

Wire Wound Chip Inductor Ferrite



**RoHS
Compliant**



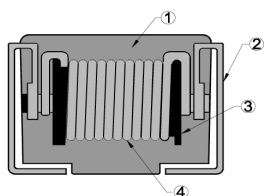
Features:

- Very strong solderability by flow soldering, soldering iron or wave soldering
- Highly accurate dimensions, can be mounted automatically
- Terminals are highly resistant to pull forces
- Highly resistant to mechanical shocks and pressure
- Highly reliable in environments of sudden temperature change and humidity. Super Q characteristics

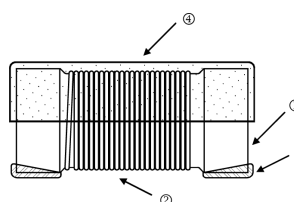
Applications:

Micro Televisions, Liquid Crystal Televisions, Video Cameras, Portable VCRs, Car Radios, Car Stereos, Thin Tape Radios, Television Tuners, Mobile Telephones, Radio and Other Electronic Devices

Construction:



1. Molded resin
2. Electrode (Tinned Copper Wire)
3. Ferrite core
4. Magnet wire



1. Ferrite core
2. Magnet wire
3. Electrode (Ag/Pd+Ni+Sn)
4. UV Glue

Dimensions:

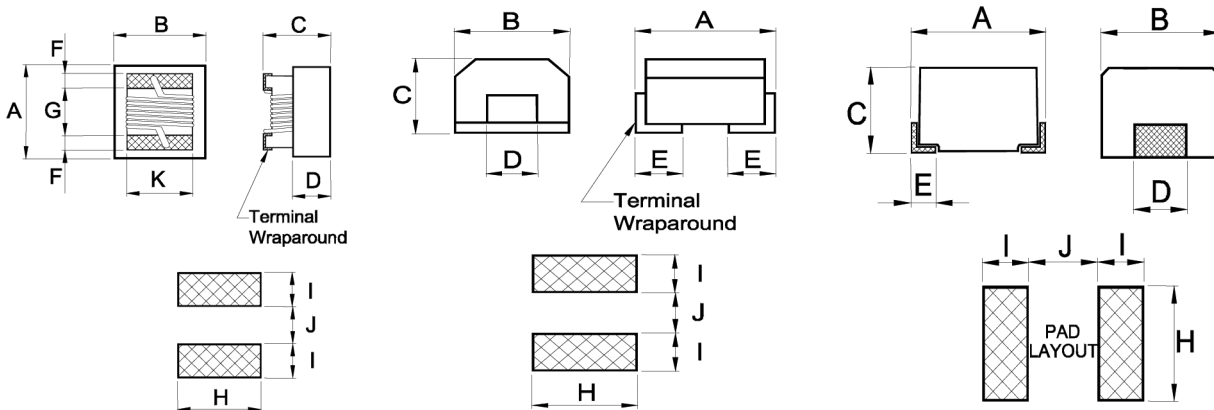


Figure 1

Figure 2

Figure 3

Size (In)	Fig.	A	B	C	D	E	F	G	H	I	J	K	Weight (g) (1000pcs)
0805	1	2.4 max	1.71 max	1.45 max	0.65	-	0.44	1.02	1.78	1.02	0.76	1.27	14
1008	1	2.92 max	2.79 max	2.1 max	1.2	-	0.45	1.52	2.54	1.02	1.27	2.03	30
1210	2	3.2±0.4	2.5±0.2	2.2 ±0.2	1±0.2	0.6 -0/+0.3	-	-	1.4	1	1.8	-	40
1812	2	4.5±0.3	3.2±0.2	3.2 ±0.2	1.2	1 -0/+0.3	-	-	1.6	1.5	2.2	-	160

Dimensions : Millimetres

www.element14.com
www.farnell.com
www.newark.com



Wire Wound Chip Inductor Ferrite

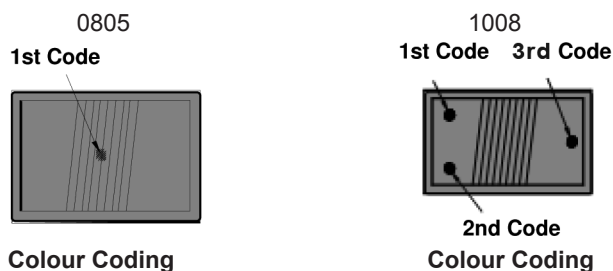


Colour Coding:

0805 / 1008 Type

Because of small sizes, these parts are marked with a single colour dot.

The inductance value represented by the dot is shown on the data page for each type.



Standard Electrical Specifications:

0805 Wire Wound Chip Inductors (Ferrite / Open Type) / Standard Type

Part Number	Inductance (µH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.	Colour Code
MCFT000152	0.15	±5, ±10%	20	25.2	900	0.18	1100	Gray
MCFT000153	0.22	±5, ±10%	20	25.2	550	0.25	700	Brown
MCFT000154	0.33	±5, ±10%	20	25.2	550	0.35	650	Orange
MCFT000155	0.47	±5, ±10%	20	25.2	350	0.45	600	Green
MCFT000156	0.68	±5, ±10%	20	25.2	300	0.6	500	Violet
MCFT000157	1	±5, ±10%	15	7.96	280	0.8	450	White
MCFT000158	1.5	±5, ±10%	15	7.96	250	1.05	350	Brown
MCFT000159	2.2	±5, ±10%	15	7.96	110	1.1	320	Orange
MCFT000160	3.3	±5, ±10%	15	7.96	60	1.5	300	Green
MCFT000161	4.7	±5, ±10%	15	7.96	45	2.1	200	Violet
MCFT000162	6.8	±5, ±10%	15	7.96	36	2.7	200	White
MCFT000163	10	±5, ±10%	10	2.52	30	4.5	180	Brown

Standard Electrical Specifications:

1008 Wire Wound Chip Inductors (Ferrite / Open Type) / Standard Type

Part Number	Inductance (µH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.	Colour Code		
MCFT000165	0.22	±5, ±10%	27	25.2	600	0.4	880	Red	Red	Brown
MCFT000166	0.33	±5, ±10%	30	25.2	400	0.42	900	Orange	Orange	Brown
MCFT000167	0.47	±5, ±10%	30	25.2	350	0.5	900	Yellow	Violet	Brown



Wire Wound Chip Inductor Ferrite



Part Number	Inductance (µH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.	Colour Code		
MCFT000168	0.68	±5, ±10%	30	25.2	300	0.55	800	Blue	Gray	Brown
MCFT000169	1	±5, ±10%	25	7.96	245	0.6	600	Brown	Black	Red
MCFT000170	1.5	±5, ±10%	25	7.96	182	0.85	550	Brown	Green	Red
MCFT000171	2.2	±5, ±10%	25	7.96	105	1.1	500	Red	Red	Red
MCFT000172	3.3	±5, ±10%	25	7.96	55	1.37	350	Orange	Orange	Red
MCFT000173	4.7	±5, ±10%	25	7.96	43	1.68	300	Yellow	Violet	Red
MCFT000174	6.8	±5, ±10%	25	7.96	39	1.85	300	Blue	Gray	Red
MCFT000175	10	±5, ±10%	20	2.52	33	2.32	250	Brown	Black	Orange
MCFT000176	15	±5, ±10%	15	2.52	24	3.42	200	Brown	Green	Orange
MCFT000177	22	±5, ±10%	15	2.52	18	5.12	180	Red	Red	Orange
MCFT000178	33	±5, ±10%	15	2.52	16	6.44	120	Orange	Orange	Orange
MCFT000179	47	±5, ±10%	14	2.52	13	9.94	110	Yellow	Violet	Orange
MCFT000180	68	±5, ±10%	14	2.52	8	12.8	90	Blue	Gray	Orange
MCFT000181	100	±5, ±10%	8	1	7	19.6	120	Brown	Black	Yellow

Standard Electrical Specifications:

1210 Wire Wound Chip Inductors (Ferrite / Open Type) / Standard Type

Part Number	Inductance (µH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
MCFT000182	1	±10%	30	7.96	120	0.7	400
MCFT000183	1.5	±10%	30	7.96	85	0.85	370
MCFT000184	2.2	±10%	30	7.96	75	1	320
MCFT000185	3.3	±10%	30	7.96	60	1.2	260
MCFT000186	4.7	±10%	30	7.96	50	1.5	220
MCFT000187	6.8	±10%	30	7.96	40	1.8	180
MCFT000187	10	±10%	30	2.52	30	2.1	150
MCFT000189	15	±10%	30	2.52	20	2.8	130
MCFT000190	22	±10%	30	2.52	20	3.7	110
MCFT000191	33	±10%	30	2.52	17	5.6	70
MCFT000191	47	±10%	30	2.52	15	7	60
MCFT000193	68	±10%	30	2.52	12	9	50
MCFT000194	100	±10%	20	0.796	10	10	40
MCFT000195	150	±10%	20	0.796	8	15	65



Wire Wound Chip Inductor Ferrite



Standard Electrical Specifications:

1812 Wire Wound Chip Inductors (Ferrite / Open Type) / Standard Type

Part Number	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
MCFT000197	1	±10%	50	7.96	100	0.5	450
MCFT000198	1.5	±10%	50	7.96	70	0.6	410
MCFT000199	2.2	±10%	50	7.96	55	0.7	380
MCFT000200	3.3	±10%	50	7.96	45	0.8	355
MCFT000201	4.7	±10%	50	7.96	35	1	315
MCFT000202	6.8	±10%	50	7.96	27	1.2	285
MCFT000203	10	±10%	50	2.52	20	1.6	250
MCFT000204	15	±10%	50	2.52	17	2.5	200
MCFT000205	22	±10%	50	2.52	13	3.2	180
MCFT000206	33	±10%	50	2.52	11	4	160
MCFT000207	47	±10%	50	2.52	10	5	140
MCFT000208	68	±10%	50	2.52	9	6	130
MCFT000209	100	±10%	40	0.796	8	8	110
MCFT000210	150	±10%	40	0.796	5	9	105
MCFT000211	220	±10%	40	0.796	4	10	100
MCFT000212	330	±10%	30	0.796	3.5	15	85
MCFT000213	470	±10%	30	0.796	3	26	62
MCFT000214	680	±10%	30	0.796	3	30	50

Low Profile Electrical Specifications:

0805 Wound Chip Inductors (Ferrite / Open Type) / Low Profile Type

Part Number	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
MCFT000157	1	±5, ±10%	15	L: 7.96 / Q: 25.2	115	0.9	450
MCFT000160	3.3	±5, ±10%	13	7.96	70	1.4	450
MCFT000161	4.7	±5, ±10%	15	7.96	65	1.9	400
MCFT000162	6.8	±5, ±10%	15	7.96	41	2.4	400
MCFT000163	10	±5, ±10%	14	7.96	31	2.7	400

Wire Wound Chip Inductor Ferrite



Large Current Electrical Specifications:

0805 Wound Chip Inductors (Ferrite / Open Type) / Large Current Type

Part Number	Inductance (µH)	Tolerance	Q typ.	Test Freq. (MHz)	SRF (MHz) typ.	DCR (Ω) max.	IDC (mA) max.	Colour Code
MCFT000155	0.47	±10, ±20%	14	25.2	850	0.156	1,400	Blue
MCFT000156	0.68	±10, ±20%	14	25.2	765	0.195	1,200	Gray
MCFT000157	1	±10, ±20%	14	7.96	208	0.169	1,100	Black
MCFT000158	1.5	±10, ±20%	14	7.96	159	0.221	920	Brown
MCFT000159	2.2	±10, ±20%	13	7.96	87	0.286	740	Red
MCFT000160	3.3	±10, ±20%	12	7.96	70	0.364	620	Orange
MCFT000161	4.7	±10, ±20%	14	7.96	51	0.559	520	Yellow
MCFT000162	6.8	±10, ±20%	14	7.96	46	0.884	420	Green
MCFT000163	10	±5, ±10, ±20%	14	2.52	31	1.105	360	Blue

Large Current Electrical Specifications:

1008 Wound Chip Inductors (Ferrite / Open Type) / Large Current Type

Part Number	Inductance (µH)	Tolerance	Q typ.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.	Colour Code		
								1st	2nd	3rd
MCFT000165	0.22	±5, ±10%	35	25.2	800	0.15	2600	Red	Red	Brown
MCFT000167	0.47	±10%	35	25.2	460	0.2	2400	Yellow	Violet	Brown
MCFT000168	0.68	±5, ±10%	35	25.2	400	0.3	1700	Blue	Gray	Brown
MCFT000169	1	±10%	22	7.96	245	0.35	800	Brown	Black	Red
MCFT000170	1.5	±5, ±10%	25	7.96	182	0.45	550	Brown	Green	Red
MCFT000171	2.2	±5, ±10%	22	7.96	105	0.6	500	Red	Red	Red
MCFT000172	3.3	±5, ±10%	22	7.96	55	0.75	450	Orange	Orange	Red
MCFT000173	4.7	±5, ±10%	22	7.96	45	0.9	400	Yellow	Violet	Red
MCFT000174	6.8	±5, ±10%	22	7.96	40	1.05	400	Blue	Gray	Red
MCFT000175	10	±5, ±10%	20	2.52	35	1.55	300	Brown	Black	Orange
MCFT000176	15	±5, ±10%	20	2.52	24	2.38	250	Brown	Green	Orange
MCFT000177	22	±5, ±10%	20	2.52	18	2.92	200	Red	Red	Orange
MCFT000178	33	±5, ±10%	20	2.52	16	4.1	180	Orange	Orange	Orange
MCFT000179	47	±5, ±10%	23	2.52	17	7.8	350	Yellow	Violet	Orange
MCFT000181	100	±5, ±10%	13	1	4	13.2	200	Brown	Black	Yellow

Wire Wound Chip Inductor Ferrite



1210 Wire Wound Chip Inductors (Ferrite / Molding Type) / Large Current Type

Part Number	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
MCFT000182	1	±20%	10	7.96	100	0.156	770
MCFT000183	1.5	±20%	10	7.96	80	0.195	580
MCFT000184	2.2	±20%	10	7.96	65	0.26	480
MCFT000184	3.3	±20%	10	7.96	55	0.325	400
MCFT000186	4.7	±20%	10	7.96	45	0.52	320
MCFT000187	6.8	±20%	10	7.96	35	0.65	280
MCFT000188	10	±10%	15	2.52	28	1.105	220
MCFT000189	15	±10%	15	2.52	25	1.69	180
MCFT000190	22	±10%	15	2.52	20	2.6	145
MCFT000191	33	±10%	15	2.52	15	3.64	115
MCFT000192	47	±10%	20	2.52	13	5.46	105
MCFT000193	68	±10%	20	2.52	10	8.45	85
MCFT000194	100	±10%	20	0.796	8	10.14	75

Large Current Electrical Specifications:

1812 Wound Chip Inductors (Ferrite / Open Type) / Large Current Type

Codes	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
MCFT000197	1	±10%	10	7.96	200	0.11	1,050
MCFT000198	1.5	±10%	10	7.96	130	0.15	950
MCFT000199	2.2	±10%	10	7.96	80	0.18	850
MCFT000200	3.3	±10%	10	7.96	45	0.22	750
MCFT000201	4.7	±10%	10	7.96	35	0.27	650
MCFT000202	6.8	±10%	10	7.96	28	0.35	600
MCFT000203	10	±10%	10	2.52	22	0.5	550
MCFT000204	15	±10%	10	2.52	20	0.7	450
MCFT000205	22	±10%	10	2.52	18	0.9	370
MCFT000206	33	±10%	10	2.52	14	1.4	300
MCFT000207	47	±10%	10	2.52	11.5	1.9	260
MCFT000208	68	±10%	10	2.52	10	2.6	220
MCFT000209	100	±10%	20	0.796	8	4	180
MCFT000210	150	±10%	20	0.796	7	6.5	140
MCFT000211	220	±10%	20	0.796	5.5	9	120
MCFT000212	330	±10%	20	0.796	4	13	90
MCFT000213	470	±10%	20	0.796	3.5	26	75
MCFT000214	680	±10%	20	0.796	2.6	40	65

Wire Wound Chip Inductor Ferrite



Environmental Characteristics:

Electrical Performance Test

Item	Requirement	Test Method
Inductance	Refer to standard electrical characteristic spec.	HP4291 or HP4284
Q		HP4291 or HP4284
SRF		HP4291
DC Resistance DCR		Agilent 34401A
Rated Current IDC		Applied the current to coils, The inductance change should be less than 10% to initial value

Mechanical Performance Test

Item	Requirement	Test Method
Solderability	The electrodes shall be at least 90% covered with new solder coating	Lead-free inductor: after fluxing(alpha 100 or equiv), inductor shall be dipped in a melted solder bath at 245±5°C, 5±0.5 seconds
Resistance to Soldering Heat	Appearance: No damage	Pre-heating: 150°C, 1min. Solder Temperature: 260±5°C Immersion Time: 10±1 seconds
Vibration	Appearance: No damage L change: within±10% Q change: within±30% DCR: within specification	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1 min. Amplitude: 1.5mm Time: 2 hrs for each axis (X, Y & Z), total 6 hrs

Climatic Test

Item	Requirement	Test Method															
Temperature Cycle	Appearance: No damage L change: within±10% Q change: within±30% DCR: within specification	One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25±2</td> <td>3</td> </tr> <tr> <td>3</td> <td>85±3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25±2</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Time (min.)	1	-25±3	30	2	25±2	3	3	85±3	30	4	25±2	3
Step		Temperature (°C)	Time (min.)														
1		-25±3	30														
2		25±2	3														
3	85±3	30															
4	25±2	3															
Damp Heat with Load	Temperature: 40±2°C Relative Humidity: 90 to 95%; Time: 1,000hrs Measured after exposure in the room condition for 24hrs																
High Temperature Storage	Temperature: 85±3°C Applied Current: Rated Current Time: 1,000hrs Measured after exposure in the room condition for 24hrs																
Low Temperature Storage	Temperature: -25±3°C Time: 1,000hrs Measured after exposure in the room condition for 24hrs																



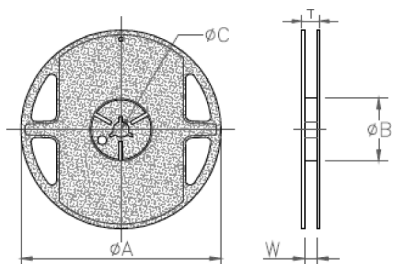
Wire Wound Chip Inductor Ferrite



Storage Temperature : 25±3°C; Humidity <80%RH
 Operating Temperature Range : -40°C to +85°C

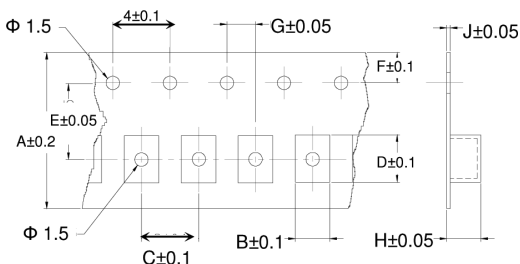
Packaging:

Packaging Quantity & Reel Specifications



Type	A	B	C	W	T	Quantity (EA)
MCNL05	178±2	60±0.5	13±0.3	9±0.3	12±1	2,000
MCNL08	178±2	60±0.5	13±0.3	9±0.3	12±1	2,000
MCNL10	178±2	60±0.5	13±0.3	9±0.3	12±1	2,000
MCNL12	178±2	80±0.5	13±0.3	13.2±0.3	16±1	500

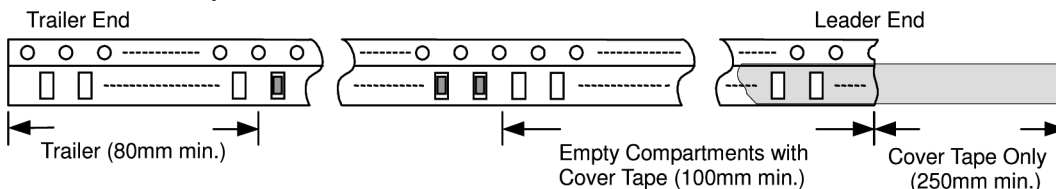
Embossed Plastic Tape Specifications:



Type	A	B	C	D	E	F	G	H	J
MCNL05	8	1.85	4	2.55	3.5	1.75	2	1.45	0.23
MCNL08	8	2.8	4	2.95	3.5	1.75	2	2.22	0.23
MCNL10	8	2.96	4	3.6	3.5	1.75	2	2.4	0.23
MCNL12	12	3.3	8	5	5.5	1.75	2	3.5	0.3

Dimensions : Millimetres

Leader / Trailer Tape:



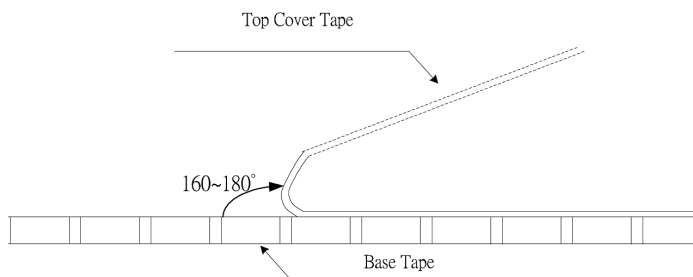
Cover Tape Peel Strength:

The force for tearing off cover tape is 0.1 to 0.6 (N) in the arrow direction at the following conditions:

Temperature : 5°C to 35°C

Humidity : 45% to 85%

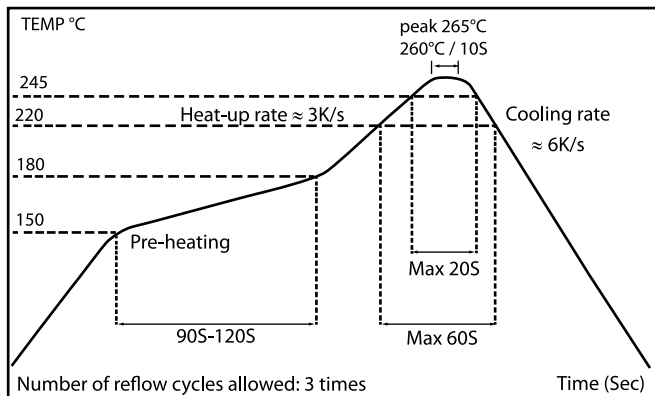
Atmospheric pressure : 860 to 1,060hpa



Wire Wound Chip Inductor Ferrite



Reflow:



Part Number Table

Description	Part Number
Inductor, Ferrite, 0805, 0.15µH	MCFT000152
Inductor, Ferrite, 0805, 0.22µH	MCFT000153
Inductor, Ferrite, 0805, 0.33µH	MCFT000154
Inductor, Ferrite, 0805, 0.47µH	MCFT000155
Inductor, Ferrite, 0805, 0.68µH	MCFT000156
Inductor, Ferrite, 0805, 1µH	MCFT000157
Inductor, Ferrite, 0805, 1.5µH	MCFT000158
Inductor, Ferrite, 0805, 2.2µH	MCFT000159
Inductor, Ferrite, 0805, 3.3µH	MCFT000160
Inductor, Ferrite, 0805, 4.7µH	MCFT000161
Inductor, Ferrite, 0805, 6.8µH	MCFT000162
Inductor, Ferrite, 0805, 10µH	MCFT000163
Inductor, Ferrite, 1008, 0.22µH	MCFT000165
Inductor, Ferrite, 1008, 0.33µH	MCFT000166
Inductor, Ferrite, 1008, 0.47µH	MCFT000167
Inductor, Ferrite, 1008, 0.68µH	MCFT000168
Inductor, Ferrite, 1008, 1µH	MCFT000169
Inductor, Ferrite, 1008, 1.5µH	MCFT000170
Inductor, Ferrite, 1008, 2.2µH	MCFT000171
Inductor, Ferrite, 1008, 3.3µH	MCFT000172
Inductor, Ferrite, 1008, 4.7µH	MCFT000173
Inductor, Ferrite, 1008, 6.8µH	MCFT000174
Inductor, Ferrite, 1008, 10µH	MCFT000175

Description	Part Number
Inductor, Ferrite, 1008, 15µH	MCFT000176
Inductor, Ferrite, 1008, 22µH	MCFT000177
Inductor, Ferrite, 1008, 33µH	MCFT000178
Inductor, Ferrite, 1008, 47µH	MCFT000179
Inductor, Ferrite, 1008, 68µH	MCFT000180
Inductor, Ferrite, 1008, 100µH	MCFT000181
Inductor, Ferrite, 1210, 1µH	MCFT000182
Inductor, Ferrite, 1210, 1.5µH	MCFT000183
Inductor, Ferrite, 1210, 2.2µH	MCFT000184
Inductor, Ferrite, 1210, 3.3µH	MCFT000185
Inductor, Ferrite, 1210, 4.7µH	MCFT000186
Inductor, Ferrite, 1210, 6.8µH	MCFT000187
Inductor, Ferrite, 1210, 10µH	MCFT000188
Inductor, Ferrite, 1210, 15µH	MCFT000189
Inductor, Ferrite, 1210, 22µH	MCFT000190
Inductor, Ferrite, 1210, 33µH	MCFT000191
Inductor, Ferrite, 1210, 47µH	MCFT000192
Inductor, Ferrite, 1210, 68µH	MCFT000193
Inductor, Ferrite, 1210, 100µH	MCFT000194
Inductor, Ferrite, 1210, 150µH	MCFT000195
Inductor, Ferrite, 1812, 1µH	MCFT000197
Inductor, Ferrite, 1812, 1.5µH	MCFT000198
Inductor, Ferrite, 1812, 2.2µH	MCFT000199



Wire Wound Chip Inductor Ferrite



Description	Part Number
Inductor, Ferrite, 1812, 3.3 μ H	MCFT000200
Inductor, Ferrite, 1812, 4.7 μ H	MCFT000201
Inductor, Ferrite, 1812, 6.8 μ H	MCFT000202
Inductor, Ferrite, 1812, 10 μ H	MCFT000203
Inductor, Ferrite, 1812, 15 μ H	MCFT000204
Inductor, Ferrite, 1812, 22 μ H	MCFT000205
Inductor, Ferrite, 1812, 33 μ H	MCFT000206
Inductor, Ferrite, 1812, 47 μ H	MCFT000207

Description	Part Number
Inductor, Ferrite, 1812, 68 μ H	MCFT000208
Inductor, Ferrite, 1812, 100 μ H	MCFT000209
Inductor, Ferrite, 1812, 150 μ H	MCFT000210
Inductor, Ferrite, 1812, 220 μ H	MCFT000211
Inductor, Ferrite, 1812, 330 μ H	MCFT000212
Inductor, Ferrite, 1812, 470 μ H	MCFT000213
Inductor, Ferrite, 1812, 680 μ H	MCFT000214

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