



RF Inductors

Multilayer Chip Inductors for High Frequency - MF Series / 贴片叠层陶瓷电感

► High Frequency Inductor Features

High Q and high reliability and ceramic material.

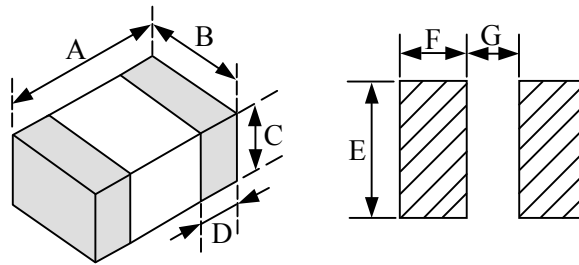
To prevent EMI interference noises between electronic circuits.

► Applications

Notebook Computer, Disc Drive Unit(CD/DVD), Inkjet Printer, Hard Disk Drive, Copying Machine, Display Monitor, Gaming Machine, Color TV, Video Tape Recorder, DVD Player, Video Camera, Digital Still Camera, Car Electronics, Lowest EMI.

► High Frequency Inductor Configurations & Dimensions (unit: mm)

Land Pattern



Type	A	B	C	D	E	F	G
TCMF100505 (0402)	1.0 ± 0.1	0.5 ± 0.1	0.5 ± 0.1	0.1(min)	0.5	0.45	0.5
TCMF160808 (0603)	1.6 ± 0.2	0.8 ± 0.2	0.8 ± 0.2	0.3 ± 0.2	0.7	0.70	0.7
TCMF201209 (0805)	2.0 ± 0.2	1.2 ± 0.2	0.9 ± 0.2	0.5 ± 0.3	1.0	0.80	1.0

► Electrical Characteristics for TCMF100505 (0402) Series High Frequency Inductors

Part Number	Inductance (L)(nH)	Freq. (MHz)	Tolerance	SRF (MHz)(min)	DCR (Ω)(max)	IDC (mA)(max)
TCMF100505 - 1N2*	1.20	100	S	12000	0.10	300
TCMF100505 - 1N5*	1.50	100	S	10500	0.10	300
TCMF100505 - 1N8*	1.80	100	S	9400	0.10	300
TCMF100505 - 2N2*	2.20	100	S	8700	0.20	300
TCMF100505 - 2N7*	2.70	100	S	7700	0.20	300
TCMF100505 - 3N3*	3.30	100	S, K	6800	0.30	300
TCMF100505 - 3N9*	3.90	100	S, K	6300	0.30	300
TCMF100505 - 4N7*	4.70	100	S, K	5700	0.40	300
TCMF100505 - 5N6*	5.60	100	S, K	5100	0.40	300
TCMF100505 - 6N8*	6.80	100	J, K	4550	0.50	300
TCMF100505 - 8N2*	8.20	100	J, K	4100	0.50	300
TCMF100505 - 10N*	10.00	100	J, K	3750	0.60	300
TCMF100505 - 12N*	12.00	100	J, K	2950	0.60	300
TCMF100505 - 15N*	15.00	100	J, K	2600	0.70	300
TCMF100505 - 18N*	18.00	100	J, K	2350	0.80	300
TCMF100505 - 22N*	22.00	100	J, K	1950	0.90	300
TCMF100505 - 27N*	27.00	100	J, K	1750	1.00	300
TCMF100505 - 33N*	33.00	100	J, K	1700	1.50	200
TCMF100505 - 39N*	39.00	100	J, K	1650	1.80	200
TCMF100505 - 47N*	47.00	100	J, K	1300	2.00	200



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► Electrical Characteristics for TCMF160808 (0603) Series High Frequency Inductors

Part Number	Inductance (L)(nH)	Freq. (MHz)	Tolerance	SRF (MHz)(min)	DCR (Ω)(max)	IDC (mA)(max)
TCMF160808 - 1N2*	1.20	100	S	>6000	0.12	300
TCMF160808 - 1N5*	1.50	100	S	>6000	0.12	300
TCMF160808 - 1N8*	1.80	100	S	>6000	0.12	300
TCMF160808 - 2N2*	2.20	100	S	>6000	0.16	300
TCMF160808 - 2N7*	2.70	100	S	>6000	0.20	300
TCMF160808 - 3N3*	3.30	100	S, K	5700	0.22	300
TCMF160808 - 3N9*	3.90	100	S, K	5600	0.25	300
TCMF160808 - 4N7*	4.70	100	S, K	4800	0.28	300
TCMF160808 - 5N6*	5.60	100	S, K	4350	0.29	300
TCMF160808 - 6N8*	6.80	100	J, K	3750	0.30	300
TCMF160808 - 8N2*	8.20	100	J, K	3300	0.33	300
TCMF160808 - 10N*	10.00	100	J, K	2850	0.35	300
TCMF160808 - 12N*	12.00	100	J, K	2700	0.40	300
TCMF160808 - 15N*	15.00	100	J, K	2400	0.45	300
TCMF160808 - 18N*	18.00	100	J, K	2050	0.50	300
TCMF160808 - 22N*	22.00	100	J, K	1850	0.55	300
TCMF160808 - 27N*	27.00	100	J, K	1750	0.60	300
TCMF160808 - 33N*	33.00	100	J, K	1500	0.65	300
TCMF160808 - 39N*	39.00	100	J, K	1350	0.70	300
TCMF160808 - 47N*	47.00	100	J, K	1200	0.90	300
TCMF160808 - 56N*	56.00	100	J, K	1100	1.00	300
TCMF160808 - 68N*	68.00	100	J, K	1000	1.50	300
TCMF160808 - 82N*	82.00	100	J, K	900	1.80	300
TCMF160808 - R10*	100.00	100	J, K	830	2.10	300





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► Electrical Characteristics for TCMF201209 (0805) Series High Frequency Inductors

Part Number	Inductance (L)(nH)	Freq. (MHz)	Tolerance	SRF (MHz)(min)	DCR (Ω)(max)	IDC (mA)(max)
TCMF201209 - 1N5*	1.50	100	S	>6000	0.10	300
TCMF201209 - 1N8*	1.80	100	S	>6000	0.10	300
TCMF201209 - 2N2*	2.20	100	S	>6000	0.10	300
TCMF201209 - 2N7*	2.70	100	S	>6000	0.10	300
TCMF201209 - 3N3*	3.30	100	S, K	>6000	0.13	300
TCMF201209 - 3N9*	3.90	100	S, K	5400	0.15	300
TCMF201209 - 4N7*	4.70	100	S, K	4500	0.20	300
TCMF201209 - 5N6*	5.60	100	S, K	4000	0.23	300
TCMF201209 - 6N8*	6.80	100	J, K	3650	0.25	300
TCMF201209 - 8N2*	8.20	100	J, K	3000	0.28	300
TCMF201209 - 10N*	10.00	100	J, K	2500	0.30	300
TCMF201209 - 12N*	12.00	100	J, K	2450	0.35	300
TCMF201209 - 15N*	15.00	100	J, K	2000	0.40	300
TCMF201209 - 18N*	18.00	100	J, K	1750	0.45	300
TCMF201209 - 22N*	22.00	100	J, K	1700	0.50	300
TCMF201209 - 27N*	27.00	100	J, K	1550	0.55	300
TCMF201209 - 33N*	33.00	100	J, K	1350	0.60	300
TCMF201209 - 39N*	39.00	100	J, K	1300	0.65	300
TCMF201209 - 47N*	47.00	100	J, K	1200	0.70	300
TCMF201209 - 56N*	56.00	100	J, K	1150	0.75	300
TCMF201209 - 68N*	68.00	100	J, K	1000	0.85	300
TCMF201209 - 82N*	82.00	100	J, K	850	0.90	300
TCMF201209 - R10*	100.00	100	J, K	730	1.00	300

► How to Order

TCMF100505	-	1N2	S
❶		❷	❸

❶ Multilayer Chip Inductors for High Frequency : (TCMF100505, TCMF160808, TCMF201209)

❷ Inductance

Code	Inductance
1N2	1.2nH
10N	10.0nH
R10	100.00nH

❸ Tolerance

Code	Tolerance
S	0.3nH
J	5%
K	10%
M	20%



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Chip Multilayer Inductors - MI Series / 贴片陶瓷叠层电感

▶ Chip Multilayer Inductor Features

High Q and high reliability and ceramic material.

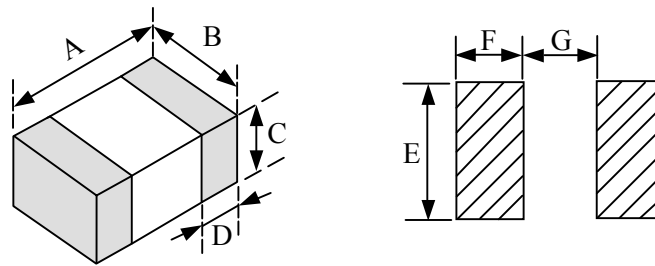
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▶ Chip Multilayer Inductor Configurations & Dimensions (unit: mm)

Land Pattern



Type	A	B	C	D	E	F	G
TCMI160808 (0603)	1.6 ± 0.2	0.8 ± 0.2	0.8 ± 0.2	0.3 ± 0.2	0.7	0.7	0.7
TCMI201209 (0805)	2.0 ± 0.2	1.2 ± 0.2	0.9 ± 0.2	0.5 ± 0.3	1.0	0.8	1.0
TCMI201212 (0805)	2.0 ± 0.2	1.2 ± 0.2	1.2 ± 0.2	0.5 ± 0.3	1.0	0.8	1.0
TCMI321611 (1206)	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3	1.4	1.1	2.2

▶ Electrical Characteristics for TCM160808 (0603) Series Chip Multilayer Inductors

Part Number	Inductance (L)(μH)	Q(min)	Test Freq. (MHz)	SRF (MHz)(min)	DCR (Ω)(max)	IDC (mA)(max)
TCMI160808 - 47NM	0.047	10	50	260	0.300	50
TCMI160808 - 68NM	0.068	10	50	250	0.300	50
TCMI160808 - R10K	0.10	15	25	240	0.500	50
TCMI160808 - R12K	0.12	15	25	205	0.500	50
TCMI160808 - R15K	0.15	15	25	180	0.600	50
TCMI160808 - R18K	0.18	15	25	165	0.600	50
TCMI160808 - R22K	0.22	15	25	150	0.800	50
TCMI160808 - R27K	0.27	15	25	136	0.800	50
TCMI160808 - R33K	0.33	15	25	125	0.850	35
TCMI160808 - R39K	0.39	15	25	110	1.000	35
TCMI160808 - R47K	0.47	15	25	105	1.350	35
TCMI160808 - R56K	0.56	15	25	95	1.550	35
TCMI160808 - R68K	0.68	15	25	90	1.700	35
TCMI160808 - R82K	0.82	15	25	85	2.100	35
TCMI160808 - 1R0K	1.00	35	10	75	0.600	25
TCMI160808 - 1R2K	1.20	35	10	65	0.800	25
TCMI160808 - 1R5K	1.50	35	10	60	0.800	25
TCMI160808 - 1R8K	1.80	35	10	55	0.950	25
TCMI160808 - 2R2K	2.20	35	10	50	1.150	15



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► Electrical Characteristics for TCMI201209/12 (0805) Series Chip Multilayer Inductors

Part Number	Inductance(L)(μ H)	Q(min)	Test Freq. (MHz)	SRF(MHz) (min)	DCR (Ω)(max)	IDC (mA)(max)
TCMI201209 - 47NM	0.047	15	50	320	0.200	300
TCMI201209 - 68NM	0.068	15	50	280	0.200	300
TCMI201209 - R10K	0.10	20	25	235	0.300	250
TCMI201209 - R12K	0.12	20	25	220	0.300	250
TCMI201209 - R15K	0.15	20	25	200	0.400	250
TCMI201209 - R18K	0.18	20	25	185	0.400	250
TCMI201209 - R22K	0.22	20	25	170	0.500	250
TCMI201209 - R27K	0.27	20	25	150	0.500	250
TCMI201209 - R33K	0.33	20	25	145	0.550	250
TCMI201209 - R39K	0.39	25	25	135	0.650	200
TCMI201209 - R47K	0.47	25	25	125	0.650	200
TCMI201209 - R56K	0.56	25	25	115	0.750	150
TCMI201209 - R68K	0.68	25	25	105	0.800	150
TCMI201209 - R82K	0.82	25	25	100	1.000	150
TCMI201209 - 1R0K	1.00	45	10	75	0.400	50
TCMI201209 - 1R2K	1.20	45	10	65	0.500	50
TCMI201209 - 1R5K	1.50	45	10	60	0.500	50
TCMI201209 - 1R8K	1.80	45	10	55	0.600	50
TCMI201209 - 2R2K	2.20	45	10	50	0.650	30
TCMI201212 - 2R7K	2.70	45	10	45	0.750	30
TCMI201212 - 3R3K	3.30	45	10	41	0.800	30
TCMI201212 - 3R9K	3.90	45	10	38	0.900	30
TCMI201212 - 4R7K	4.70	45	10	35	1.000	30
TCMI201212 - 5R6K	5.60	50	4	32	0.900	15
TCMI201212 - 6R8K	6.80	50	4	29	1.000	15
TCMI201212 - 8R2K	8.20	50	4	26	1.100	15
TCMI201212 - 100K	10.00	50	2	24	1.150	15



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► Electrical Characteristics for TCM1321611 (1206) Series Chip Multilayer Inductors

Part Number	Inductance(L)(μ H)	Q(min)	Test Freq. (MHz)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)
TCMI321611 - 47NM	0.047	20	50	320	0.150	300
TCMI321611 - 68NM	0.068	20	50	280	0.250	300
TCMI321611 - R10K	0.10	20	25	235	0.250	250
TCMI321611 - R12K	0.12	20	25	220	0.300	250
TCMI321611 - R15K	0.15	20	25	200	0.300	250
TCMI321611 - R18K	0.18	20	25	185	0.400	250
TCMI321611 - R22K	0.22	20	25	170	0.400	250
TCMI321611 - R27K	0.27	20	25	150	0.500	250
TCMI321611 - R33K	0.33	20	25	145	0.600	250
TCMI321611 - R39K	0.39	25	25	135	0.500	200
TCMI321611 - R47K	0.47	25	25	125	0.600	200
TCMI321611 - R56K	0.56	25	25	115	0.700	150
TCMI321611 - R68K	0.68	25	25	105	0.800	150
TCMI321611 - R82K	0.82	25	25	100	0.900	150
TCMI321611 - 1R0K	1.00	45	10	75	0.400	100
TCMI321611 - 1R2K	1.20	45	10	65	0.500	100
TCMI321611 - 1R5K	1.50	45	10	60	0.500	50
TCMI321611 - 1R8K	1.80	45	10	55	0.500	50
TCMI321611 - 2R2K	2.20	45	10	50	0.600	50
TCMI321611 - 2R7K	2.70	45	10	45	0.600	50
TCMI321611 - 3R3K	3.30	45	10	41	0.700	50
TCMI321611 - 3R9K	3.90	45	10	38	0.800	50
TCMI321611 - 4R7K	4.70	45	10	35	0.900	50
TCMI321611 - 5R6K	5.60	50	4	32	0.700	25
TCMI321611 - 6R8K	6.80	50	4	29	0.800	25
TCMI321611 - 8R2K	8.20	50	4	26	0.900	25
TCMI321611 - 100K	10.00	50	2	24	1.000	25

► How to Order

TCMI160808	-	47N	M
❶		❷	❸

❶ Multilayer Chip Inductors: TCM160808, TCM201209, TCM201212, TCM1321611

❷ Inductance

Code	Inductance
47N	0.047 μ H
R10	0.10 μ H
1R0	1.00 μ H
100	10.00 μ H

❸ Tolerance

Code	Tolerance
S	0.3nH
J	5%
K	10%
M	20%