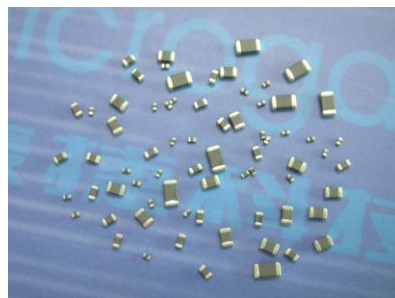


Multilayer Chip Ferrite Inductor

FEATURES

- Compact size and light weight
- Excellent solderability and heat resistance for either flow or reflow soldering
- No cross coupling between inductors due to magnetic shield



APPLICATIONS

- Resonance circuit, traps, filter circuits
- RF choke in telecommunications equipment, cordless phones, radio equipment

Product Identification

MGFI 2012 A 47N K I - LF
 ① ② ③ ④ ⑤ ⑥ ⑦

① Series name

② Dimension L×W: 【2012: 2.0mm×1.2mm】

③Material code

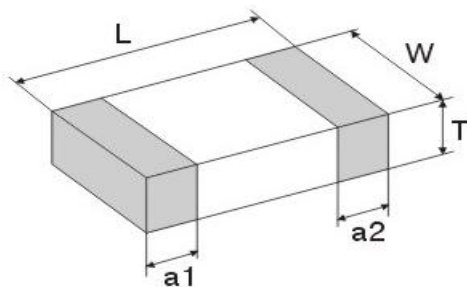
④Inductance: 【47N=0.047 uH R10=0.1 uH 2R7=2.7uH 150=15 uH】

⑤Tolerance of Inductance: 【 J: ±5% K: ±10% M: ±20%】

⑥Packing Style: 【 T: Taping B: Bulk】

⑦ Lead free products

Shapes And Dimensions



Type	Dimensions (mm) [inch]			
	L	W	T	a1, a2
1005 [0402]	1.00±0.15 [0.04±0.006]	0.50±0.15 [0.02±0.006]	0.50±0.15 [0.02±0.006]	0.25±0.10 [0.01±0.004]
1608 [0603]	1.60±0.15 [0.063±0.006]	0.80±0.15 [0.031±0.006]	0.80±0.15 [0.031±0.006]	0.30±0.20 [0.012±0.008]
2012 [0805]	2.00±0.20 [0.079±0.008]	1.25±0.20 [0.049±0.008]	0.85±0.20 [0.033±0.008] 1.25±0.20 [0.049±0.008]	0.50±0.30 [0.02±0.012]
3216 [1206]	3.20±0.20 [0.126±0.008]	1.60±0.20 [0.063±0.008]	1.10±0.30 [0.043±0.012]	0.50±0.30 [0.02±0.012]
3225 [1210]	3.20±0.20 [0.126±0.008]	2.50±0.20 [0.098±0.008]	1.25±0.20 [0.049±0.008]	0.70±0.30 [0.028±0.012]

Multilayer Chip Ferrite Inductor

Electrical Characteristics

MGFI 1005 (0402) Series

Part No.	L (uH)	Q /min	L,Q Test Freq. (MHz)	SRF(MHz) /min	RDC(Ω) /max	Ir(mA) /max
MGFI1005A47N□	0.047	10	50	220	0.45	25
MGFI1005A56N□	0.056	10	50	220	0.45	25
MGFI1005A68N□	0.068	10	50	210	0.45	25
MGFI1005A82N□	0.082	10	50	200	0.45	25
MGFI1005AR10□	0.10	15	25	200	0.70	25
MGFI1005AR12□	0.12	15	25	165	0.70	25
MGFI1005AR15□	0.15	15	25	140	0.90	25
MGFI1005AR18□	0.18	15	25	120	1.10	25
MGFI1005AR22□	0.22	15	25	110	1.20	25
MGFI1005AR27□	0.27	15	25	95	1.20	25
MGFI1005AR33□	0.33	15	25	85	1.25	18
MGFI1005AR39□	0.39	15	25	70	1.50	18
MGFI1005AR47□	0.47	20	25	68	2.00	18
MGFI1005AR56□	0.56	20	25	55	2.35	18
MGFI1005AR68□	0.68	20	25	50	2.55	18
MGFI1005AR82□	0.82	20	25	45	3.15	18
MGFI1005C1R0□	1.0	20	10	40	0.90	15
MGFI1005C1R2□	1.2	20	10	35	1.20	15
MGFI1005C1R5□	1.5	20	10	30	1.20	15
MGFI1005C1R8□	1.8	20	10	30	1.45	15
MGFI1005C2R2□	2.2	20	10	28	1.75	10
MGFI1005C2R7□	2.7	20	10	22	2.00	10
MGFI1005C3R3□	3.3	20	10	20	2.35	10
MGFI1005C3R9□	3.9	20	10	18	2.55	10
MGFI1005C4R7□	4.7	20	10	15	3.15	10
MGFI1005D5R6□	5.6	20	4	13	2.35	3
MGFI1005D6R8□	6.8	20	4	11	2.55	3
MGFI1005D8R2□	8.2	20	4	10	3.15	3
MGFI1005D100□	10.0	20	2	9	3.45	2

Multilayer Chip Ferrite Inductor

MGFI 1608 (0603) Series

Part No.	L (uH)	Q /min	L,Q Test Freq. (MHz)	SRF(MHz) /min	RDC(Ω) /max	Ir(mA) /max
MGFI1608A47N□	0.047	15	50	600	0.20	50
MGFI1608A56N□	0.056	15	50	550	0.30	50
MGFI1608A68N□	0.068	15	50	500	0.30	50
MGFI1608A82N□	0.082	15	50	450	0.30	50
MGFI1608AR10□	0.10	15	25	400	0.50	50
MGFI1608AR12□	0.12	15	25	350	0.50	50
MGFI1608AR15□	0.15	15	25	300	0.60	50
MGFI1608AR18□	0.18	15	25	280	0.60	50
MGFI1608AR22□	0.22	15	25	260	0.80	50
MGFI1608AR27□	0.27	15	25	255	0.80	50
MGFI1608AR33□	0.33	15	25	250	0.85	35
MGFI1608AR39□	0.39	15	25	245	1.00	35
MGFI1608AR47□	0.47	15	25	240	1.35	35
MGFI1608AR56□	0.56	15	25	205	1.55	35
MGFI1608AR68□	0.68	15	25	180	1.70	35
MGFI1608AR82□	0.82	15	25	165	2.10	35
MGFI1608C1R0□	1.0	35	10	125	0.60	25
MGFI1608C1R2□	1.2	35	10	110	0.80	25
MGFI1608C1R5□	1.5	35	10	105	0.80	25
MGFI1608C1R8□	1.8	35	10	95	0.95	25
MGFI1608C2R2□	2.2	35	10	90	1.15	15
MGFI1608C2R7□	2.7	35	10	80	1.35	15
MGFI1608C3R3□	3.3	35	10	70	1.55	15
MGFI1608C3R9□	3.9	35	10	60	1.70	15
MGFI1608C4R7□	4.7	35	10	50	2.10	15
MGFI1608D5R6□	5.6	35	4	45	1.55	5
MGFI1608D6R8□	6.8	35	4	40	1.70	5
MGFI1608D8R2□	8.2	35	4	35	2.10	4
MGFI1608D100□	10.0	35	2	33	2.55	3
MGFI1608D120□	12.0	35	2	22	2.75	3
MGFI1608E150□	15.0	20	1	20	1.70	1
MGFI1608E180□	18.0	20	1	18	1.85	1
MGFI1608E220□	22.0	20	1	15	2.10	1
MGFI1608E270□	27.0	20	1	12	2.75	1
MGFI1608E330□	33.0	20	1	10	2.95	1

Multilayer Chip Ferrite Inductor

MGFI 2012 (0805) Series

Part No.	L (uH)	Q /min	L,Q Test Freq. (MHz)	SRF(MHz) /min	RDC(Ω) /max	Ir(mA) /max
MGFI2012A47N□	0.047	15	50	350	0.20	300
MGFI2012A56N□	0.056	15	50	350	0.20	300
MGFI2012A68N□	0.068	15	50	280	0.20	300
MGFI2012A82N□	0.082	15	50	255	0.20	300
MGFI2012AR10□	0.10	20	25	235	0.30	250
MGFI2012AR12□	0.12	20	25	220	0.30	250
MGFI2012AR15□	0.15	20	25	200	0.40	250
MGFI2012AR18□	0.18	20	25	185	0.40	250
MGFI2012AR22□	0.22	20	25	170	0.50	250
MGFI2012AR27□	0.27	20	25	150	0.50	250
MGFI2012AR33□	0.33	20	25	145	0.55	250
MGFI2012AR39□	0.39	25	25	135	0.65	200
MGFI2012AR47□	0.47	25	25	125	0.65	200
MGFI2012AR56□	0.56	25	25	115	0.75	150
MGFI2012AR68□	0.68	25	25	105	0.80	150
MGFI2012AR82□	0.82	25	25	100	1.00	150
MGFI2012C1R0□	1.0	45	10	75	0.40	50
MGFI2012C1R2□	1.2	45	10	65	0.50	50
MGFI2012C1R5□	1.5	45	10	60	0.50	50
MGFI2012C1R8□	1.8	45	10	55	0.60	50
MGFI2012C2R2□	2.2	45	10	50	0.65	30
MGFI2012C2R7□	2.7	45	10	45	0.75	30
MGFI2012C3R3□	3.3	45	10	41	0.80	30
MGFI2012C3R9□	3.9	50	10	38	0.90	30
MGFI2012C4R7□	4.7	50	10	35	1.00	30
MGFI2012D5R6□	5.6	50	4	32	0.90	15
MGFI2012D6R8□	6.8	50	4	29	1.00	15
MGFI2012D8R2□	8.2	50	4	26	1.10	15
MGFI2012D100□	10.0	50	2	24	1.15	15
MGFI2012D120□	12.0	50	2	22	1.25	15
MGFI2012E150□	15.0	30	1	19	0.80	5
MGFI2012E180□	18.0	30	1	18	0.90	5
MGFI2012E220□	22.0	30	1	16	1.10	5
MGFI2012E270□	27.0	25	1	14	1.15	5
MGFI2012E330□	33.0	25	1	13	1.25	5
MGFI2012E390□	39.0	25	1	13	1.50	4
MGFI2012E470□	47.0	25	1	12	1.80	4
MGFI2012E560□	56.0	25	1	11	2.20	4
MGFI2012E680□	68.0	25	1	10	2.20	2
MGFI2012E820□	82.0	25	1	9	2.50	2
MGFI2012E101□	100	25	1	8	2.50	2

Multilayer Chip Ferrite Inductor

MGFI 3216 (1206) Series

Part No.	L (uH)	Q /min	L,Q Test Freq. (MHz)	SRF(MHz) /min	RDC(Ω) /max	Ir(mA) /max
MGFI3216A47N□	0.047	30	50	400	0.15	300
MGFI3216A56N□	0.056	30	50	380	0.15	300
MGFI3216A68N□	0.068	30	50	330	0.25	300
MGFI3216A82N□	0.082	30	50	310	0.25	300
MGFI3216AR10□	0.10	30	25	280	0.25	250
MGFI3216AR12□	0.12	30	25	260	0.25	250
MGFI3216AR15□	0.15	30	25	240	0.25	250
MGFI3216AR18□	0.18	30	25	220	0.30	250
MGFI3216AR22□	0.22	30	25	200	0.35	250
MGFI3216AR27□	0.27	30	25	180	0.40	250
MGFI3216AR33□	0.33	35	25	170	0.40	250
MGFI3216AR39□	0.39	35	25	160	0.45	200
MGFI3216AR47□	0.47	35	25	140	0.50	200
MGFI3216AR56□	0.56	35	25	130	0.55	150
MGFI3216AR68□	0.68	35	25	120	0.65	150
MGFI3216AR82□	0.82	35	25	110	0.75	150
MGFI3216C1R0□	1.0	50	10	90	0.40	100
MGFI3216C1R2□	1.2	50	10	80	0.40	100
MGFI3216C1R5□	1.5	50	10	70	0.45	50
MGFI3216C1R8□	1.8	50	10	66	0.50	50
MGFI3216C2R2□	2.2	50	10	58	0.55	50
MGFI3216C2R7□	2.7	50	10	53	0.55	50
MGFI3216C3R3□	3.3	50	10	49	0.60	50
MGFI3216C3R9□	3.9	50	10	48	0.70	50
MGFI3216C4R7□	4.7	50	10	41	0.70	50
MGFI3216D5R6□	5.6	55	4	38	0.75	25
MGFI3216D6R8□	6.8	55	4	34	0.75	25
MGFI3216D8R2□	8.2	55	4	31	0.80	25
MGFI3216D100□	10.0	55	2	28	0.80	25
MGFI3216D120□	12.0	55	2	26	0.90	15
MGFI3216E150□	15.0	40	1	23	0.80	5
MGFI3216E180□	18.0	40	1	21	0.80	5
MGFI3216E220□	22.0	40	1	19	0.90	5
MGFI3216E270□	27.0	40	1	17	0.90	5
MGFI3216E330□	33.0	40	1	16	1.05	5
MGFI3216E390□	39.0	40	1	12.5	2.00	5
MGFI3216E470□	47.0	40	1	11.5	2.00	5
MGFI3216E560□	56.0	40	1	10.5	2.50	4
MGFI3216E680□	68.0	40	1	10.5	2.50	4
MGFI3216E820□	82.0	40	1	10.0	3.00	4
MGFI3216E101□	100	30	1	9.0	3.00	4
MGFI3216E121□	120	30	1	7.0	3.50	2
MGFI3216E151□	150	30	1	6.5	3.80	2
MGFI3216E181□	180	30	1	6.0	4.00	2
MGFI3216E221□	220	30	1	5.5	4.00	2

Multilayer Chip Ferrite Inductor

MGFI 3225 (1210) Series

Part No.	L (uH)	Q /min	L,Q Test Freq. (MHz)	SRF(MHz) /min	RDC(Ω) /max	Ir(mA) /max
MGFI3225C1R0□	1.0	50	10	90	0.20	150
MGFI3225C1R2□	1.2	50	10	80	0.22	150
MGFI3225C1R5□	1.5	50	10	70	0.26	120
MGFI3225C1R8□	1.8	50	10	66	0.28	100
MGFI3225C2R2□	2.2	50	10	58	0.31	80
MGFI3225C2R7□	2.7	50	10	53	0.34	70
MGFI3225C3R3□	3.3	50	10	49	0.39	60
MGFI3225C3R9□	3.9	50	10	48	0.42	50
MGFI3225C4R7□	4.7	50	10	41	0.55	40
MGFI3225D5R6□	5.6	55	4	38	0.65	30
MGFI3225D6R8□	6.8	55	4	34	0.69	25
MGFI3225D8R2□	8.2	55	4	31	0.71	20
MGFI3225D100□	10.0	55	2	28	0.72	20
MGFI3225D120□	12.0	55	2	26	0.78	18
MGFI3225E150□	15.0	40	1	23	0.80	15
MGFI3225E180□	18.0	40	1	21	0.80	10
MGFI3225E220□	22.0	40	1	19	0.90	10
MGFI3225E270□	27.0	40	1	17	0.90	10

MGFI 1608 (0603)2012(0805) Q Series

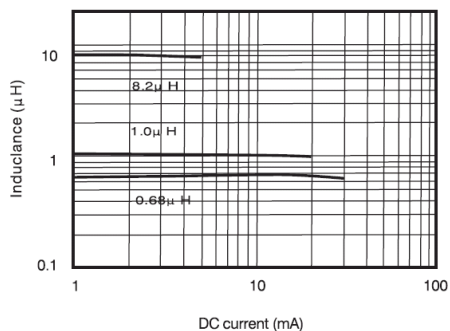
Part No.	L (uH) at 10MHz	Q /min at 10MHz	Q /min at 30MHz	SRF(MHz) /min	RDC(Ω) /max	Ir(mA) /max
MGFI1608Q1R0□	1.0	30	40	75	0.60	25
MGFI1608Q1R2□	1.2	30	40	65	0.65	25
MGFI1608Q1R5□	1.5	30	40	60	0.70	25
MGFI1608Q1R8□	1.8	30	40	55	0.80	25
MGFI1608Q2R2□	2.2	30	40	50	0.90	15
MGFI1608Q2R7□	2.7	30	40	45	1.00	15
MGFI1608Q3R3□	3.3	30	40	40	1.10	15
MGFI1608Q3R9□	3.9	30	40	35	1.15	15
MGFI2012Q1R0□	1.0	35	45	75	0.55	50
MGFI2012Q1R2□	1.2	35	45	65	0.60	50
MGFI2012Q1R5□	1.5	35	45	60	0.65	50
MGFI2012Q1R8□	1.8	35	45	55	0.75	50
MGFI2012Q2R2□	2.2	35	45	50	0.80	30
MGFI2012Q2R7□	2.7	35	45	45	0.90	30
MGFI2012Q3R3□	3.3	35	45	41	1.00	30
MGFI2012Q3R9□	3.9	35	45	38	1.10	30
MGFI2012Q4R7□	4.7	35	45	35	1.15	30

Multilayer Chip Ferrite Inductor

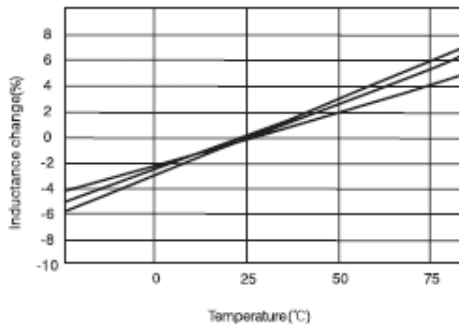
Characteristic curve

MGFI 1005 (0402) Series

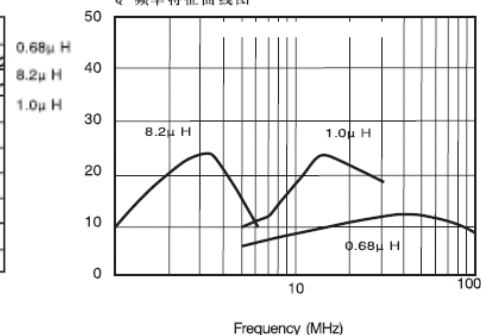
INDUCTANCE vs DC SUPERPOSITION
CHARACTERISTICS
电感·电流特征曲线图



INDUCTANCE vs TEMPERATURE
CHARACTERISTICS
电感·温度特征曲线图

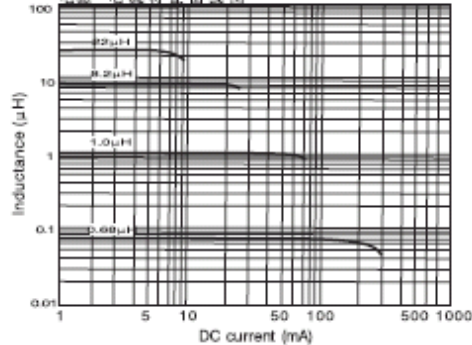


Q vs FREQUENCY
CHARACTERISTICS
Q·频率特征曲线图

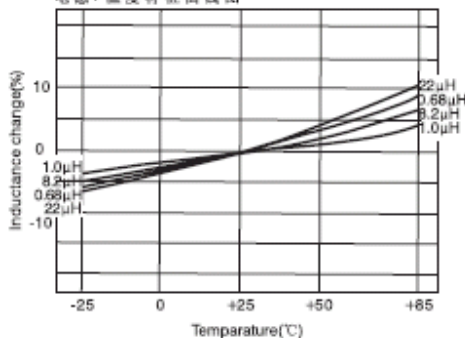


MGFI 1608 (0603) Series

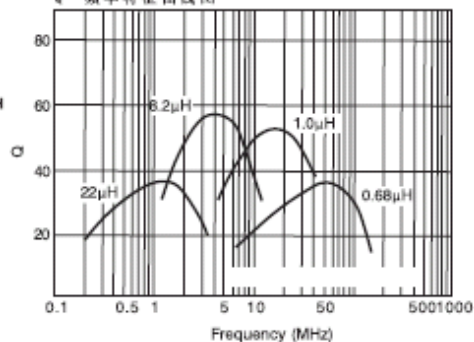
INDUCTANCE vs DC SUPERPOSITION
CHARACTERISTICS
电感·电流特征曲线图



INDUCTANCE vs TEMPERATURE
CHARACTERISTICS
电感·温度特征曲线图

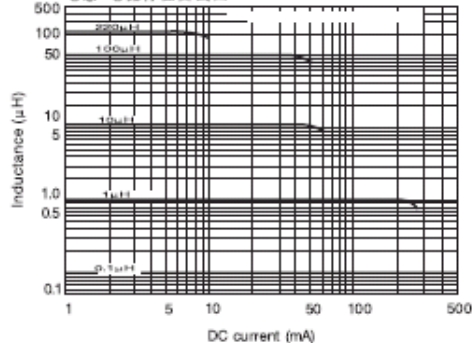


Q vs FREQUENCY
CHARACTERISTICS
Q·频率特征曲线图

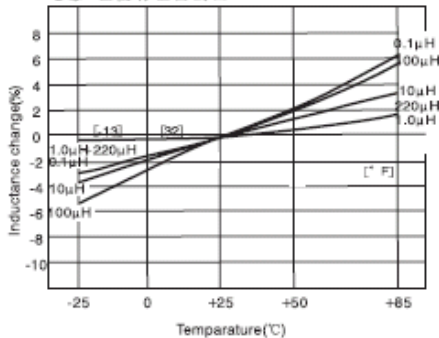


MGFI 2012 (0805) Series

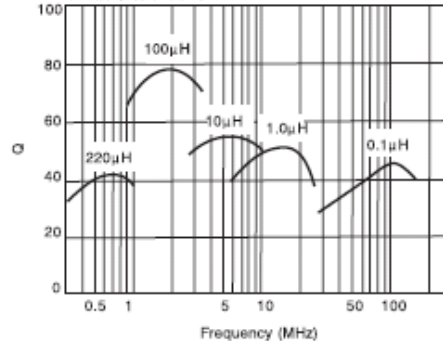
INDUCTANCE vs DC SUPERPOSITION
CHARACTERISTICS
电感·电流特征曲线图



INDUCTANCE vs TEMPERATURE
CHARACTERISTICS
电感·温度特征曲线图

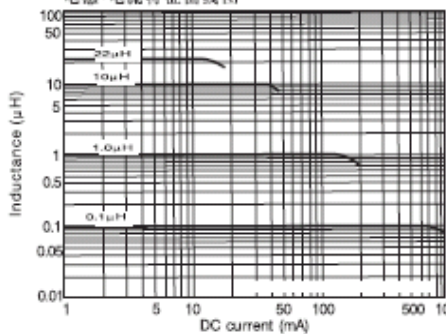


Q vs FREQUENCY
CHARACTERISTICS
Q·频率特征曲线图

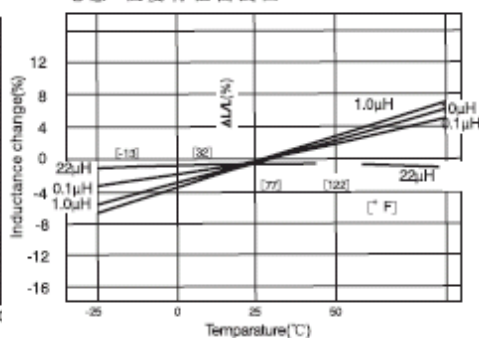


MGFI 3216 (1206) Series

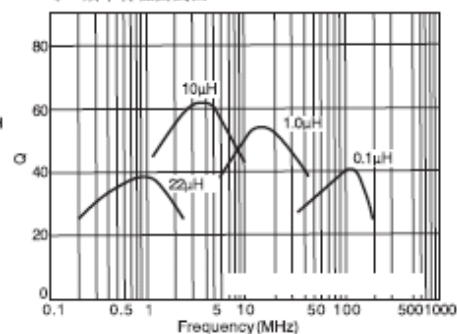
INDUCTANCE vs DC SUPERPOSITION
CHARACTERISTICS
电感·电流特征曲线图



INDUCTANCE vs TEMPERATURE
CHARACTERISTICS
电感·温度特征曲线图

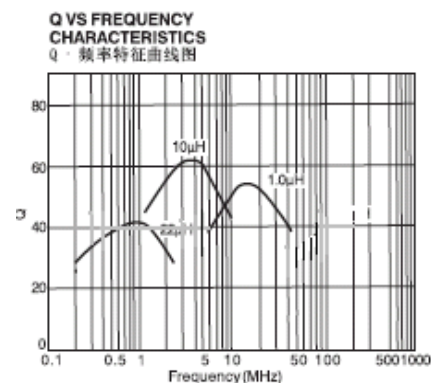
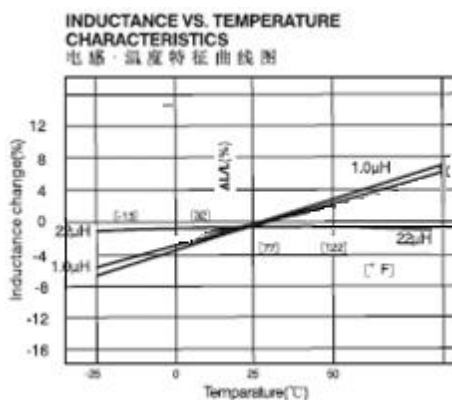
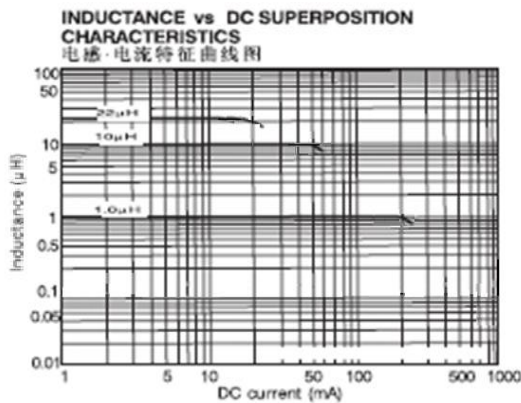


Q vs FREQUENCY
CHARACTERISTICS
Q·频率特征曲线图

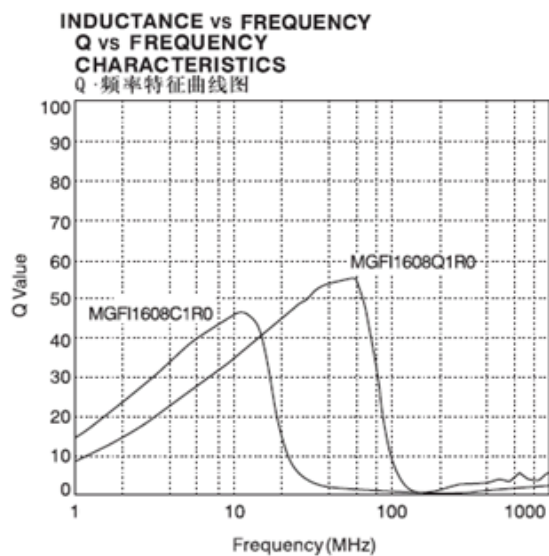
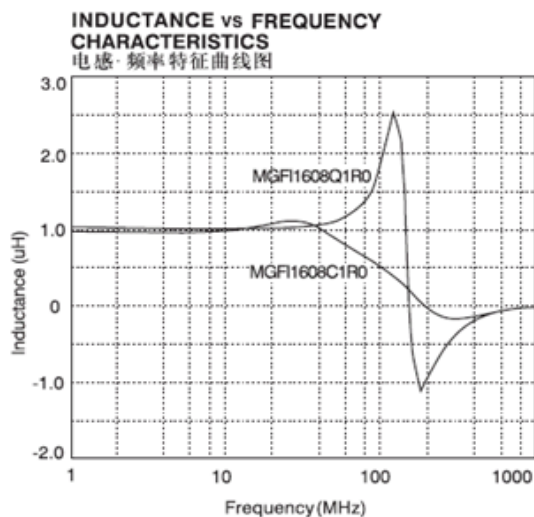


Multilayer Chip Ferrite Inductor

MGFI 3225 (1210) Series



MGFI 1608 (0603) Q Series



MGFI 1212 (0805) Q Series

