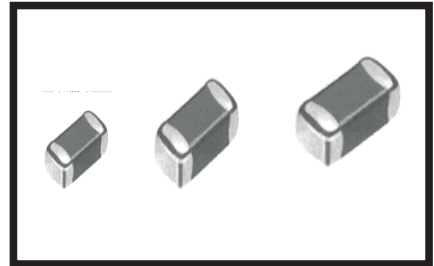


■ 鐵氧體疊層片式電感
FERRITE CHIP INDUCTORS

OPERATING TEMP.	1005	-55~125°C
	1608	
	2012	-40~+85°C



● 特征 FEATURES

- 體積小
- 漏磁小，不產生耦合，可靠性高
- 無引綫，不產生跟踪性，適合高密度表面貼裝
- 優良的可焊性及耐熱衝擊性，適合波峰焊及回流焊
- Miniature volume.
- No cross coupling between inductors due to low magnetic shield and high reliability.
- No lead, ideal for high density SMT installation, with no directionality.
- Superior solderability and resistance to soldering heat, Ideal for wave or reflow soldering.

● 應用 APPLICATIONS

- VCD/DVD、數碼相機、電腦、數字電視、機頂盒
- VCD/DVD、digital cameras、personal computers etc.

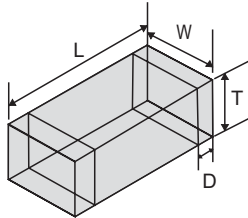
● 產品規格型號的表示方法 ORDERING CODE

<u>CMI</u>	<u>201209</u>	<u>V</u>	<u>47N</u>	<u>K</u>	<u>T</u>
①	②	③	④	⑤	⑥

① 產品代號 Product Code		② 規格尺寸(L×W×T) (mm) Dimensions		③ 材料代號 Material Code	④ 感量(μH) Inductance		⑤ 誤差 Tolerance		⑥ 包裝方式 Packaging Style	
CMI	疊層片式電感 Multilayer Chip Inductors	100505	1.0×0.5×0.5	U	實例 Example		K	±10%	T	卷帶盤裝 Tape & Reel
		160808	1.6×0.8×0.8	V	47N	0.047	M	±20%	B	散裝 Bulk
		201209	2.0×1.2×0.9	J	R10	0.10				
		201212	2.0×1.2×1.2	X	1R0	1.0				
		321609	3.2×1.6×0.9		N=0.0(nH) R=0.0(μH)					
		321611	3.2×1.6×1.1							
		322513	3.2×2.5×1.3							
		451616	4.5×1.6×1.6							
		453215	4.5×3.2×1.5							

• 外形尺寸 SHAPE AND DIMENSIONS

Unit:mm(inch)



Part No.	L	W	T	D
100505 (0402)	1.0±0.15 (0.040±0.006)	0.5±0.15 (0.020±0.006)	0.5±0.15 (0.020±0.006)	0.25±0.10 (0.010±0.004)
160808 (0603)	1.6±0.2 (0.063±0.008)	0.8±0.2 (0.031±0.008)	0.8±0.2 (0.031±0.008)	0.3±0.2 (0.01±0.008)
201209 (0805)	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	0.9±0.2 (0.035±0.008)	0.5±0.3 (0.020±0.012)
201212 (0805)	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	1.2±0.2 (0.047±0.008)	0.5±0.3 (0.020±0.012)
321611 (1206)	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	1.1±0.2 (0.043±0.008)	0.5±0.3 (0.020±0.012)
321609 (1206)	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	0.9±0.2 (0.035±0.008)	0.5±0.3 (0.020±0.012)
322513 (1210)	3.2±0.2 (0.126±0.008)	2.5±0.2 (0.098±0.008)	1.3±0.2 (0.051±0.008)	0.5±0.3 (0.020±0.012)
451616 (1806)	4.5±0.2 (0.186±0.008)	1.6±0.2 (0.063±0.008)	1.6±0.2 (0.063±0.008)	0.5±0.3 (0.020±0.012)
453215 (1812)	4.5±0.2 (0.180±0.008)	3.2±0.2 (0.126±0.008)	1.5±0.2 (0.060±0.008)	0.5±0.3 (0.020±0.012)

• 電性能參數 ELECTRICAL CHARACTERISTICS

1005 TYPE

Part No.	Inductance (μ H)	Q (Min)	Test Fre. (MHz)	SRF (MHz)Min	DCR (Ω)Max	Ir (mA)Max
CMI100505V47NK	0.047	10	50	220	0.45	25
CMI100505V56NK	0.056	10	50	210	0.45	25
CMI100505V68NK	0.068	10	50	210	0.45	25
CMI100505V82NK	0.082	10	50	200	0.45	25
CMI100505VR10K	0.10	15	25	200	0.70	25
CMI100505VR12K	0.12	15	25	165	0.70	25
CMI100505VR15K	0.15	15	25	140	0.80	25
CMI100505VR18K	0.18	15	25	120	0.80	25
CMI100505VR22K	0.22	15	25	110	1.00	25
CMI100505VR27K	0.27	15	25	95	1.20	25
CMI100505VR33K	0.33	15	25	85	1.20	25
CMI100505VR39K	0.39	15	25	70	1.30	20
CMI100505VR47K	0.47	15	25	68	1.50	20
CMI100505VR56K	0.56	15	25	55	2.00	20
CMI100505VR68K	0.68	15	25	50	2.30	20
CMI100505VR82K	0.82	15	25	45	3.00	18
CMI100505U1R0K	1.0	20	10	40	0.90	25
CMI100505U1R2K	1.2	20	10	35	1.20	25
CMI100505U1R5K	1.5	20	10	30	1.30	20
CMI100505U1R8K	1.8	20	10	30	1.40	20
CMI100505U2R2K	2.2	20	10	28	1.70	20
CMI100505U2R7K	2.7	20	10	22	1.90	20
CMI100505X3R3K	3.3	20	10	20	2.00	20
CMI100505X3R9K	3.9	20	10	18	2.20	20
CMI100505X4R7K	4.7	20	10	15	2.50	18
CMI100505J5R6M	5.6	20	4	13	2.20	18
CMI100505J6R8M	6.8	20	4	11	2.40	18
CMI100505J8R2M	8.2	20	4	10	2.90	18
CMI100505J100M	10	20	2	9	3.10	10
CMI100505J120M	12	20	2	8	3.30	5
CMI100505J150M	15	20	1	8	3.50	5
CMI100505J180M	18	20	1	8	3.50	5

鐵氧體疊層片式電感
FERRITE CHIP INDUCTORS

1608 TYPE

Part No.	Inductance (μ H)	Q (Min)	Test Fre. (MHz)	SRF (MHz)Min	DCR (Ω)Max	I _r (mA)Max
CMI160808V47NK	0.047	15	50	260	0.20	50
CMI160808V56NK	0.056	15	50	260	0.20	50
CMI160808V68NK	0.068	15	50	250	0.20	50
CMI160808V82NK	0.082	15	50	245	0.20	50
CMI160808VR10K	0.10	20	25	240	0.25	50
CMI160808VR12K	0.12	20	25	205	0.30	50
CMI160808VR15K	0.15	20	25	180	0.30	50
CMI160808VR18K	0.18	20	25	165	0.30	50
CMI160808VR22K	0.22	20	25	150	0.40	50
CMI160808VR27K	0.27	20	25	136	0.45	50
CMI160808VR33K	0.33	20	25	125	0.50	50
CMI160808VR39K	0.39	20	25	110	0.60	50
CMI160808VR47K	0.47	20	25	105	0.70	50
CMI160808VR56K	0.56	20	25	95	0.70	50
CMI160808VR68K	0.68	20	25	90	0.90	50
CMI160808VR82K	0.82	20	25	85	1.00	50
CMI160808U1R0K	1.0	25	10	75	0.50	25
CMI160808U1R2K	1.2	25	10	65	0.55	25
CMI160808U1R5K	1.5	25	10	60	0.70	25
CMI160808U1R8K	1.8	25	10	55	0.75	25
CMI160808U2R2K	2.2	25	10	50	0.80	25
CMI160808U2R7K	2.7	25	10	45	0.90	15
CMI160808U3R3K	3.3	25	10	40	1.00	15
CMI160808X3R9K	3.9	25	10	35	1.30	15
CMI160808X4R7K	4.7	25	10	33	1.50	15
CMI160808X5R6K	5.6	25	4	22	1.55	5
CMI160808J6R8K	6.8	20	4	20	1.55	5
CMI160808J8R2K	8.2	20	4	18	1.65	5
CMI160808J100M	10	20	2	17	1.75	3
CMI160808J120M	12	20	2	15	1.85	3
CMI160808J150M	15	20	1	14	2.50	1
CMI160808J180M	18	20	1	13	2.70	1
CMI160808J220M	22	20	1	11	3.00	1
CMI160808J270M	27	20	1	10	3.10	1
CMI160808J330M	33	20	1	9	3.30	1

2012 TYPE

Part No.	Inductance (μ H)	Q (Min)	Test Fre. (MHz)	SRF (MHz)Min	DCR (Ω)Max	Ir (mA)Max
CMI201209V47NK	0.047	25	50	320	0.15	300
CMI201209V56NK	0.056	25	50	320	0.15	300
CMI201209V68NK	0.068	25	50	280	0.20	300
CMI201209V82NK	0.082	25	50	280	0.20	300
CMI201209VR10K	0.10	20	25	235	0.20	250
CMI201209VR12K	0.12	20	25	220	0.25	250
CMI201209VR15K	0.15	20	25	200	0.25	250
CMI201209VR18K	0.18	20	25	185	0.30	250
CMI201209VR22K	0.22	20	25	170	0.30	250
CMI201209VR27K	0.27	20	25	150	0.40	250
CMI201209VR33K	0.33	20	25	145	0.40	250
CMI201209VR39K	0.39	25	25	135	0.50	200
CMI201209VR47K	0.47	25	.25	125	0.50	200
CMI201209VR56K	0.56	25	25	115	0.60	150
CMI201209VR68K	0.68	25	25	105	0.65	150
CMI201209VR82K	0.82	25	25	100	0.70	150
CMI201209U1R0K	1.0	35	10	75	0.40	50
CMI201209U1R2K	1.2	35	10	65	0.40	50
CMI201209U1R5K	1.5	35	10	60	0.40	50
CMI201209U1R8K	1.8	35	10	55	0.40	50
CMI201209U2R2K	2.2	35	10	50	0.60	50
CMI201209U2R7K	2.7	35	10	45	0.60	50
CMI201209U3R3K	3.3	35	10	41	0.60	50
CMI201209U3R9K	3.9	35	10	38	0.80	50
CMI201209U4R7K	4.7	35	10	35	0.90	30
CMI201209X5R6K	5.6	30	4	32	1.00	15
CMI201209X6R8K	6.8	30	4	29	1.05	15
CMI201209X8R2K	8.2	30	4	26	1.05	15
CMI201209X100K	10	30	2	24	1.15	15
CMI201209X120K	12	30	2	22	1.15	15
CMI201209J150K	15	25	1	19	1.15	5
CMI201209J180K	18	25	1	18	1.20	5
CMI201209J220K	22	25	1	16	1.20	5
CMI201209J270K	27	25	1	16	1.50	5
CMI201209J330M	33	25	1	16	1.50	5
CMI201212J390M	39	25	1	16	1.50	5
CMI201212J470M	47	25	1	15	1.70	5
CMI201212J560M	56	25	1	15	1.80	5

鐵氧體疊層片式電感
FERRITE CHIP INDUCTORS

3216 TYPE

Part No.	Inductance (μ H)	Q (Min)	Test Fre. (MHz)	SRF (MHz)Min	DCR (Ω)Max	Ir (mA)Max
CMI321609V47NK	0.047	25	50	320	0.15	300
CMI321609V56NK	0.056	25	50	320	0.20	300
CMI321609V68NK	0.068	25	50	280	0.25	300
CMI321609V82NK	0.082	25	50	280	0.25	300
CMI321609VR10K	0.10	25	25	235	0.25	250
CMI321609VR12K	0.12	25	25	220	0.25	250
CMI321609VR15K	0.15	25	25	200	0.25	250
CMI321609VR18K	0.18	25	25	185	0.30	250
CMI321609VR22K	0.22	25	25	170	0.30	250
CMI321609VR27K	0.27	25	25	150	0.30	250
CMI321609VR33K	0.33	25	25	145	0.30	250
CMI321609VR39K	0.39	30	25	135	0.50	200
CMI321609VR47K	0.47	30	25	125	0.50	200
CMI321609VR56K	0.56	30	25	115	0.50	150
CMI321609VR68K	0.68	30	25	105	0.50	150
CMI321609VR82K	0.82	30	25	100	0.60	150
CMI321609U1R0K	1.0	35	10	75	0.30	100
CMI321609U1R2K	1.2	35	10	65	0.40	100
CMI321609U1R5K	1.5	35	10	60	0.40	50
CMI321609U1R8K	1.8	35	10	55	0.40	50
CMI321609U2R2K	2.2	35	10	50	0.50	50
CMI321609U2R7K	2.7	35	10	45	0.50	50
CMI321609U3R3K	3.3	35	10	41	0.50	50
CMI321609U3R9K	3.9	35	10	38	0.60	50
CMI321609U4R7K	4.7	35	10	35	0.65	25
CMI321609U5R6K	5.6	35	4	32	0.80	25
CMI321609X6R8K	6.8	35	4	29	0.80	25
CMI321609X8R2K	8.2	35	4	26	0.80	25
CMI321609X100K	10	35	2	24	0.80	25
CMI321609X120K	12	35	2	22	0.90	15
CMI321609J150M	15	30	1	19	1.00	5
CMI321609J180M	18	30	1	18	1.00	5
CMI321609J220M	22	30	1	16	1.20	5
CMI321609J270M	27	30	1	14	1.20	5
CMI321609J330M	33	30	1	13	1.30	5
CMI321609J390M	39	30	1	13	1.30	5
CMI321611J470M	47	30	1	12	1.60	5
CMI321611J560M	56	30	1	12	1.80	5
CMI321611J680M	68	30	1	11	2.00	5
CMI321611J820M	82	30	1	11	2.40	5
CMI321611J101M	100	30	1	8	3.00	5
CMI321611J121M	120	30	1	8	3.20	5

3225 TYPE

Part No.	Inductance (μ H)	Q (Min)	Test Fre. (MHz)	SRF (MHz)Min	DCR (Ω)Max	Ir (mA)Max
CMI322513U1R0K	1.0	40	10	70	0.20	600
CMI322513U1R2K	1.2	40	10	70	0.20	600
CMI322513U1R5K	1.5	40	10	70	0.30	500
CMI322513U1R8K	1.8	40	10	70	0.30	500
CMI322513U2R2K	2.2	40	10	50	0.30	500
CMI322513U2R7K	2.7	40	10	50	0.30	500
CMI322513U3R3K	3.3	40	10	50	0.40	500
CMI322513U3R9K	3.9	40	10	30	0.40	500
CMI322513U4R7K	4.7	40	10	30	0.50	500
CMI322513U5R6K	5.6	35	4	30	0.60	450
CMI322513X6R8K	6.8	35	4	20	0.60	450
CMI322513X8R2K	8.2	35	4	20	0.70	400
CMI322513X100K	10	35	2	20	0.70	400
CMI322513J120M	12	35	2	20	0.70	400
CMI322513J150M	15	35	1	20	0.70	300
CMI322513J180M	18	35	1	10	0.70	300
CMI322513J220M	22	35	1	10	0.75	250
CMI322513J270M	27	35	1	10	0.75	250
CMI322513J330M	33	35	1	10	0.80	250
CMI322513J390M	39	35	1	10	0.80	250
CMI322513J470M	47	35	1	10	1.00	200
CMI322513J560M	56	35	1	5	1.20	200
CMI322513J680M	68	35	1	5	1.30	150
CMI322513J820M	82	35	1	5	1.50	150
CMI322513J101M	100	35	1	5	1.50	150
CMI322513J121M	120	35	1	5	1.80	150
CMI322513J151M	150	35	1	5	1.80	100
CMI322513J181M	180	35	1	5	1.80	100
CMI322513J221M	220	35	1	5	2.00	50
CMI322513J271M	270	35	1	5	2.00	50

鐵氧體疊層片式電感
FERRITE CHIP INDUCTORS

4516 TYPE

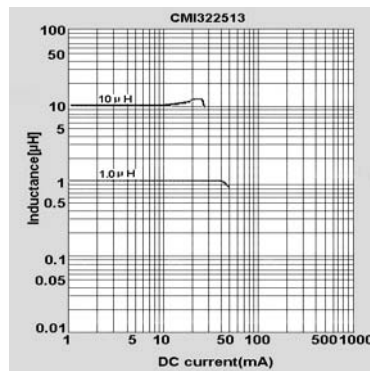
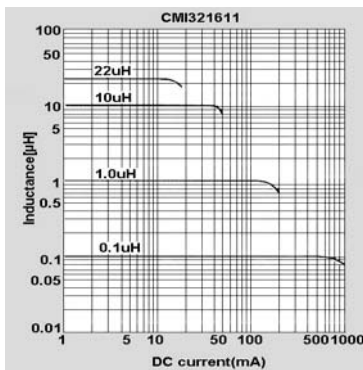
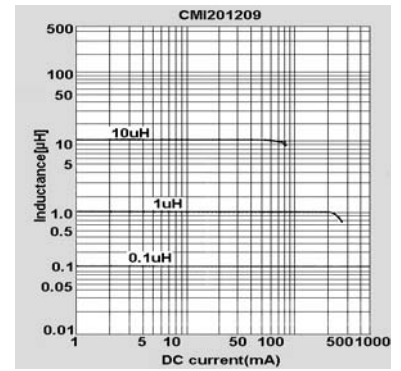
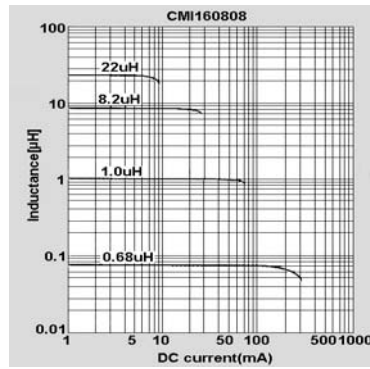
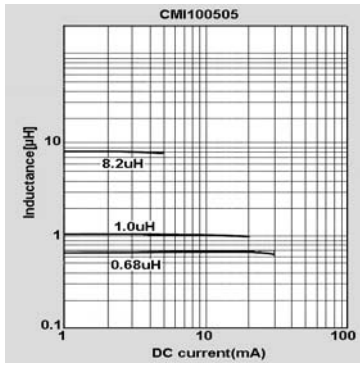
Part No.	Inductance (μ H)	Q (Min)	Test Fre. (MHz)	SRF (MHz)Min	DCR (Ω)Max	Ir (A)Max
CMI451616U1R0K	1.0	40	10	80	0.25	500
CMI451616U1R2K	1.2	40	10	75	0.30	500
CMI451616U1R5K	1.5	40	10	60	0.30	500
CMI451616U1R8K	1.8	40	10	55	0.35	450
CMI451616U2R2K	2.2	40	10	50	0.35	400
CMI451616U2R7K	2.7	40	10	45	0.40	400
CMI451616U3R3K	3.3	40	10	40	0.40	400
CMI451616U3R9K	3.9	40	10	35	0.45	400
CMI451616U4R7K	4.7	40	10	30	0.50	300
CMI451616U5R6K	5.6	40	4	20	0.50	300
CMI451616U6R8K	6.8	35	4	20	0.60	300
CMI451616X8R2K	8.2	35	4	15	0.70	250
CMI451616X100K	10	35	2	15	0.70	250

4532 TYPE

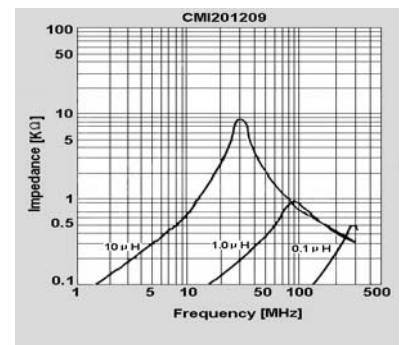
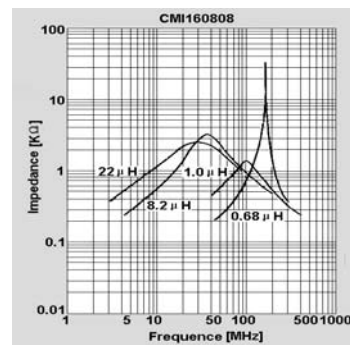
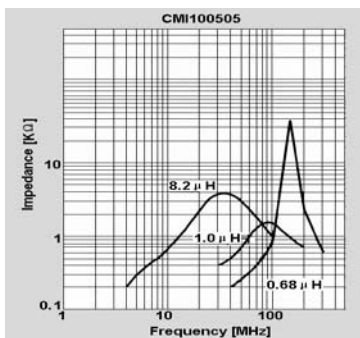
Part No.	Inductance (μ H)	Q (Min)	Test Fre. (MHz)	SRF (MHz)Min	DCR (Ω)Max	Ir (A)Max
CMI453215U1R0K	1.0	35	10	50	0.55	650
CMI453215U1R2K	1.2	35	10	50	0.55	650
CMI453215U1R5K	1.5	35	10	45	0.55	600
CMI453215U1R8K	1.8	35	10	45	0.65	600
CMI453215U2R2K	2.2	35	10	40	0.65	500
CMI453215U2R7K	2.7	35	10	40	0.70	500
CMI453215U3R3K	3.3	35	10	35	0.75	500
CMI453215U3R9K	3.9	35	10	35	0.80	500
CMI453215U4R7K	4.7	30	10	25	0.90	500
CMI453215U5R6K	5.6	30	4	20	0.90	500
CMI453215U 6R8K	6.8	30	4	18	1.00	500
CMI453215X8R2K	8.2	30	4	17	1.00	450
CMI453215X 100K	10	30	2	16	1.00	450
CMI453215X120K	12	35	2	15	1.00	450
CMI453215J150M	15	35	1	14	1.00	400
CMI453215J180M	18	35	1	13	1.00	400
CMI453215J220M	22	35	1	12	1.30	300
CMI453215J270M	27	35	1	10	1.30	300
CMI453215J330M	33	40	1	10	1.50	250
CMI453215J390M	39	40	1	10	1.50	250
CMI453215J470M	47	40	1	8	1.65	250
CMI453215J560M	56	40	1	8	1.80	250
CMI453215J680M	68	40	1	6	2.00	200
CMI453215J820M	82	40	1	6	2.30	200
CMI453215J101M	100	40	1	6	2.30	150
CMI453215J121M	120	40	1	6	2.50	150
CMI453215J151M	150	40	1	5	3.00	150
CMI453215J181M	180	40	1	5	3.00	150
CMI453215J221M	220	40	1	5	3.50	100
CMI453215J271M	270	40	1	5	4.00	50
CMI453215J331M	330	40	1	3	5.00	50

■ 鐵氧體疊層片式電感

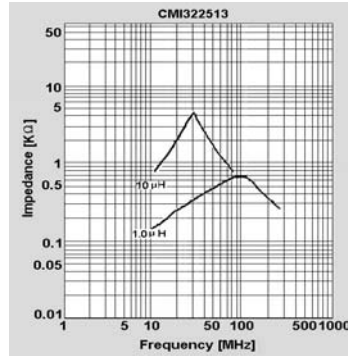
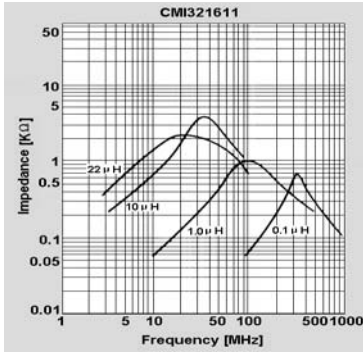
FERRITE CHIP INDUCTORS



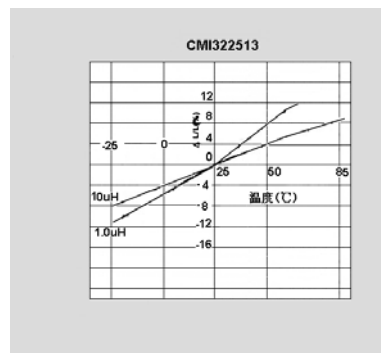
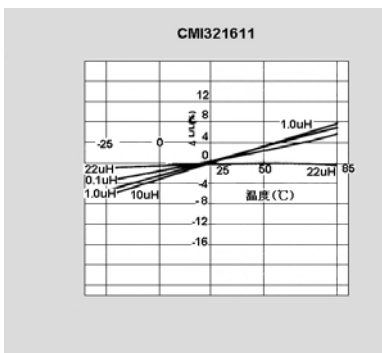
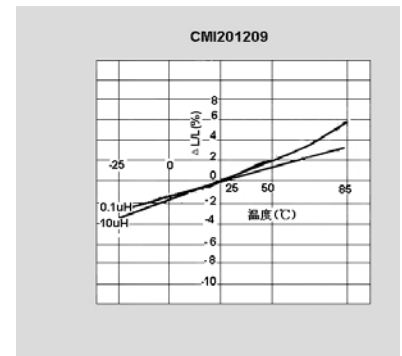
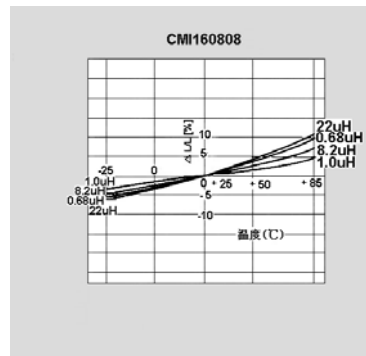
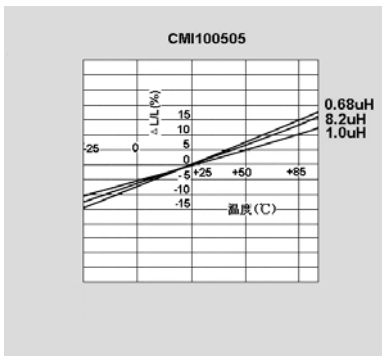
■ 阻抗－頻率特性 IMPEDANCE VS. FREQUENCY



鐵氧體疊層片式電感 FERRITE CHIP INDUCTORS

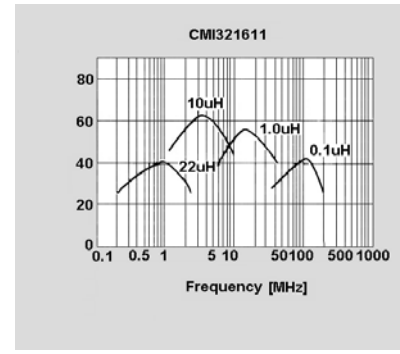
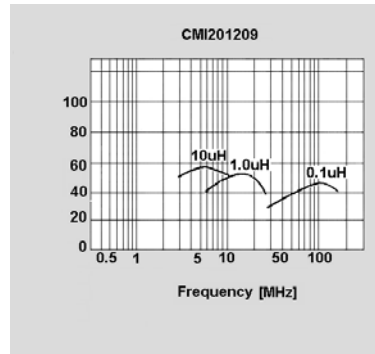
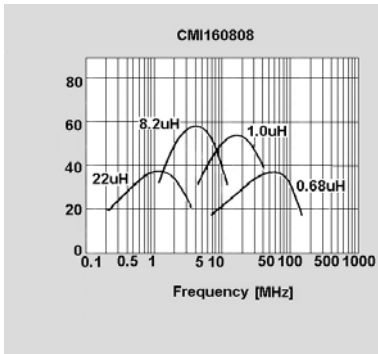


■ 特性曲綫 CHARACTERISTICS CURVES



■ 鐵氧體疊層片式電感

FERRITE CHIP INDUCTORS



■ 可靠性測試
RELIABILITY TESTING

Type	Item	Specified value	Test methods
1	Operating temperature range	-40 to +125°C	
2	Storage temperature range	-10 to +40°C	
3	Solderability	At least 90% of terminal electrode is covered by new solder	Solder temperature: 230±5°C Duration: 4±1S Preheating temperature: 120 to 150°C Preheating time: 60S immersion into the colophony flux for 3 to 5 sec. Flux: immersion into methanol solution with colophony for 3 to 5 sec. Immersion speed: 25mm/sec
4	Resistance to soldering	Appearance: No significant abnormality. At least 75% of terminal electrode is covered by new solder Impedance change: within ±20% Inductor change: within ±10%	Solder temperature: 260±5°C Duration: 10±0.5S Preheating temperature: 120 to 150°C Preheating time: 60S immersion into the colophony flux for 3 to 5 sec. Flux: immersion into methanol solution with colophony for 3 to 5 sec. Immersion speed: 25mm/sec
5	Thermal shock	Appearance: No significant abnormality. Impedance change: within ±30% Inductor change: within ±10% Q value change(ferrite):within ±30% Q value change(ceramic):within ±20%	Temperature: -40°C for 30±3min +85°C for 30±3min Transforming interval :max 20 sec Number of cycles: 32 
6	Loading at low temperature	Appearance: No significant abnormality. Impedance change: within ±20% Inductor change: within ±10%	Temperature: -55±2°C Duration: 500 ⁺²⁴ ₋₀ hrs
7	Loading at high temperature	Appearance: No significant abnormality. Impedance change: within ±30% Inductor change: within ±10% Q value change(ferrite):within ±30% Q value change(ceramic):within ±20%	Temperature: 85±2°C Duration: 1000 ⁺²⁴ ₋₀ hrs Applied current: Rated current
8	Loading under Damp Heat	Appearance: No significant abnormality. Impedance change: within ±30% Inductor change : within ±10% Q value change(ferrite):within ±30% Q value change(ceramic):within ±20%	Temperature: 55±2°C Duration: 500 ⁺²⁴ ₋₀ hrs Humidity: 90 to 95%RH Applied current: Rated current

Type	Item	Specified value	Test methods								
9	Vibration	Appearance: No significant abnormality. Impedance change: within $\pm 30\%$ Inductor change: within $\pm 10\%$ Q value change (ferrite): within $\pm 30\%$ Q value change (ceramic): within $\pm 20\%$	Amplitude: 1.5mm Directions: 2hrs each in X Y Z direction Frequency range: 10 to 55 to 10Hz (min) Applied force: 5N force for 1005 and 1608 series. 10N force for 2012, 3216, 3225, 4516, 4532 series. Keep time: 10 ± 1 S								
10	Adhesion of electrode	The termination and body should be no damage	Applied force: 5N force for 1005 and 1608 series. 10N force for 2012, 3216, 3225, 4516, 4532 series. Keep time: 10 ± 1 S 								
11	Resistance to pressure of substrate	The body shall not be damaged by forces applied on the right. <table border="1" data-bbox="454 1209 949 1288"> <tr> <td>d</td> <td>1.3</td> <td>1.3</td> <td>2.0</td> </tr> <tr> <td>w</td> <td>2.0</td> <td>3.0</td> <td>4.0</td> </tr> </table>	d	1.3	1.3	2.0	w	2.0	3.0	4.0	
d	1.3	1.3	2.0								
w	2.0	3.0	4.0								

Note: When there are questions concerning, measurement shall be made after 24 ± 2 hrs of recovery under the standard condition.

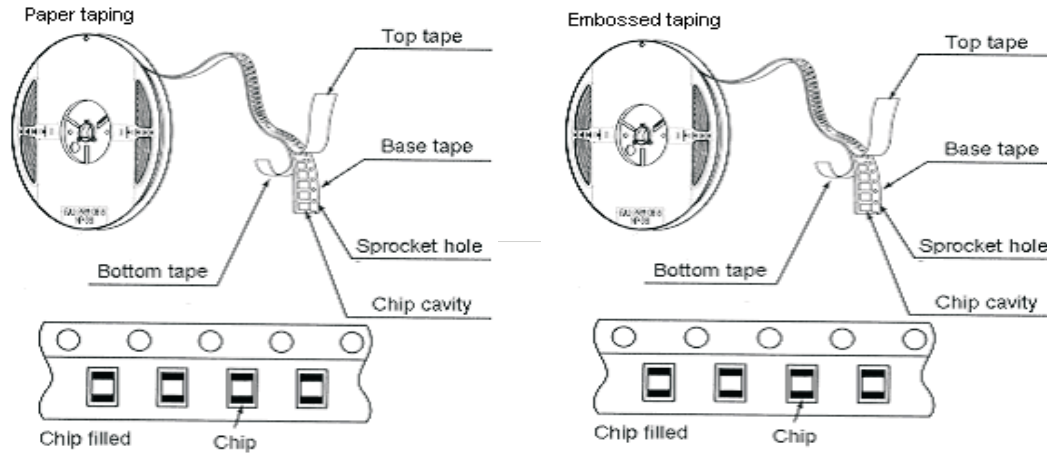
包裝PACKAGING

(VHF、CMI、CBG、CBW、CBH、CBY、CBA、CBM SERIES)

STANDAE QUANTITY

Type	1000505	160808	201209	321609	321611	322513	451616	453215	321609 (磁珠排)
Quantity(pcs)	10000	4000	4000	4000	3000	3000	5000	3000	3000

TAPING DRAWINGS



TAPING DIMENSIONS (UNIT: mm)

Paper tape



Part NO.	A	B	F	T
100505	0.65 ± 0.1	1.15 ± 0.1	2.0 ± 0.05	0.62max
160808	1.1 ± 0.1	1.9 ± 0.1	4.0 ± 0.05	1.1max
201209	1.5 ± 0.1	2.3 ± 0.1	4.0 ± 0.05	1.1max
321609	1.9 ± 0.1	3.5 ± 0.1	4.0 ± 0.05	0.97max

Embossed tape



	2012	3216	3225	4516	4532	3216(磁珠排)
W	8.1+/-0.2	8.1+/-0.2	8.1+/-0.2	12.0+/-0.2	12.0+/-0.2	8.1+/-0.2
P	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	8.0+/-0.10	4.0+/-0.10
E	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10
F	3.50+/-0.10	3.50+/-0.10	3.50+/-0.10	5.50+/-0.10	5.50+/-0.10	3.50+/-0.10
D	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05
D1	1.50 ^{+0.25} ₋₀	1.50 ^{+0.25} ₋₀	1.50 ^{+0.25} ₋₀	1.50 ^{+0.25} ₋₀	1.50 ^{+0.25} ₋₀	1.50 ^{+0.25} ₋₀
P ₀	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10
P ₀ 10	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20
P2	2.0+/-0.05	2.0+/-0.05	2.0+/-0.05	2.0+/-0.05	2.0+/-0.05	2.0+/-0.05
A ₀	1.52+/-0.10	1.90+/-0.10	2.80+/-0.10	1.93+/-0.10	3.66+/-0.10	1.90+/-0.10
B ₀	2.41+/-0.10	3.51+/-0.10	3.50+/-0.10	4.95+/-0.10	4.95+/-0.10	3.51+/-0.10
t	0.23+/-0.10	0.23+/-0.10	0.23+/-0.10	0.23+/-0.10	0.23+/-0.10	0.23+/-0.10
K ₀	1.35+/-0.10	1.27+/-0.10	1.55+/-0.10	1.85+/-0.10	1.74+/-0.10	1.10+/-0.10

• REEL DIMENSIONS(UNIT:mm)

	A	B	C	N	G
CF-8	178±2.0	22±2.0	12.5±1.5	57±2.0	8
CF-12	330±2.0	22±2.0	12.5±1.5	98±2.0	12



• LEADER AND BLANK PORTION



• PEELING OFF FORCE : 0.05 to 0.7N in the direction show below.

