Inductor

Multilayer Ferrite Chip Inductor FCI Series
SMD Type

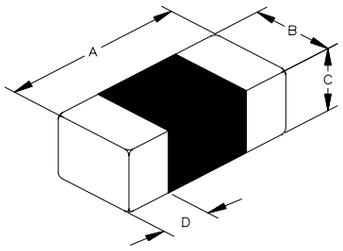
FEATURES

- Monolithic inorganic material construction
- Closed magnetic circuit avoids crosstalk
- Excellent solderability and heat resistance
- High reliability

APPLICATIONS

Noise elimination for I/O lines of notebook PCs, digital TVs and VTRs, Printers, hard disk drives, personal computers and other general consumer and computers products.

SHAPES AND DIMENSIONS



Shape	EIA Std	A	B	C	D
453215	1812	4.50 ± 0.20	3.20 ± 0.20	1.50 ± 0.20	0.50 ± 0.30
322513	1210	3.20 ± 0.20	2.50 ± 0.20	1.30 ± 0.20	0.50 ± 0.30
321611	1206	3.20 ± 0.20	1.60 ± 0.20	1.10 ± 0.20	0.50 ± 0.30
252016	1008	2.50 ± 0.20	2.00 ± 0.20	1.60 ± 0.30	0.50 ± 0.30
201209	0805	2.00 ± 0.20	1.25 ± 0.20	0.85 ± 0.20	0.50 ± 0.30
201212	0805	2.00 ± 0.20	1.25 ± 0.20	1.25 ± 0.20	0.50 ± 0.30
160808	0603	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.20

Dimension in mm

PART NUMBER IDENTIFICATION

FCI 4532 - 1R0 K

(1) (2) (3) (4)

(1) Series name
(2) Dimensions L x W
(3) Inductance Code
(4) Tolerance Code
K = ± 10%
M = ± 20%

SPECIFICATIONS

- Operating temperature range -25°C ~ +125°C
- Storage temperature range -40°C max, 70%RH

Precautions

- After mounting components onto printed circuit board, do not apply stress through board bending or mishandling
- When hand soldering, apply solder iron to the printed circuit board only. Temperature of the iron tip should not exceed 260°C with soldering time < 3 second
- Reflow soldering condition:
  - 230 °C+/- 5°C (260 °C+/- 5°C for Pb free)

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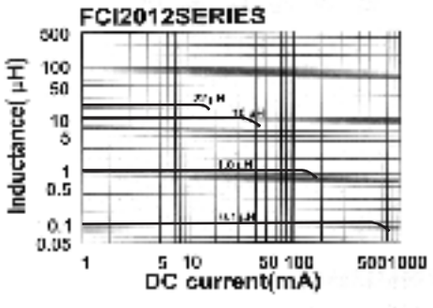
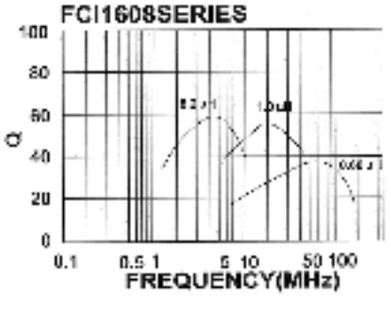
ELECTRICAL CHARACTERISTICS

Part Number	EIA Size	Inductance L (µH)	Test Freq. (MHz)	Q (Min)	Rated Current (mA) Max	DCR (Ω) Max	SRF (MHz)Min
FCI1608-47NX	0603	0.047	50	10	50	0.30	260
FCI1608-68NX	0603	0.068	50	10	50	0.30	250
FCI1608-82NX	0603	0.082	50	10	50	0.30	245
FCI1608-R10X	0603	0.100	25	15	50	0.50	240
FCI1608-R12X	0603	0.120	25	15	50	0.50	205
FCI1608-R15X	0603	0.150	25	15	50	0.60	180
FCI1608-R18X	0603	0.180	25	15	50	0.60	165
FCI1608-R22X	0603	0.220	25	15	50	0.80	150
FCI1608-R27X	0603	0.270	25	15	50	0.80	136
FCI1608-R33X	0603	0.330	25	15	35	0.85	125
FCI1608-R39X	0603	0.390	25	15	35	1.00	110
FCI1608-R47X	0603	0.470	25	15	35	1.35	105
FCI1608-R56X	0603	0.560	25	15	35	1.55	95
FCI1608-R68X	0603	0.680	25	15	35	1.70	80
FCI1608-R82X	0603	0.820	25	15	35	2.10	75
FCI1608-1R0X	0603	1.000	10	30	25	0.60	70
FCI1608-1R2X	0603	1.200	10	30	25	0.80	60
FCI1608-1R5X	0603	1.500	10	30	25	0.80	55
FCI1608-1R8X	0603	1.800	10	30	25	0.95	50
FCI1608-2R2X	0603	2.200	10	30	15	1.15	45
FCI1608-2R7X	0603	2.700	10	30	15	1.35	40
FCI1608-3R3X	0603	3.300	10	30	15	1.55	38
FCI1608-3R9X	0603	3.900	10	30	15	1.70	36
FCI1608-4R7X	0603	4.700	10	30	15	2.10	33
FCI1608-5R6X	0603	5.600	4.0	30	15	1.55	22
FCI1608-6R8X	0603	6.800	4.0	30	15	1.70	20
FCI1608-8R2X	0603	8.200	4.0	30	15	2.10	18
FCI1608-100X	0603	10.00	2.0	30	15	2.55	17
FCI1608-120X	0603	12.00	1.0	30	15	2.75	15
FCI1608-150X	0603	15.00	1.0	20	15	1.70	14
FCI1608-180X	0603	18.00	1.0	20	15	1.85	13
FCI1608-220X	0603	22.00	1.0	20	15	2.15	11
FCI1608-270X	0603	27.00	1.0	20	15	2.75	10
FCI1608-330X	0603	33.00	1.0	20	15	2.95	9

Test Equipment: RF Impedance Analyzer HP-4291A + HP4195A

DC BIAS & Q CHARACTERISTICS





Inductor

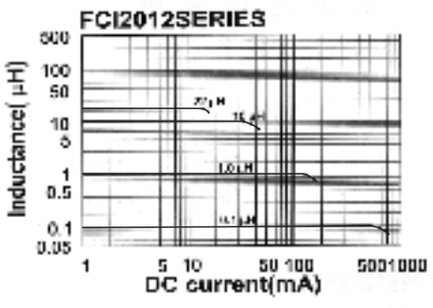
Multilayer Ferrite Chip Inductor FCI Series
SMD Type

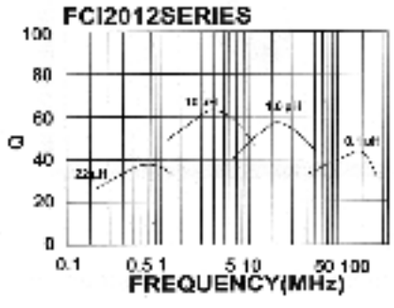
ELECTRICAL CHARACTERISTICS

Part Number	EIA Size	Inductance L (µH)	Test Freq. (MHz)	Q (Min)	Rated Current (mA) Max	DCR (Ω) Max	SRF (MHz)Min
FCI2012-47NX	0805	0.047	50	15	300	0.20	320
FCI2012-68NX	0805	0.068	50	15	300	0.20	280
FCI2012-82NX	0805	0.082	50	15	300	0.20	255
FCI2012-R10X	0805	0.10	25	20	250	0.30	235
FCI2012-R12X	0805	0.12	25	20	250	0.30	220
FCI2012-R15X	0805	0.15	25	20	250	0.40	200
FCI2012-R18X	0805	0.18	25	20	250	0.40	185
FCI2012-R22X	0805	0.22	25	20	250	0.50	170
FCI2012-R27X	0805	0.27	25	20	250	0.50	150
FCI2012-R33X	0805	0.33	25	20	250	0.55	145
FCI2012-R39X	0805	0.39	25	25	200	0.65	135
FCI2012-R47X	0805	0.47	25	25	200	0.65	125
FCI2012-R56X	0805	0.56	25	25	150	0.75	115
FCI2012-R68X	0805	0.68	25	25	150	0.80	105
FCI2012-R82X	0805	0.82	25	25	150	1.00	100
FCI2012-1R0X	0805	1.00	10	45	50	0.40	75
FCI2012-1R2X	0805	1.20	10	45	50	0.50	65
FCI2012-1R5X	0805	1.50	10	45	50	0.50	60
FCI2012-1R8X	0805	1.80	10	45	50	0.60	55
FCI2012-2R2X	0805	2.20	10	45	30	0.65	50
FCI2012-2R7X	0805	2.70	10	45	30	0.75	45
FCI2012-3R3X	0805	3.30	10	45	30	0.80	41
FCI2012-3R9X	0805	3.90	10	45	30	0.90	38
FCI2012-4R7X	0805	4.70	10	45	30	1.00	35
FCI2012-5R6X	0805	5.60	4.0	45	15	0.90	32
FCI2012-6R8X	0805	6.80	4.0	45	15	1.00	29
FCI2012-8R2X	0805	8.20	4.0	45	15	1.10	26
FCI2012-100X	0805	10.0	2.0	45	15	1.15	24
FCI2012-120X	0805	12.0	2.0	45	15	1.25	22
FCI2012-150X	0805	15.0	1.0	30	5	0.80	19
FCI2012-180X	0805	18.0	1.0	30	5	0.90	18
FCI2012-220X	0805	22.0	1.0	30	5	1.10	16
FCI2012-270X	0805	27.0	1.0	30	5	1.15	14
FCI2012-330X	0805	33.0	0.4	30	5	1.25	13

Test Equipment: RF Impedance Analyzer HP-4291A + HP4195A

DC BIAS & Q CHARACTERISTICS





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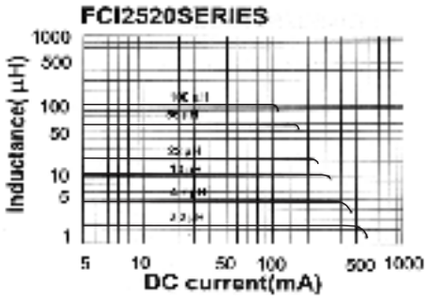
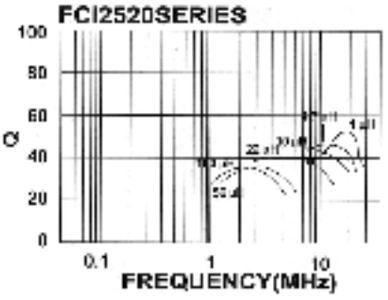
ELECTRICAL CHARACTERISTICS

Part Number	EIA Size	Inductance L (µH)	Test Freq. (MHz)	Q (Min)	Rated Current (mA) Max	DCR (Ω) Max	SRF (MHz)Min
FCI2520-R10X	1008	0.10	25.2	30	570	0.21	680
FCI2520-R12X	1008	0.12	25.2	30	550	0.22	650
FCI2520-R15X	1008	0.15	25.2	30	500	0.25	530
FCI2520-R18X	1008	0.18	25.2	30	460	0.29	520
FCI2520-R22X	1008	0.22	25.2	30	430	0.30	390
FCI2520-R27X	1008	0.27	25.2	30	420	0.33	330
FCI2520-R33X	1008	0.33	25.2	30	400	0.39	310
FCI2520-R39X	1008	0.39	25.2	30	375	0.40	290
FCI2520-R47X	1008	0.47	25.2	30	350	0.44	260
FCI2520-R56X	1008	0.56	25.2	30	330	0.49	230
FCI2520-R68X	1008	0.68	25.2	30	320	0.52	220
FCI2520-R82X	1008	0.82	25.2	30	290	0.61	180
FCI2520-1R0X	1008	1.00	7.96	30	250	0.75	150
FCI2520-1R2X	1008	1.20	7.96	30	240	0.87	140
FCI2520-1R5X	1008	1.50	7.96	30	230	1.00	130
FCI2520-1R8X	1008	1.80	7.96	30	220	1.10	120
FCI2520-2R2X	1008	2.20	7.96	30	210	1.30	105
FCI2520-2R7X	1008	2.70	7.96	30	200	1.40	90
FCI2520-3R3X	1008	3.30	7.96	30	190	1.60	80
FCI2520-3R9X	1008	3.90	7.96	30	185	1.70	75
FCI2520-4R7X	1008	4.70	7.96	30	180	1.90	70
FCI2520-5R6X	1008	5.60	7.96	30	170	2.20	60
FCI2520-6R8X	1008	6.80	7.96	30	165	2.40	55
FCI2520-8R2X	1008	8.20	7.96	30	160	2.60	50
FCI2520-100X	1008	10.0	2.52	25	155	2.20	30
FCI2520-120X	1008	12.0	2.52	25	150	2.50	27
FCI2520-150X	1008	15.0	2.52	25	140	2.80	23
FCI2520-180X	1008	18.0	2.52	25	130	3.20	22
FCI2520-220X	1008	22.0	2.52	25	125	3.60	21
FCI2520-270X	1008	27.0	2.52	25	115	4.30	19
FCI2520-330X	1008	33.0	2.52	25	110	4.70	17

Test Equipment: RF Impedance Analyzer HP-4291A + HP4195A

DC BIAS & Q CHARACTERISTICS





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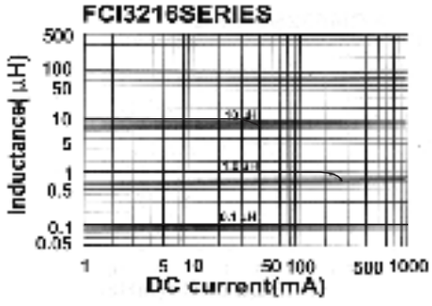
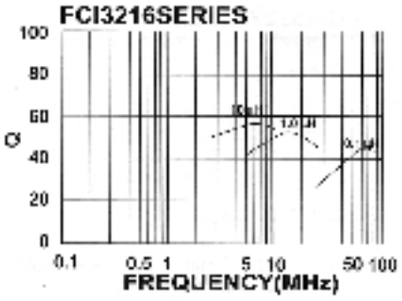
Part Number	EIA Size	Inductance L (µH)	Test Freq. (MHz)	Q (Min)	Rated Current (mA) Max	DCR (Ω) Max	SRF (MHz)Min
FCI3216-47NX	1206	0.047	50	20	300	0.15	320
FCI3216-68NX	1206	0.068	50	20	300	0.25	280
FCI3216-82NX	1206	0.082	50	20	300	0.25	260
FCI3216-R10X	1206	0.100	25	20	250	0.25	235
FCI3216-R12X	1206	0.120	25	20	250	0.30	220
FCI3216-R15X	1206	0.150	25	20	250	0.30	200
FCI3216-R18X	1206	0.180	25	20	250	0.40	185
FCI3216-R22X	1206	0.220	25	20	250	0.40	170
FCI3216-R27X	1206	0.270	25	20	250	0.50	150
FCI3216-R33X	1206	0.330	25	20	250	0.50	145
FCI3216-R39X	1206	0.390	25	25	250	0.60	135
FCI3216-R47X	1206	0.470	25	25	200	0.60	125
FCI3216-R56X	1206	0.560	25	25	200	0.70	115
FCI3216-R68X	1206	0.680	25	25	150	0.80	105
FCI3216-R82X	1206	0.820	25	25	150	0.90	100
FCI3216-1R0X	1206	1.000	10	45	100	0.40	75
FCI3216-1R2X	1206	1.200	10	45	100	0.50	65
FCI3216-1R5X	1206	1.500	10	45	50.0	0.50	60
FCI3216-1R8X	1206	1.800	10	45	50.0	0.50	55
FCI3216-2R2X	1206	2.200	10	45	50.0	0.60	50
FCI3216-2R7X	1206	2.700	10	45	50.0	0.60	45
FCI3216-3R3X	1206	3.300	10	45	50.0	0.70	41
FCI3216-3R9X	1206	3.900	10	45	50.0	0.80	38
FCI3216-4R7X	1206	4.700	10	45	50.0	0.90	35
FCI3216-5R6X	1206	5.600	4.0	50	25.0	0.70	32
FCI3216-6R8X	1206	6.800	4.0	50	25.0	0.80	29
FCI3216-8R2X	1206	8.200	4.0	50	25.0	0.90	26
FCI3216-100X	1206	10.00	2.0	50	25.0	1.00	24
FCI3216-120X	1206	12.00	2.0	50	15.0	1.05	22
FCI3216-150X	1206	15.00	1.0	35	5.00	0.70	19
FCI3216-180X	1206	18.00	1.0	35	5.00	0.70	18
FCI3216-220X	1206	22.00	1.0	35	5.00	0.90	16
FCI3216-270X	1206	27.00	1.0	35	5.00	0.90	14
FCI3216-330X	1206	33.00	0.4	35	5.00	1.05	13

Test Equipment: RF Impedance Analyzer HP-4291A + HP4195A

DC BIAS & Q CHARACTERISTICS





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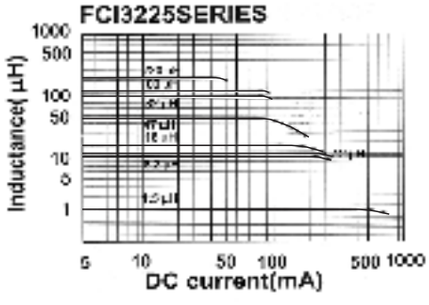
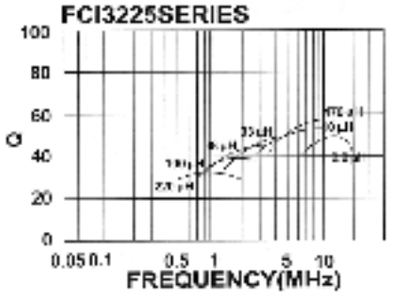
FCI3225-R12X	1210	0.12	25.2	30	450	0.22	500
FCI3225-R15X	1210	0.15	25.2	30	450	0.25	450
FCI3225-R18X	1210	0.18	25.2	30	450	0.28	400
FCI3225-R22X	1210	0.22	25.2	30	450	0.32	350
FCI3225-R27X	1210	0.27	25.2	30	450	0.36	320
FCI3225-R33X	1210	0.33	25.2	30	450	0.40	300
FCI3225-R39X	1210	0.39	25.2	30	450	0.45	250
FCI3225-R47X	1210	0.47	25.2	30	450	0.50	220
FCI3225-R56X	1210	0.56	25.2	30	450	0.55	180
FCI3225-R68X	1210	0.68	25.2	30	450	0.60	160
FCI3225-R82X	1210	0.82	25.2	30	450	0.65	140
FCI3225-1R0X	1210	1.00	7.96	30	400	0.70	120
FCI3225-1R2X	1210	1.20	7.96	30	390	0.75	100
FCI3225-1R5X	1210	1.50	7.96	30	370	0.85	85
FCI3225-1R8X	1210	1.80	7.96	30	350	0.90	80
FCI3225-2R2X	1210	2.20	7.96	30	320	1.00	75
FCI3225-2R7X	1210	2.70	7.96	30	290	1.10	70
FCI3225-3R3X	1210	3.30	7.96	30	260	1.20	60
FCI3225-3R9X	1210	3.90	7.96	30	250	1.30	55
FCI3225-4R7X	1210	4.70	7.96	30	220	1.50	50
FCI3225-5R6X	1210	5.60	7.96	30	200	1.60	47
FCI3225-6R8X	1210	6.80	7.96	30	180	1.80	43
FCI3225-8R2X	1210	8.20	7.96	30	170	2.00	40
FCI3225-100X	1210	10.0	2.52	30	150	2.10	36
FCI3225-120X	1210	12.0	2.52	30	140	2.50	33
FCI3225-150X	1210	15.0	2.52	30	130	2.80	30
FCI3225-180X	1210	18.0	2.52	30	120	3.30	27
FCI3225-220X	1210	22.0	2.52	30	110	3.70	25
FCI3225-270X	1210	27.0	2.52	30	80.0	5.00	20
FCI3225-330X	1210	33.0	2.52	30	70.0	5.60	17

Test Equipment: RF Impedance Analyzer HP-4291A + HP4195A

DC BIAS & Q CHARACTERISTICS





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Part Number	EIA Size	Inductance L (µH)	Test Freq. (MHz)	Q (Min)	Rated Current (mA) Max	DCR (Ω) Max	SRF (MHz)Min
FCI4532-R10X	1812	0.10	25.2	35	800	0.18	300
FCI4532-R12X	1812	0.12	25.2	35	770	0.20	280
FCI4532-R15X	1812	0.15	25.2	35	730	0.22	250
FCI4532-R18X	1812	0.18	25.2	35	700	0.24	220
FCI4532-R22X	1812	0.22	25.2	40	665	0.25	200
FCI4532-R27X	1812	0.27	25.2	40	635	0.26	180
FCI4532-R33X	1812	0.33	25.2	40	605	0.28	165
FCI4532-R39X	1812	0.39	25.2	40	575	0.30	150
FCI4532-R47X	1812	0.47	25.2	40	545	0.32	145
FCI4532-R56X	1812	0.56	25.2	40	520	0.36	140
FCI4532-R68X	1812	0.68	25.2	40	500	0.40	135
FCI4532-R82X	1812	0.82	25.2	40	475	0.45	130
FCI4532-1R0X	1812	1.00	7.96	50	450	0.50	100
FCI4532-1R2X	1812	1.20	7.96	50	430	0.55	80
FCI4532-1R5X	1812	1.50	7.96	50	410	0.60	70
FCI4532-1R8X	1812	1.80	7.96	50	390	0.65	60
FCI4532-2R2X	1812	2.20	7.96	50	380	0.70	55
FCI4532-2R7X	1812	2.70	7.96	50	370	0.75	50
FCI4532-3R3X	1812	3.30	7.96	50	355	0.80	45
FCI4532-3R9X	1812	3.90	7.96	50	330	0.90	40
FCI4532-4R7X	1812	4.70	7.96	50	315	1.00	35
FCI4532-5R6X	1812	5.60	7.96	50	300	1.10	33
FCI4532-6R8X	1812	6.80	7.96	50	285	1.20	27
FCI4532-8R2X	1812	8.20	7.96	50	270	1.40	25
FCI4532-100X	1812	10.0	2.52	50	250	1.60	20
FCI4532-120X	1812	12.0	2.52	50	225	2.00	18
FCI4532-150X	1812	15.0	2.52	50	200	2.50	17
FCI4532-180X	1812	18.0	2.52	50	190	2.80	15
FCI4532-220X	1812	22.0	2.52	50	180	3.20	13
FCI4532-270X	1812	27.0	2.52	50	170	3.60	12
FCI4532-330X	1812	33.0	2.52	50	160	4.00	11

Test Equipment: RF Impedance Analyzer HP-4291A + HP4195A

DC BIAS & Q CHARACTERISTICS