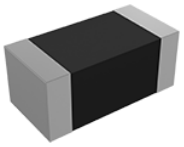
Multilayer Chip Ferrite Inductor – SDFL Series

Operating Temp. : -40℃~+85℃



FEATURES

- Monolithic structure for high reliability
- Compact size inductor possible
- No cross coupling due to magnetic shield
- Perfect shape for mounting with no directionality
- Excellent solderability and high heat resistance for reflow soldering or wave soldering

APPLICATIONS

- Widely use in Communications, Video and audio equipment, Computer, Remote control, etc.

PRODUCT IDENTIFICATION

SDFL	1608	Q	1R0	K	T	F
①	②	③	④	⑤	⑥	⑦

①

Type	
SDFL	Chip Ferrite Inductor

②

External Dimensions (L×W) (mm)	
1005 [0402]	1.0×0.5
1608 [0603]	1.6×0.8
2012 [0805]	2.0×1.25
3216 [1206]	3.2×1.6

③

Material Code
L, P, Q, S, T

④

Nominal Inductance	
Example	Nominal Value
47N	0.047μH
R10	0.1μH
1R0	1.0μH
※R= decimal point，N=nH	

⑤

Inductance Tolerance	
I	±7%
K	±10%
L	±15%
M	±20%

⑥

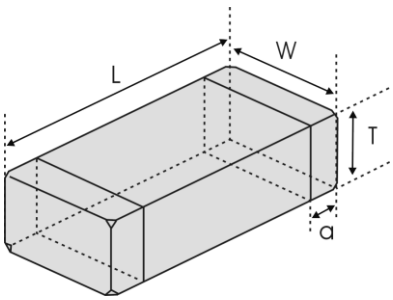
Packing	
T	Tape & Reel

⑦

Hazardous Substance Free Products
F

SHAPE AND DIMENSIONS

Unit: mm [inch]



Type	L	W	T	a
SDFL1005 [0402]	1.0±0.15 [.039±.006]	0.5±0.15 [.020±.006]	0.5±0.15 [.020±.006]	0.25±0.1 [.010±.004]
SDFL1608 [0603]	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]
SDFL2012 [0805]	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.25±0.2 [.049±.008]	0.85±0.2 [.033±.008]	0.5±0.3 [.020±.012]
			1.25±0.2 [.049±.008]	
SDFL3216 [1206]	3.2±0.2 [.126±.008]	1.6±0.2 [.063±.008]	0.85±0.2 [.033±.008]	0.5±0.3 [.020±.012]
			1.1±0.2 [.043±.008]	

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SPECIFICATIONS

SDFL1005 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.L/Q	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
Units	μH	-	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	S.R.F	DCR	Ir	T
SDFL1005L47N□TF	0.047	10	50	220	0.45	25	0.5±0.15 [.020±.006]
SDFL1005L68N□TF	0.068	10	50	210	0.45	25	
SDFL1005L82N□TF	0.082	10	50	200	0.45	25	
SDFL1005LR10□TF	0.1	10	25	200	0.8	25	
SDFL1005LR12□TF	0.12	10	25	165	0.8	25	
SDFL1005LR15□TF	0.15	10	25	140	0.9	25	
SDFL1005LR18□TF	0.18	10	25	120	0.9	25	
SDFL1005LR22□TF	0.22	10	25	110	1.2	25	
SDFL1005LR27□TF	0.27	15	25	95	1.2	25	
SDFL1005LR33□TF	0.33	15	25	85	1.25	18	
SDFL1005QR39□TF	0.39	20	10	85	0.6	15	
SDFL1005QR47□TF	0.47	20	10	80	0.7	15	
SDFL1005QR56□TF	0.56	20	10	75	0.8	15	
SDFL1005QR68□TF	0.68	20	10	70	0.9	15	
SDFL1005QR82□TF	0.82	20	10	65	0.9	15	
SDFL1005P1R0□TF	1.0	20	10	60	1.0	15	
SDFL1005P1R2□TF	1.2	20	10	55	1.25	15	
SDFL1005P1R5□TF	1.5	20	10	50	1.4	15	
SDFL1005P1R8□TF	1.8	20	10	45	1.55	15	
SDFL1005P2R2□TF	2.2	20	10	40	1.7	10	
SDFL1005Q1R0□TF	1.0	20	10	40	0.9	15	
SDFL1005Q1R2□TF	1.2	20	10	35	1.2	15	
SDFL1005Q1R5□TF	1.5	20	10	30	1.2	15	
SDFL1005Q1R8□TF	1.8	20	10	30	1.45	15	
SDFL1005Q2R2□TF	2.2	20	10	28	1.7	10	
SDFL1005Q2R7□TF	2.7	20	10	28	2.4	10	
SDFL1005Q3R3□TF	3.3	20	10	28	2.7	10	

SDFL1608 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.L/Q	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
Units	μH	-	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	S.R.F	DCR	Ir	T
SDFL1608L47N□TF	0.047	10	50	260	0.3	50	0.8±0.15 [.031±.006]
SDFL1608L68N□TF	0.068	10	50	250	0.3	50	
SDFL1608L82N□TF	0.082	10	50	245	0.3	50	
SDFL1608LR10□TF	0.1	15	25	240	0.5	50	
SDFL1608LR12□TF	0.12	15	25	205	0.5	50	
SDFL1608LR15□TF	0.15	15	25	180	0.6	50	
SDFL1608LR18□TF	0.18	15	25	165	0.6	50	
SDFL1608LR22□TF	0.22	15	25	150	0.8	50	
SDFL1608LR27□TF	0.27	15	25	136	0.8	50	
SDFL1608LR33□TF	0.33	15	25	125	0.85	35	
SDFL1608LR39□TF	0.39	15	25	110	1.0	35	
SDFL1608LR47□TF	0.47	15	25	105	1.35	35	
SDFL1608LR56□TF	0.56	15	25	95	1.55	35	

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SPECIFICATIONS

SDFL1608 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.L/Q	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
Units	μH	-	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	S.R.F	DCR	Ir	T
SDFL1608LR68□TF	0.68	15	25	90	1.7	35	0.8±0.15 [.031±.006]
SDFL1608LR82□TF	0.82	15	25	85	2.1	35	
SDFL1608P1R0□TF	1.0	35	10	90	0.6	25	
SDFL1608P1R1□TF	1.1	35	10	90	0.6	25	
SDFL1608P1R2□TF	1.2	35	10	85	0.8	25	
SDFL1608P1R5□TF	1.5	35	10	80	0.8	25	
SDFL1608P1R8□TF	1.8	35	10	75	0.95	25	
SDFL1608P2R2□TF	2.2	35	10	70	1.15	15	
SDFL1608Q1R0□TF	1.0	35	10	75	0.6	25	
SDFL1608Q1R1□TF	1.1	35	10	75	0.6	25	
SDFL1608Q1R2□TF	1.2	35	10	65	0.8	25	
SDFL1608Q1R5□TF	1.5	35	10	60	0.8	25	
SDFL1608Q1R8□TF	1.8	35	10	55	0.95	25	
SDFL1608Q2R2□TF	2.2	35	10	50	1.15	15	
SDFL1608Q2R7□TF	2.7	35	10	45	1.35	15	
SDFL1608Q3R3□TF	3.3	35	10	40	1.55	15	
SDFL1608Q3R9□TF	3.9	35	10	35	1.7	15	
SDFL1608Q4R7□TF	4.7	35	10	33	2.1	15	
SDFL1608S5R6□TF	5.6	35	4	22	1.55	5	
SDFL1608S6R8□TF	6.8	35	4	20	1.7	5	
SDFL1608S8R2□TF	8.2	35	4	18	2.1	5	
SDFL1608S100□TF	10	30	2	17	1.85	3	
SDFL1608S120□TF	12	30	2	15	2.1	3	
SDFL1608T150□TF	15	20	1	14	1.7	1	
SDFL1608T180□TF	18	20	1	13	1.85	1	
SDFL1608T220□TF	22	20	1	11	2.1	1	
SDFL1608T270□TF	27	20	1	10	2.75	1	
SDFL1608T330□TF	33	20	1	9	2.95	1	

SDFL2012 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.L/Q	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
Units	μH	-	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	S.R.F	DCR	Ir	T
SDFL2012L47N□TF	0.047	15	50	320	0.2	300	0.85±0.2 [.033±.008]
SDFL2012L68N□TF	0.068	15	50	280	0.2	300	
SDFL2012L82N□TF	0.082	15	50	255	0.2	300	
SDFL2012LR10□TF	0.1	20	25	235	0.3	250	
SDFL2012LR12□TF	0.12	20	25	220	0.3	250	
SDFL2012LR15□TF	0.15	20	25	200	0.4	250	
SDFL2012LR18□TF	0.18	20	25	185	0.4	250	
SDFL2012LR22□TF	0.22	20	25	170	0.5	250	
SDFL2012LR27□TF	0.27	20	25	150	0.5	250	
SDFL2012LR33□TF	0.33	20	25	145	0.55	250	
SDFL2012LR39□TF	0.39	25	25	135	0.65	200	
SDFL2012LR47□TF	0.47	25	25	125	0.65	200	

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SPECIFICATIONS

SDFL2012 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.L/Q	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
Units	μH	-	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	S.R.F	DCR	Ir	T
SDFL2012LR56□TF	0.56	25	25	115	0.75	150	0.85±0.2 [.033±.008]
SDFL2012LR68□TF	0.68	25	25	105	0.8	150	
SDFL2012LR82□TF	0.82	25	25	100	1	150	
SDFL2012P1R0□TF	1.0	45	10	95	0.4	50	
SDFL2012P1R2□TF	1.2	45	10	85	0.5	50	
SDFL2012P1R5□TF	1.5	45	10	80	0.5	50	
SDFL2012P1R8□TF	1.8	45	10	75	0.6	50	
SDFL2012P2R2□TF	2.2	45	10	70	0.65	30	
SDFL2012Q1R0□TF	1.0	45	10	75	0.4	50	
SDFL2012Q1R1□TF	1.1	45	10	65	0.5	50	
SDFL2012Q1R2□TF	1.2	45	10	65	0.5	50	
SDFL2012Q1R5□TF	1.5	45	10	60	0.5	50	
SDFL2012Q1R8□TF	1.8	45	10	55	0.6	50	
SDFL2012Q2R2□TF	2.2	45	10	50	0.65	30	
SDFL2012Q2R4□TF	2.4	45	10	47	0.70	30	
SDFL2012Q2R7□TF	2.7	45	10	45	0.75	30	
SDFL2012Q3R3□TF	3.3	45	10	41	0.8	30	
SDFL2012Q3R9□TF	3.9	45	10	38	0.9	30	
SDFL2012Q4R7□TF	4.7	45	10	35	1	30	
SDFL2012S5R6□TF	5.6	50	4	32	0.9	15	
SDFL2012S6R8□TF	6.8	50	4	29	1	15	
SDFL2012S8R2□TF	8.2	50	4	26	1.1	15	
SDFL2012S100□TF	10	50	2	24	1.15	15	
SDFL2012S120□TF	12	50	2	22	1.25	15	
SDFL2012T150□TF	15	30	1	19	0.8	5	
SDFL2012T180□TF	18	30	1	18	0.9	5	
SDFL2012T220□TF	22	30	1	16	1.1	5	
SDFL2012T270□TF	27	30	1	14	1.15	5	1.25±0.2 [.049±.008]
SDFL2012T330□TF	33	30	0.4	13	1.25	5	
SDFL2012T390□TF	39	35	2	8	2.9	4	
SDFL2012T470□TF	47	35	2	7.5	3	4	

SDFL3216 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.L/Q	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
Units	μH	-	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	S.R.F	DCR	Ir	T
SDFL3216L47N□TF	0.047	20	50	320	0.15	300	0.85±0.2 [.033±.008]
SDFL3216L68N□TF	0.068	20	50	280	0.25	300	
SDFL3216LR10□TF	0.1	20	25	235	0.25	250	
SDFL3216LR12□TF	0.12	20	25	220	0.3	250	
SDFL3216LR15□TF	0.15	20	25	200	0.3	250	
SDFL3216LR18□TF	0.18	20	25	185	0.4	250	
SDFL3216LR22□TF	0.22	20	25	170	0.4	250	
SDFL3216LR27□TF	0.27	20	25	150	0.5	250	
SDFL3216LR33□TF	0.33	20	25	145	0.6	250	
SDFL3216LR39□TF	0.39	25	25	135	0.5	200	

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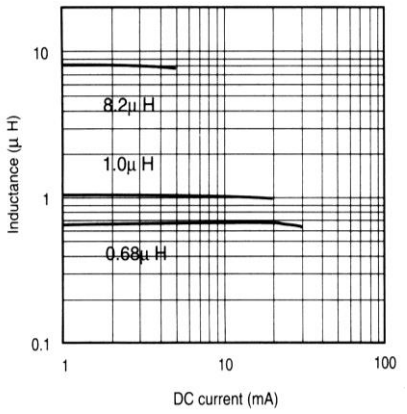
SDFL3216 Series

Part Number	Inductance	Min. Quality Factor	L, Q Test Freq.L/Q	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current	Thickness
Units	μH	-	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Q	Freq.	S.R.F	DCR	Ir	T
SDFL3216LR47□TF	0.47	25	25	125	0.6	200	0.85±0.2 [.033±.008]
SDFL3216LR56□TF	0.56	25	25	115	0.7	150	
SDFL3216LR68□TF	0.68	25	25	105	0.8	150	
SDFL3216LR82□TF	0.82	25	25	100	0.9	150	
SDFL3216Q1R0□TF	1.0	45	10	75	0.4	100	
SDFL3216Q1R2□TF	1.2	45	10	65	0.5	100	
SDFL3216Q1R5□TF	1.5	45	10	60	0.5	50	
SDFL3216Q1R8□TF	1.8	45	10	55	0.5	50	
SDFL3216Q2R2□TF	2.2	45	10	50	0.6	50	
SDFL3216Q2R7□TF	2.7	45	10	45	0.6	50	
SDFL3216Q3R3□TF	3.3	45	10	41	0.7	50	
SDFL3216Q3R9□TF	3.9	45	10	38	0.8	50	
SDFL3216Q4R7□TF	4.7	45	10	35	0.9	50	
SDFL3216S5R6□TF	5.6	50	4	32	0.7	25	
SDFL3216S6R8□TF	6.8	50	4	29	0.8	25	
SDFL3216S8R2□TF	8.2	50	4	26	0.9	25	
SDFL3216S100□TF	10	50	2	24	1	25	
SDFL3216S120□TF	12	50	2	22	1.05	15	
SDFL3216T150□TF	15	35	1	19	0.7	5	
SDFL3216T180□TF	18	35	1	18	0.7	5	
SDFL3216T220□TF	22	35	1	16	0.9	5	
SDFL3216T270□TF	27	35	1	14	0.9	5	
SDFL3216T330□TF	33	35	0.4	13	1.05	5	1.10±0.2 [.043±.008]
SDFL3216T390□TF	39	40	2	11	3	5	
SDFL3216T470□TF	47	40	2	10	3.4	5	

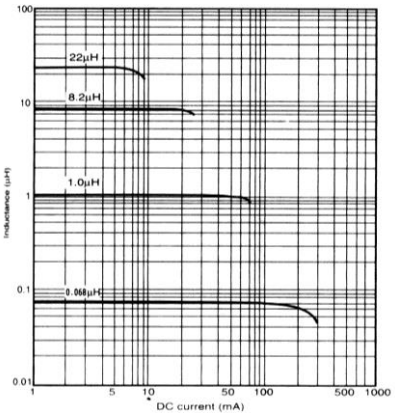
※□: Please specify the inductance tolerance code (I=±7%,K=±10%,L=±15%, M=±20%). The product with tolerance less than ±7% is also available. Please contact your local sales.

TYPICAL ELECTRICAL CHARACTERISTICS

SDFL1005 Series
Inductance vs. DC Current Characteristics



SDFL1608 Series
Inductance vs. DC Current Characteristics



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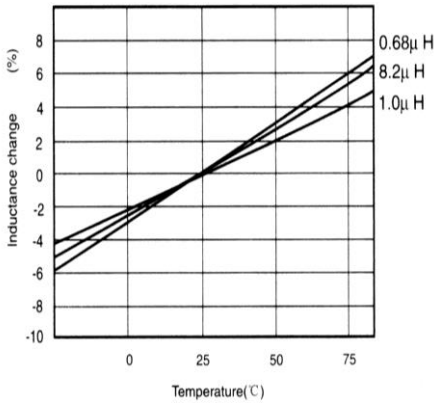
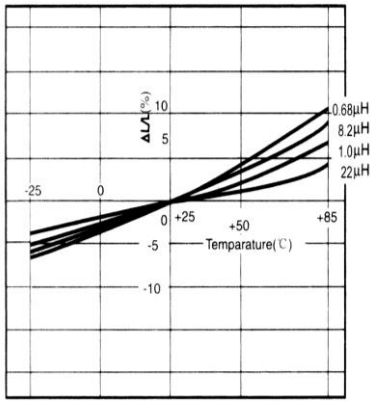
TYPICAL ELECTRICAL CHARACTERISTICS

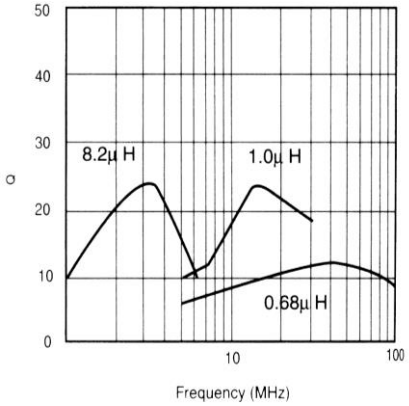
SDFL1005 Series
Inductance vs. Temperature Characteristics



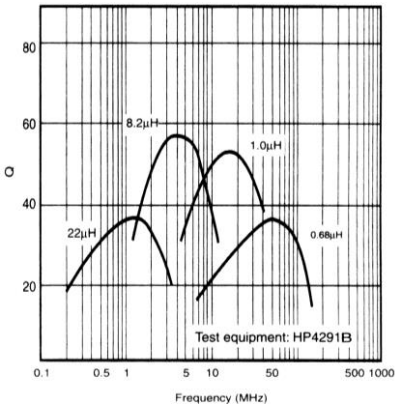
SDFL1608 Series
Inductance vs. Temperature Characteristics



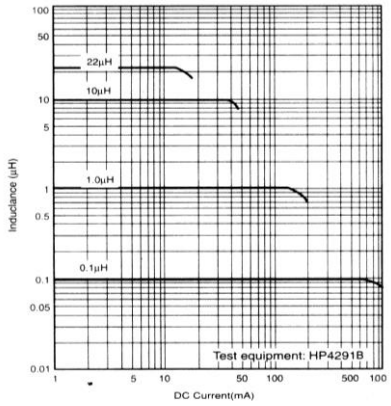
Q vs. Frequency Characteristics



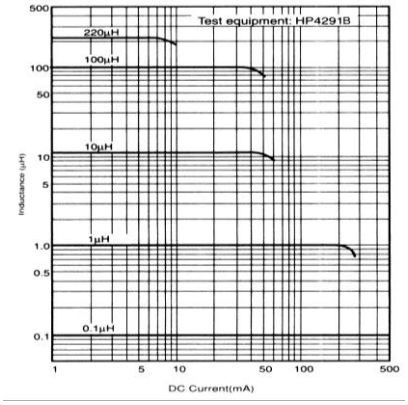
Q vs. Frequency Characteristics



SDFL2012 Series
Inductance vs. DC Current Characteristics



SDFL3216 Series
Inductance vs. DC Current Characteristics



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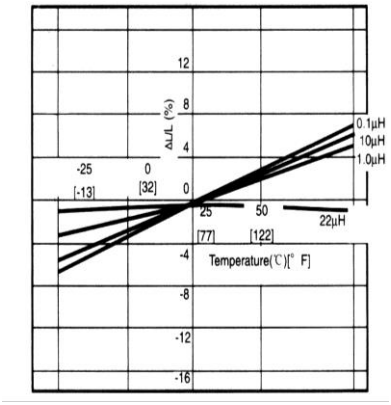
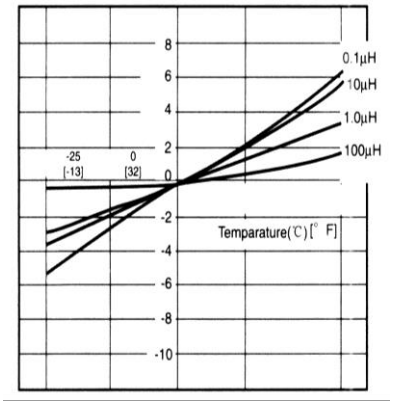
TYPICAL ELECTRICAL CHARACTERISTICS

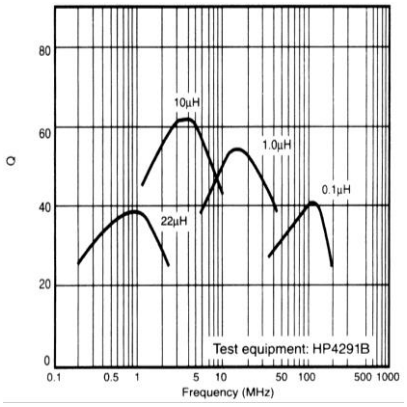
SDFL2012 Series
Inductance vs. Temperature Characteristics



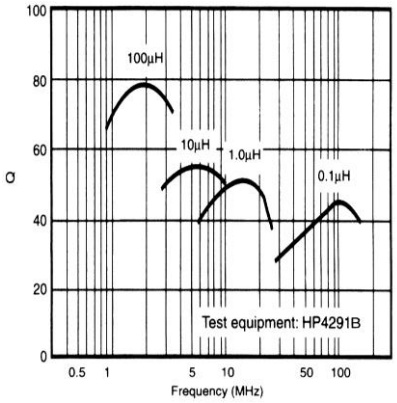
SDFL3216 Series
Inductance vs. Temperature Characteristics



Q vs. Frequency Characteristics



Q vs. Frequency Characteristics



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