
LBC2518□220M	22			19	0.77	210	
LBC2518□330M	33			15	1.50	170	
LBC2518□470M	47			12	1.90	150	
LBC2518□680M	68			9.5	2.80	120	
LBC2518□101M	100			9.0	3.70	100	
LBC2518□151M	150			7.0	6.10	85	
LBC2518□221M	220			5.5	8.40	70	
LBC2518□331M	330			4.5	12.3	60	
LBC2518□471M	470			3.5	22.0	45	
LBC2518□681M	680			3.0	28.0	35	0.796

・注：形名の□に 包装記号 Please specify the packaging code.(T : Tape&Reel, B : Bulk)

直流 特性例 DC Bias characteristics (Measured by HP4285A+42841A)



特性例 Temperature characteristics (Measured by HP4285A)

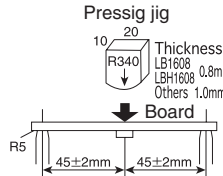


PRECAUTIONS

LER Type, LEM Type, LB Type

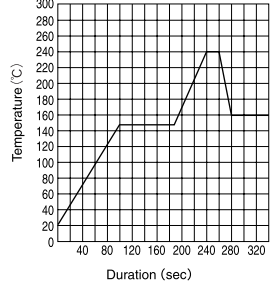
Stages	Precautions	Technical considerations
1.Circuit Design	<p>Operating environment,</p> <p>1.The products described in this specification are intended for use in general electronic equipment,(office supply equipment, telecommunications systems, measuring equipment, and household equipment). They are not intended for use in mission-critical equipment or systems requiring special quality and high reliability (traffic systems, safety equipment, aerospace systems, nuclear control systems and medical equipment including life-support systems,) where product failure might result in loss of life, injury or damage. For such uses, contact TAIYO YUDEN Sales Department in advance.</p>	
2.PCB Design	<p>Land pattern design</p> <p>1.Please contact any of our offices for a land pattern, and refer to a recommended land pattern of specifications.</p>	
3.Considerations for automatic placement	<p>Adjustment of mounting machine</p> <p>1.Excessive impact load should not be imposed on the products when mounting onto the PC boards.</p> <p>2.Mounting and soldering conditions should be checked beforehand.</p>	<p>1. When installing products, care should be taken not to apply distortion stress as it may deform the products.</p>
4.Soldering	<p>Wave soldering</p> <p>1.Please refer to the specifications in the catalog for a wave soldering.</p> <p>Reflow soldering</p> <p>1.Please contact any of our offices for a reflow soldering, and refer to the recommended condition specified.</p> <p>2.LER012 Type, LB Type</p> <p>Reflow solderring only.</p> <p>Lead free soldering</p> <p>1.When using products with lead free soldering, we request to use them after confirming of adhesion, temperature of resistance to soldering heat, etc. sufficiently.</p> <p>Recommended conditions for using a soldering iron</p> <p>Put the soldering iron on the land-pattern.</p> <p>Soldering iron's temperature - Below 350</p> <p>Duration - 3 seconds or less</p> <p>The soldering iron should not directly touch the inductor.</p>	<p>1.If products are used beyond the range of the recommended conditions, heat stresses may deform the products, and consequently degrade the reliability of the products.</p>
5.Cleaning	<p>Cleaning conditions</p> <p>LB Type</p> <p>1.Washing by supersonic waves shall be avoided.</p>	<p>LB Type</p> <p>1.If washing by supersonic waves, supersonic waves may cause broken products.</p>
6.Handling	<p>Handling</p> <p>1.Keep the inductors away from all magnets and magnetic objects.</p> <p>Breakaway PC boards (splitting along perforations)</p> <p>1.When splitting the PC board after mounting inductors, care should be taken not to give any stresses of deflection or twisting to the board.</p> <p>2.Board separation should not be done manually, but by using the appropriate devices.</p> <p>Mechanical considerations</p> <p>1.Please do not give the inductors any excessive mechanical shocks.</p>	<p>1.There is a case that a characteristic varies with magnetic influence.</p> <p>1.Planning pattern configurations and the position of products should be carefully performed to minimize stress.</p> <p>1.There is a case to be damaged by a mechanical shock.</p>
7.Storage conditions	<p>Storage</p> <p>1.To maintain the solderability of terminal electrodes and to keep the packing material in good condition, temperature and humidity in the storage area should be controlled.</p> <p>Recommended conditions</p> <p>Ambient temperature 0 40</p> <p>Humidity Below 70% RH</p> <p>The ambient temperature must be kept below 30 Even under ideal storage conditions, solderability of products electrodes may decrease as time passes. For this reason, LE type inductors should be used within one year from the time of delivery.</p> <p>LER type, LB type</p> <p>Please should be used within 6 months from the time of delivery.</p> <p>LE type</p> <p>In case of storage over 6 months, solderability shall be checked before actual usage.</p>	<p>1. Under a high temperature and humidity environment, problems such as reduced solderability caused by oxidation of terminal electrodes and deterioration of taping/packaging materials may take place.</p>

Item	Specified Value												Test Methods and Remarks
	LER012 LER015	LEM2520	LEMC2520	LEMF2520	LEMC3225	LEMF3225	LB2518	LB2016	LB2012	LB1608	LBC2518	LBH1608	
1. Operating temperature Range	-25~+85°C	-40~+85°C					-25~+85°C						
2. Storage	-40~+85°C					-25~+85°C							
3. Rated Voltage	Within the specified tolerance											<p>The maximum DC value having inductance decrease within 10% and temperature increases within 20°C by the application of DC bias.</p> <p>LBH1608 LEM Series 5N6~R10: The maximum DC value having temperature increases within 20°C by the application of DC bias.</p>	
4. Inductance	Within the specified tolerance											<p>LER LEM Series 5N6~R10 Measuring equipment Impedance analyzer (HP4291A or its equivalent) Measuring frequency Specified frequency</p> <p>LER LEM Series R12~221 Measuring equipment LCR Meter (HP4285A 42851A or its equivalent) Measuring frequency Specified frequency</p> <p>LB LBC Series Measuring equipment LCR Meter (HP4285A or its equivalent)</p> <p>LBH1608 Series Measuring equipment Impedance analyzer (HP4291A or its equivalent)</p>	
5. Q	Within the specified tolerance											<p>12~18 (at 100MHz) min</p> <p>LER LEM Series 5N6~R10 Measuring equipment Impedance analyzer (HP4291A or its equivalent) Measuring frequency Specified frequency</p> <p>LER LEM Series R12~221 Measuring equipment LCR Meter (HP4285A 42851A or its equivalent) Measuring frequency Specified frequency</p> <p>LB LBC Series Measuring equipment LCR Meter (HP4285A or its equivalent)</p> <p>LBH1608 Series Measuring equipment Impedance analyzer (HP4291A or its equivalent)</p>	
6. DC Resistance	Within the specified tolerance											<p>LER LEM LB LBC LBH Series Measuring equipment low ohmmeter (A&D AD5812 or its equivalent)</p>	

Item	Specified Value												Test Methods and Remarks											
	LER012 LER015	LEM2520	LEMC2520	LEMF2520	LEMC3225	LEMF3225	LB2518	LB2016	LB2012	LB1608	LBC2518	LBH1608												
7. Self-Resonant Frequency	Within the specified tolerance												LER LEM Series 5N6~R10 Measuring equipment Network analyzer (HP8720B or its equivalent) LER LEM Series (Exclude LEM2520) R12~ Measuring equipment Impedance analyzer (HP4291A or its equivalent) LEM2520 Measuring equipment Network analyzer (Anritsu MS620J or its equivalent) LB LBC Series Measuring equipment Impedance analyzer (HP4291A or its equivalent) LBH1608 Series Measuring equipment Network analyzer (HP8720B or its equivalent)											
8. Temperature Characteristic	$\Delta L/L$ Within $\pm 5\%$		$\Delta L/L \rightarrow$ Within $\pm 10\%$	$\Delta L/L \rightarrow$ Within $\pm 5\%$	$\Delta L/L \rightarrow$ Within $\pm 15\%$			$\Delta L/L \rightarrow$ Within $\pm 15\%$			$\Delta L/L \rightarrow$ Within $\pm 5\%$ $\Delta L/L \rightarrow$ Within $\pm 0.5nH$ under 8.2nH	Change of maximum inductance deviation in step 1-5 Exclude CM03MS series <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>20</td> </tr> <tr> <td>2</td> <td>-25</td> </tr> <tr> <td>3</td> <td>20 (Reference temperature)</td> </tr> <tr> <td>4</td> <td>+85 (Maximum operating temperature)</td> </tr> <tr> <td>5</td> <td>20</td> </tr> </tbody> </table>	Step	Temperature (°C)	1	20	2	-25	3	20 (Reference temperature)	4	+85 (Maximum operating temperature)	5	20
Step	Temperature (°C)																							
1	20																							
2	-25																							
3	20 (Reference temperature)																							
4	+85 (Maximum operating temperature)																							
5	20																							
9. Resistance to Flexure of Substrate	No breakdown or damage												Warp: 2mm (LER012, LER015, LBC, LB) : 3mm (LEM2520, LEMC2520, LEMF2520, LEMC3225, LEMF3225) Test substrate: Printed board According to JIS C0051 Pressig jig 											
10. Body Strength	No breakdown or damage												LER012 LER015 Applide force 15N Duration 5sec. LB · LBC · LBH LEM2520 LEMC2520 LEMF2520 LEMC3225 LEMF3225 Applide force 10N Duration 10sec. LB1608 Applide force 5N Duration 10sec.											
11. Self Resonant Frequency	$\Delta L/L$ Within -10%												Measure inductance with application of rated current using LCR metre to compare it with the initial value. (* Excluding 5N6~R10)											

Item	Specified Value												Test Methods and Remarks
	LER012 LER015	LEM2520	LEMC2520	LEMF2520	LEMC3225	LEMF3225	LB2518	LB2016	LB2012	LB1608	LBC2518	LBH1608	
12. Adhesion of terminal electrode	Shall not come off PC board.	No detachment of electrode					Shall not come off PC board.						LER012 · LER015 Applied force 15N Duration 5 sec. Test substrate Printed board LB · LBC · LBH LEM2520 · LEMC2520 · LEMF2520 · LEMC3225 · LEMF3225 Applied force 10N to X and Y directions Duration 5 sec. Test substrate Printed board
13. Resistance to vibration	$\Delta L/L$ Within $\pm 5\%$ Q R12~1R0 25min. 1R2~3R3 20min. $\Delta L/L$ Within $\pm 5\%$ Q R12~100 30min. 120~220 20min.	$\Delta L/L$ Within $\pm 5\%$ No significant abnormality in appearance.					$\Delta L/L$ Within $\pm 10\%$ No significant abnormality in appearance.						LER LEM LB · LBC According to JIS C5102 clause 8.2. Vibration type Directions 2 hrs each in X, Y and Z directions. Total 6 hrs Frequency range 10 to 55 to 10 Hz (1min.) Amplitude 1.5mm Mounting method Soldering onto printed board (* Excluding 5N6-R10 LE Series) Recovery At least 1 hr of recovery under the standard condition after the test, followed by the measurement within 2 hrs.

Item	Specified Value												Test Methods and Remarks
	LER012 LER015	LEM2520	LEMC2520	LEMF2520	LEMC3225	LEMF3225	LB2518	LB2016	LB2012	LB1608	LBC2518	LBH1608	
14.Drop test	No significant abnormality in appearance.	△L/L Within±5% No significant abnormality in appearance.				△L/L Within±10% No significant abnormality in appearance.							LER・LEM LER012・LER015 Drop test Impact material concreta or vinyl tile Height 1m Total number of drops 10 times LEM2520・LEMC2520・LEMF2520・LEMC3225・LEMF3225 Acceleration 980m/sec ² Duration 6msec Number of times 6 sides × 3 times Mounting method Soldering onto printed board (* Excluding 10N~R10) Recovery At least 1 hr of recovery under the standard condition after the
15.Solderability	At least 90% of electrode											test, followed by the measurement within 2 hrs. LER・LEM Solder temperature 230±5°C Duration 2±0.5sec. (LER012・LER015) 5±0.5sec. (LEM2520・LEMC2520・LEMF2520・LEMC3225・LEMF3225) Flux Methanol solution with 25% of colophony LB・LBH Solder temperature 230±5°C Duration 5±0.5sec Flux Methanol solution with 25% of colophony	

Item	Specified Value												Test Methods and Remarks
	LER012 LER015	LEM2520	LEMC2520	LEMF2520	LEMC3225	LEMF3225	LB2518	LB2016	LB2012	LB1608	LBC2518	LBH1608	
16. Resistance to soldering heat	No significant abnormality in appearance												Conduct following wave soldering twice. (LER012)  Solder temperature 260±5°C Duration 5±0.5sec. Twice (LERO15) 10±1sec. Once (LEM2520 · LEMC2520 · LEMF2520 · LEMC3225 · LEMF3225) LB · LBH 3 times of reflow oven at 220 ± 5°C for 40sec. with peak temperature at 235± 5°C for 5sec.
17. Resistance to solvent	No significant abnormality in appearance.												Solvent temperature Room temperature Type of solvent Chlorocarbon type (LEM2520 · LEMC2520 · LEMC3225) Isopropyl alcohol (LEMF2520 · LEMF3225 · LB · LBC) Cleaning conditions Output 20mW/cm² Frequency 28kHz Duration 1 min Conduct ultrasonic cleaning. (LEM2520 · LEMC2520 · LEMC3225) 90s. Immersion and cleaning. (LEMF2520 · LEMF3225 · LB · LBC)

Item	Specified Value											Test Methods and Remarks													
	LER012 LER015	LEM2520	LEMC2520	LEMF2520	LEMC3225	LEMF3225	LB2518	LB2016	LB2012	LB1608	LBC2518		LBH1608												
18.Resisance to solvent	Δ/L/L	Δ/L/L	Δ/L/L Within±10%									Δ/L/L	Conditions for 1cycle <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature(C)</th> <th>Temperature(C)</th> <th>Duration(min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25</td> <td>-40</td> <td>30</td> </tr> <tr> <td>2</td> <td>+85</td> <td>+85</td> <td>30</td> </tr> </tbody> </table> Temperature for LER012・LER015 Temperature for LEM2520・LEMC2520・LEMF2520・LEMC3225・LEMF3225 Number of cycle 100 cycle Recovery At least 1 hr of recovery the standard condition after the removal from test chamber, followed by measurement within 2 hrs. LB・LBC・LBH -40~+85°C, miantain times 30min. ,100 cycle Recovery At least 1 hr of recovery under the standard condition after the test, followed by the measurement within 2 hrs.	Step	Temperature(C)	Temperature(C)	Duration(min)	1	-25	-40	30	2	+85	+85	30
	Step	Temperature(C)	Temperature(C)	Duration(min)																					
1	-25	-40	30																						
2	+85	+85	30																						
Within±10% Q 5N6~18N 10min. 22N~R10 15min. R12~1R0 20min. 25min. R12~4R7 1R2~3R3 30min. 20min. 5R6~330 25min. Δ/L/L 390~820 Within±10% 20min. Q 101 15min. 10N~18N 10min. 22N~R10 15min. R12~100 30min. 120~220 20min.	Within±10% Q 10N 10min. 12N~33N 15min. 39N~R10 20min. R12~4R7 30min. 5R6~330 25min. 390~820 20min. 101 15min.	Within±5% Δ/L/L within±0.5nH under 8.2 H Δ/Q/Q within±20% Δ/Q/Q within ±5 under 8.2 H																							
19.Damp heat	Δ/L/L	Δ/L/L	Δ/L/L Within±10%									Δ/L/L	Temperature 60±2°C Humidity 90~95%RH Duration 1000 hrs Recovery At least 1 hr of recovery the standard condition after the removal from test chamber, followed by measurement within 2 hrs.												
	Within±10% Q 5R6~18N 10min. 22N~R10 15min. R12~1R0 20min. 25min. R12~4R7 1R2~3R3 30min. 20min. 5R6~330 25min. Δ/L/L 390~820 Within±10% 20min. Q 101 15min. 10N~18N 10min. 22N~R10 15min. R12~100 30min. 120~220	Within±10% Q 10N 10min. 12N~33N 15min. 39N~R10 20min. R12~4R7 30min. 5R6~330 25min. 390~820 20min. 101 15min.	Within±5% Δ/L/L within±0.5nH under 8.2 H Δ/Q/Q Within±20% Δ/Q/Q within ±5 under 8.2 H																						

Item	Specified Value											Test Methods and Remarks
	LER012 LER015	LEM2520	LEMC2520	LEMF2520	LEMC3225	LEMF3225	LB2518	LB2016	LB2012	LB1608	LBC2518	
20.Loading under damp heat	ΔL/L Within±10% Q R12~1R0 25min. 1R2~3R3 20min. ΔL/L Within±10% Q R12~100 30min. 120~220 20min.	ΔL/L Within±10% Q R12~4R7 30min. 5R6~330 25min. 390~820 20min. 101 15min.	ΔL/L Within±10%								ΔL/L Within±5% ΔL/L within 0.5nH under 8.2 H ΔQ/Q within±20% ΔQ/Q within ±5 under 8.2 H	LER · LEM · LB · LBC Temperature 60±2°C (Excluding nH range) Humidity 90~95%RH Duration 1000 hrs Applied current Rated current Recovery At least 1 hr of recovery the standard condition after the removal from test chamber, followed by measurement within 2 hrs.
21.Hirh temperaturte life test	ΔL/L Within±10% Q 5R6~18N 10min. 22N~R10 15min. 15min. R12~1R0 25min. 1R2~3R3 20min. ΔL/L Within±10% Q 10N~18N 10min. 22N~R10 15min. R12~100 30min. 120~220 20min.	ΔL/L Within±10% Q 10N 10min. 12N~33N 15min. 39N~R10 20min. R12~4R7 30min. 5R6~330 25min. 390~820 20min. 101 15min.	ΔL/L Within±10%									LER · LEM Temperature 85±2°C Duration 1000 hrs Recovery At least 1 hr of recovery the standard condition after the removal from test chamber, followed by measurement within 2 hrs.
22.Loading at high temperature	ΔL/L Within±10% Q R12~1R0 25min. 1R2~3R3 20min. ΔL/L Within±10% Q R12~100 30min. 120~220 20min.		ΔL/L Within±10%								ΔL/L Within±5% ΔL/L within±0.5nH under 8.2 H ΔQ/Q Within±20% ΔQ/Q within ±0.5 under 8.2 H	LER · LB · LBC Temperature 85±2°C (Excluding nH range) Duration 1000 hrs Applied current Rated current Recovery At least 1 hr of recovery the standard condition after the removal from test chamber, followed by measurement within 2 hrs.

Item	Specified Value											Test Methods and Remarks	
	LER012 LER015	LEM2520	LEMC2520	LEMF2520	LEMC3225	LEMF3225	LB2518	LB2016	LB2012	LB1608	LBC2518		LBH1608
23.Low temperature life test	ΔL/L Within±10% Q 5R6~18N 10min. 22N~R10 15min. R12~1R0 25min. 1R2~3R3 30min. 20min. 5R6~330 25min. ΔL/L 390~820 20min. Q 101 15min. 10N~18N 10min. 22N~R10 15min. R12~100 30min. 120~220 20min.	ΔL/L Within±10% Q 10N 10min. 12N~33N 15min. 39N~R10 20min. R12~4R7 30min. 5R6~330 25min. 390~820 20min. 101 15min.	ΔL/L Within±10%									ΔL/L Within±5% ΔL/L within±0.5H under 8.2 H ΔQ/Q Within±20% ΔQ/Q within ±5 under 8.2 H	LER · LEM · LB · LBC · LBH Temperature -40±2°C Duration 1000 hrs Recovery At least 1 hr of recovery the standard condition after the removal from test chamber, followed by measurement within 2 hrs.
24.Standard condition	"Standard condition" referred to herein defined as follows 5 to 35 of temperature, 45 to 85% relative humidity, and 86 to 106kPa of air pressure. When there are questions concerning measurement results In order to provide correlation data, the test shall be conducted under condition of 20±2 of temperature, 45 to 85% to 106kPa of air pressure. Unless otherwise specified all the test are conducted under the "standard condition"					Standard test condition Unless otherwise specified, Temperature 20±15 of temperature, 65±20% of relative humidity. When there are question concerning measurement result In order to provide correlation date, the test shall be condition of 20±2 of temperature, 65±5% relative humidity. Inductance is in accordance with our measured value.							

①標準数 Standard Quantity

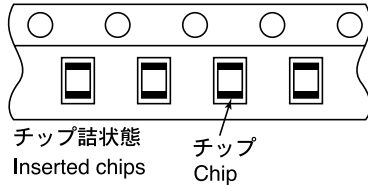
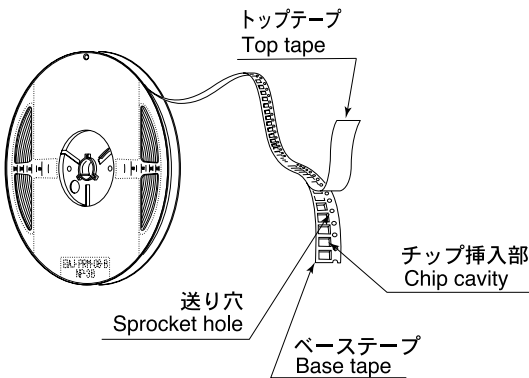
形式 Type	標準数 Standard Quantity [pcs]	
	テーピング	
	Bulk / Bag	Tape&Reel
LB2518 / LBC2518	2000	2000
LB2016	2000	2000
LB2012	3000	3000
LBH1608 / LB1608	4000	4000

形式 Type	チップ Chip Cavity		ピッチ Insertion Pitch	テープ Tape Thickness	
	A	B	F	K	T
	LB2518	2.15±0.1 (0.085±0.004)	2.7±0.1 (0.107±0.004)	4.0±0.1 (0.157±0.004)	2.1 (0.083)
LBC2518					
LB2016	1.9±0.1 (0.075±0.004)	2.2±0.1 (0.087±0.004)	4.0±0.1 (0.157±0.004)	2.15 (0.085)	0.3 (0.012)
LB2012	1.5±0.2 (0.059±0.008)	2.3±0.2 (0.091±0.008)	4.0±0.1 (0.157±0.004)	2.0 (0.079)	0.3 (0.012)
LBH1608	1.0±0.2 (0.059±0.008)	1.8±0.2 (0.091±0.008)	4.0±0.1 (0.157±0.004)	1.1max (0.079)	1.1max (0.012)
LB1608					

Unit: mm (inch)

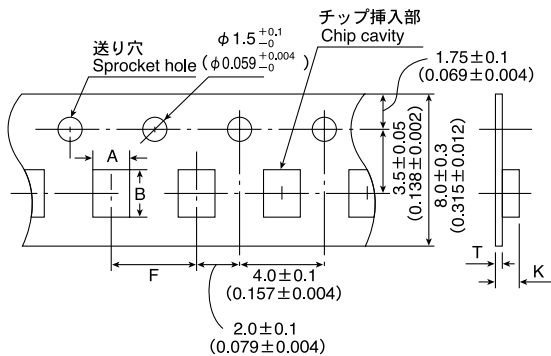
②テーピング Tape material

エンボステープ Embossed tape
紙テープ(LBH1608) Card board carrier tape(LBH1608)

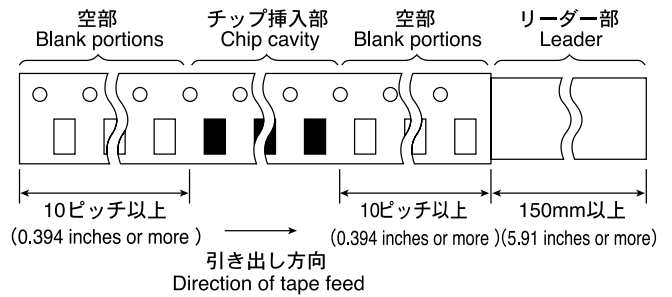


③テーピング寸法 Taping Dimensions

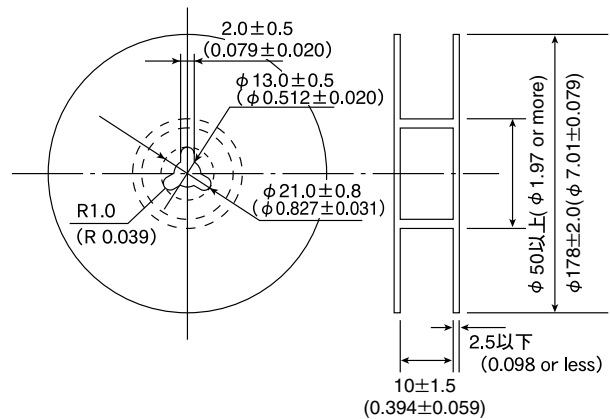
エンボステープ 8mm Embossed Tape (0.315 inches wide)
紙テープ 8mm Paper tape (0.315 inches wide)



④リーダー / Leader and Blank Portion



⑤リール寸法 Reel Size



⑥トップテープ Top Tape Strength

トップテープの、図 方向にて0.2 0.7N な
The top tape requires a peel-off force of 0.2 to 0.7N in the direction of the arrow as illustrated below.

