

**MULTILAYER CHIP INDUCTORS  
SERIES MIC**

**FEATURES**

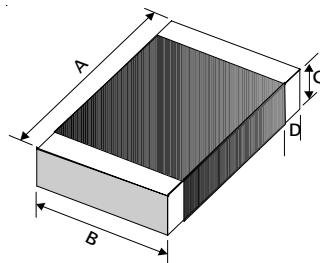
100% NO LEAD TERMINAL  
 Multilayer technology. Zero percent coupling. High reliability  
 High heat resistance. Excellent solderability  
 Excellent for both flow and reflow soldering process  
 Variety of sizes  
 Low price

**ELECTRICAL CHARACTERISTICS**

Inductance range	Size 0603 from 0.047uH to 18uH Size 0805 from 0.047uH to 33uH Size 1206 from 0.047uH to 33uH Size 1210 from 0.120uH to 33uH Size 1812 from 0.100uH to 33uH
Tolerance	5%, 10%, 20% available
Test equipment	HP-4291A, HP-4236A @ specified test frequency
Rated current	Obtained when part has Lo drop of 10% typical or temperature rises up to 28°C

**PHYSICAL CHARACTERISTICS**

Operating temperature	- 55°C to +125°C
Soldering heat resistance	300°C for 5 seconds
Terminal construction	Electro-plating with 3 layers: Silver, Nickel, Tin
Solderability	Recommendation: Preheat @ 150°C for 60 seconds Immerse chip into 235°C solder bath for 5 seconds.
Tape and reel specifications	8 mm or 12 mm embossed carrier tape with 178 mm reel
Quantity per reel	0603 & 0805                      4000 1206                                    3000 1210                                    2500 1812                                    1000

**DIMENSIONS IN MILLIMETERS**

SIZES	A	B	C	D
0603	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.3 ± 0.2
0805	2.0 ± 0.20	1.25 ± 0.20	0.85 ± 0.20	0.5 ± 0.3
1206	3.2 ± 0.20	1.60 ± 0.20	1.10 ± 0.30	0.5 ± 0.3
1210	3.2 ± 0.20	2.50 ± 0.20	1.30 ± 0.20	0.5 ± 0.3
1812	4.5 ± 0.20	3.20 ± 0.20	1.50 ± 0.20	0.5 ± 0.3

## MIC0603 SERIES

PART NUMBER	L (uH)	TOL (%) ±	Q Min	Test Freq. (MHz)	DCR max (Ω)	SRF min (MHz)	Rated Current (mA)
MIC0603-R047	0.047	20	10	50	0.30	260	50
MIC0603-R068	0.068	20	10	50	0.30	250	50
MIC0603-R082	0.082	20	10	50	0.30	245	50
MIC0603-R10M	0.10	20	15	25	0.50	240	50
MIC0603-R12M	0.12	20	15	25	0.50	205	50
MIC0603-R15M	0.15	20	15	25	0.60	180	50
MIC0603-R18M	0.18	20	15	25	0.60	165	50
MIC0603-R22M	0.22	20	15	25	0.80	150	50
MIC0603-R27M	0.27	20	15	25	0.80	136	50
MIC0603-R33M	0.33	20	15	25	0.85	125	35
MIC0603-R39M	0.39	20	15	25	1.00	110	35
MIC0603-R47M	0.47	20	15	25	1.35	105	35
MIC0603-R56M	0.56	20	15	25	1.55	95	35
MIC0603-R68M	0.68	20	15	25	1.70	80	35
MIC0603-R82M	0.82	20	15	25	2.10	75	35
MIC0603-1R0K	1.0	10	30	10	0.60	70	25
MIC0603-1R2K	1.2	10	30	10	0.80	60	25
MIC0603-1R5K	1.5	10	30	10	0.80	55	25
MIC0603-1R8K	1.8	10	30	10	0.95	50	25
MIC0603-2R2K	2.2	10	30	10	1.15	45	15
MIC0603-2R7K	2.7	10	30	10	1.35	40	15
MIC0603-3R3K	3.3	10	30	10	1.55	38	15
MIC0603-3R9K	3.9	10	30	10	1.70	36	15
MIC0603-4R7K	4.7	10	30	10	2.10	33	15
MIC0603-5R6K	5.6	10	30	4	1.55	22	15
MIC0603-6R8K	6.8	10	30	4	1.70	20	15
MIC0603-8R2K	8.2	10	30	4	2.10	18	15
MIC0603-100K	10	10	30	2	2.55	17	15
MIC0603-120K	12	10	30	2	2.75	15	15
MIC0603-150K	15	10	20	1	1.70	14	15
MIC0603-180K	18	10	20	1	1.85	13	15

## MIC0805 SERIES

PART NUMBER	L (uH)	TOL (%) ±	Q Min	Test Freq. (MHz)	DCR max (Ω)	SRF min (MHz)	Rated Current (mA)
MIC0805-R047	0.047	20	15	50	0.20	320	300
MIC0805-R068	0.068	20	15	50	0.20	280	300
MIC0805-R082	0.082	20	15	50	0.20	255	300
MIC0805-R10M	0.10	20	20	25	0.30	235	250
MIC0805-R12M	0.12	20	20	25	0.30	220	250
MIC0805-R15M	0.15	20	20	25	0.40	200	250
MIC0805-R18M	0.18	20	20	25	0.40	185	250
MIC0805-R22M	0.22	20	20	25	0.50	170	250
MIC0805-R27M	0.27	20	20	25	0.50	150	250
MIC0805-R33M	0.33	20	20	25	0.55	145	250
MIC0805-R39M	0.39	20	25	25	0.65	135	200
MIC0805-R47M*	0.47	20	25	25	0.65	125	200
MIC0805-R56M*	0.56	20	25	25	0.75	115	150
MIC0805-R68M*	0.68	20	25	25	0.80	105	150
MIC0805-R82M*	0.82	20	25	25	1.00	100	150
MIC0805-1R0K	1.0	10	45	10	0.40	75	50
MIC0805-1R2K	1.2	10	45	10	0.50	65	50
MIC0805-1R5K	1.5	10	45	10	0.50	60	50
MIC0805-1R8K	1.8	10	45	10	0.60	55	50
MIC0805-2R2K	2.2	10	45	10	0.65	50	30
MIC0805-2R7K*	2.7	10	45	10	0.75	45	30
MIC0805-3R3K*	3.3	10	45	10	0.80	41	30
MIC0805-3R9K*	3.9	10	45	10	0.90	38	30
MIC0805-4R7K*	4.7	10	45	10	1.00	35	30
MIC0805-5R6K*	5.6	10	45	4	0.90	32	15
MIC0805-6R8K*	6.8	10	45	4	1.00	29	15
MIC0805-8R2K*	8.2	10	45	4	1.10	26	15
MIC0805-100K*	10	10	45	2	1.15	24	15
MIC0805-120K*	12	10	45	2	1.25	22	15
MIC0805-150K*	15	10	30	1	0.80	19	5
MIC0805-180K*	18	10	30	1	0.90	18	5
MIC0805-220K*	22	10	30	1	1.10	16	5
MIC0805-270K*	27	10	30	1	1.15	14	5
MIC0805-330K*	33	10	30	0.4	1.25	13	5

## NOTE

\* Please note these items have a thickness of 1.25 mm instead of 0.85 mm for dimension C. Items with thickness of 1.25mm have 2000 pieces per reel instead of 4000 pieces.

## MIC1206 SERIES

PART NUMBER	L (uH)	TOL (%) ±	Q Min	Test Freq. (MHz)	DCR max (Ω)	SRF min (MHz)	Rated Current (mA)
MIC1206-R047	0.047	20	20	50	0.15	320	300
MIC1206-R068	0.068	20	20	50	0.25	280	300
MIC1206-R10K	0.10	10	20	25	0.25	235	250
MIC1206-R12K	0.12	10	20	25	0.30	220	250
MIC1206-R15K	0.15	10	20	25	0.30	200	250
MIC1206-R18K	0.18	10	20	25	0.40	185	250
MIC1206-R22K	0.22	10	20	25	0.40	170	250
MIC1206-R27K	0.27	10	20	25	0.50	150	250
MIC1206-R33K	0.33	10	20	25	0.50	145	250
MIC1206-R39K	0.39	10	25	25	0.60	135	250
MIC1206-R47K	0.47	10	25	25	0.60	125	200
MIC1206-R56K	0.56	10	25	25	0.70	115	200
MIC1206-R68K	0.68	10	25	25	0.80	105	150
MIC1206-R82K	0.82	10	25	25	0.90	100	150
MIC1206-1R0K	1.0	10	45	10	0.40	75	100
MIC1206-1R2K	1.2	10	45	10	0.50	65	100
MIC1206-1R5K	1.5	10	45	10	0.50	60	50
MIC1206-1R8K	1.8	10	45	10	0.50	55	50
MIC1206-2R2K	2.2	10	45	10	0.60	50	50
MIC1206-2R7K	2.7	10	45	10	0.60	45	50
MIC1206-3R3K	3.3	10	45	10	0.70	41	50
MIC1206-3R9K	3.9	10	45	10	0.80	38	50
MIC1206-4R7K	4.7	10	45	10	0.90	35	50
MIC1206-5R6K	5.6	10	50	4	0.70	32	25
MIC1206-6R8K	6.8	10	50	4	0.80	29	25
MIC1206-8R2K	8.2	10	50	4	0.90	26	25
MIC1206-100K	10	10	50	2	1.00	24	25
MIC1206-120K	12	10	50	2	1.05	22	15
MIC1206-150K	15	10	35	1	0.70	19	5
MIC1206-180K	18	10	35	1	0.70	18	5
MIC1206-220K	22	10	35	1	0.90	16	5
MIC1206-270K	27	10	35	1	0.90	14	5
MIC1206-330K	33	10	35	0.4	1.05	13	5

## MIC1210 SERIES

PART NUMBER	L (uH)	TOL (%) ±	Q Min	Test Freq. (MHz)	DCR max (Ω)	SRF min (MHz)	Rated Current (mA)
MIC1210-R12K	0.12	10	30	25.2	0.22	500	450
MIC1210-R15K	0.15	10	30	25.2	0.25	450	450
MIC1210-R18K	0.18	10	30	25.2	0.28	380	420
MIC1210-R22K	0.22	10	30	25.2	0.32	350	420
MIC1210-R27K	0.27	10	30	25.2	0.36	260	420
MIC1210-R33K	0.33	10	30	25.2	0.40	220	400
MIC1210-R39K	0.39	10	30	25.2	0.45	200	400
MIC1210-R47K	0.47	10	30	25.2	0.50	180	370
MIC1210-R56K	0.56	10	30	25.2	0.55	150	320
MIC1210-R68K	0.68	10	30	25.2	0.60	140	300
MIC1210-R82K	0.82	10	30	25.2	0.65	130	280
MIC1210-1R0K	1.0	10	30	7.96	0.70	120	200
MIC1210-1R2K	1.2	10	30	7.96	0.75	100	150
MIC1210-1R5K	1.5	10	30	7.96	0.85	85	150
MIC1210-1R8K	1.8	10	30	7.96	0.90	80	150
MIC1210-2R2K	2.2	10	30	7.96	1.00	75	150
MIC1210-2R7K	2.7	10	30	7.96	1.10	70	120
MIC1210-3R3K	3.3	10	30	7.96	1.20	60	120
MIC1210-3R9K	3.9	10	30	7.96	1.30	55	120
MIC1210-4R7K	4.7	10	30	7.96	1.50	50	120
MIC1210-5R6K	5.6	10	30	7.96	1.60	47	120
MIC1210-6R8K	6.8	10	30	7.96	1.80	43	100
MIC1210-8R2K	8.2	10	30	7.96	2.00	40	90
MIC1210-100K	10	10	30	2.52	2.10	36	45
MIC1210-120K	12	10	30	2.52	2.50	33	45
MIC1210-150K	15	10	30	2.52	2.80	30	35
MIC1210-180K	18	10	30	2.52	3.30	27	35
MIC1210-220K	22	10	30	2.52	3.70	25	35
MIC1210-270K	27	10	30	2.52	5.00	20	15
MIC1210-330K	33	10	30	2.52	5.60	17	15

## MIC1812 SERIES

PART NUMBER	L (uH)	TOL (%) ±	Q Min	Test Freq. (MHz)	DCR max ( $\Omega$ )	SRF min (MHz)	Rated Current (mA)
MIC1812-R10K	0.10	10	35	25.2	0.18	300	700
MIC1812-R12K	0.12	10	35	25.2	0.20	250	670
MIC1812-R15K	0.15	10	35	25.2	0.22	180	670
MIC1812-R18K	0.18	10	35	25.2	0.24	140	670
MIC1812-R22K	0.22	10	40	25.2	0.25	120	640
MIC1812-R27K	0.27	10	40	25.2	0.26	105	605
MIC1812-R33K	0.33	10	40	25.2	0.28	100	575
MIC1812-R39K	0.39	10	40	25.2	0.30	95	545
MIC1812-R47K	0.47	10	40	25.2	0.32	90	510
MIC1812-R56K	0.56	10	40	25.2	0.36	85	480
MIC1812-R68K	0.68	10	40	25.2	0.40	80	445
MIC1812-R82K	0.82	10	40	25.2	0.45	75	415
MIC1812-1R0K	1.0	10	50	7.96	0.50	70	370
MIC1812-1R2K	1.2	10	50	7.96	0.55	60	300
MIC1812-1R5K	1.5	10	50	7.96	0.60	54	300
MIC1812-1R8K	1.8	10	50	7.96	0.65	50	300
MIC1812-2R2K	2.2	10	50	7.96	0.70	46	250
MIC1812-2R7K	2.7	10	50	7.96	0.75	43	170
MIC1812-3R3K	3.3	10	50	7.96	0.80	40	160
MIC1812-3R9K	3.9	10	50	7.96	0.90	35	160
MIC1812-4R7K	4.7	10	50	7.96	1.00	32	150
MIC1812-5R6K	5.6	10	50	7.96	1.10	30	150
MIC1812-6R8K	6.8	10	50	7.96	1.20	27	120
MIC1812-8R2K	8.2	10	50	7.96	1.40	25	100
MIC1812-100K	10	10	50	2.52	1.60	20	65
MIC1812-120K	12	10	50	2.52	2.00	18	60
MIC1812-150K	15	10	50	2.52	2.50	17	55
MIC1812-180K	18	10	50	2.52	2.80	15	45
MIC1812-220K	22	10	50	2.52	3.20	13	45
MIC1812-270K	27	10	50	2.52	3.60	12	40
MIC1812-330K	33	10	50	2.52	4.00	11	40

## LAND PATTERN

Area	MIC0603	MIC0805	MIC1206	MIC1210	MIC1812
A	0.60 mm	1.00 mm	2.20 mm	2.20 mm	2.57 mm
B	1.00 mm	1.50 mm	1.40 mm	2.70 mm	3.40 mm
C	1.00 mm	1.00 mm	1.10 mm	1.10 mm	1.67 mm

