

■ FEATURES

SMI chip inductors are Mag Layers' line of high performance wound chip inductors. The SMI chip inductors are constructed with a wire wound structure and have a higher current capacity than multilayer chip inductors. SMI chip inductors have high quality characteristics suitable for your design needs.

Excellent Inductor Characteristics

SMI chip inductors have high Q values and high self-resonant frequencies.

Multiple Size Availability

SMI chip inductors are available in two sizes: 252018, 322522 and 453232.

■ APPLICATIONS

The SMI chip inductors can be used in a variety of electronics, including:

- Computers
- Computer Peripherals
- Cordless Phones

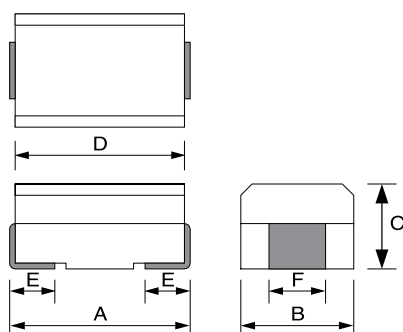
■ PRODUCT IDENTIFICATION

① ② ③ ④ ⑤
SMI - 453232 - R10 M □ □

- ① Product Code
- ② Dimensions
- ③ Inductance
- ④ Tolerance Code
- ⑤ Pattern Code

Code	Tolerance
J	$\pm 5\%$
K	$\pm 10\%$
M	$\pm 20\%$

Code	Packaging
B	Bulk
T	Taped

■ PRODUCT DIMENSIONS

	252018	322522	453232
A	2.5 ± 0.30	3.20 ± 0.40	4.5 ± 0.30
B	2.0 ± 0.30	2.50 ± 0.30	3.20 ± 0.30
C	1.8 ± 0.30	2.20 ± 0.30	3.20 ± 0.30
D	2.4 ± 0.30	2.90 ± 0.20	4.10 ± 0.30
E	0.45 ± 0.10	0.60 ± 0.10	1.00 ± 0.30
F	1.4 ± 0.20	1.10 ± 0.30	1.45 ± 0.30

NOTE: Dimension in m/m

■ PRODUCT SPECIFICATIONS (High Frequency Type)

Part No.	Inductance (nH)	Q Min.	Test Frequency (MHz)	S.R.F.(MHz) Min.	R _{DC} (Ω) Max.	I _{DC} (mA) Max.
SMI-252018-10N	10	10		2150	0.26	530
SMI-252018-12N	12	15		2050	0.27	500
SMI-252018-15N	15			1850	0.31	480
SMI-252018-18N	18		100	1650	0.34	450
SMI-252018-22N	22			1550	0.38	420
SMI-252018-27N	27			1400	0.42	410
SMI-252018-33N	33			1250	0.46	400
SMI-252018-39N	39	20		1100	0.50	380
SMI-252018-47N	47			1050	0.56	360
SMI-252018-56N	56			950	0.65	340
SMI-252018-68N	68			900	0.70	320
SMI-252018-82N	82			850	0.75	300
SMI-252018-R10	100			700	0.80	280
SMI-252018-R12	0.12	30	25.2	600	0.37	520
SMI-252018-R15	0.15			550	0.42	480
SMI-252018-R18	0.18			500	0.46	460
SMI-252018-R22	0.22			450	0.52	430
SMI-252018-R27	0.27			425	0.56	420
SMI-252018-R33	0.33			400	0.60	400
SMI-252018-R39	0.39			375	0.65	375
SMI-252018-R47	0.47			350	0.68	350
SMI-252018-R56	0.56			300	0.75	325
SMI-252018-R68	0.68			270	0.85	300
SMI-252018-R82	0.82			250	1.00	260
SMI-252018-1R0	1.00			220	1.10	345
SMI-252018-1R2	1.20			180	1.20	230
SMI-252018-1R5	1.50			135	1.30	220
SMI-252018-1R8	1.80			100	1.45	210
SMI-252018-2R2	2.20		7.96	75	1.55	200
SMI-252018-2R7	2.70			55	1.70	195

■ PRODUCT SPECIFICATIONS

Part No.	Inductance (μ H)	Q Min.	Test Frequency (MHz)	S.R.F.(MHz) Min.	R _{DC} (Ω) Max.	I _{DC} (mA) Max.
SMI-252018-3R3	3.30	30	7.96	48	1.90	185
SMI-252018-3R9	3.90			43	2.10	180
SMI-252018-4R7	4.70			40	2.30	175
SMI-252018-5R6	5.60			36	2.50	170
SMI-252018-6R8	6.80			33	2.70	165
SMI-252018-8R2	8.20			30	3.05	160
SMI-252018-100	10.0	25	2.52	27	3.50	155
SMI-252018-120	12.0			23	3.80	150
SMI-252018-150	15.0			20	4.40	140
SMI-252018-180	18.0			18	4.80	130
SMI-252018-220	22.0			17	5.50	125
SMI-252018-270	27.0			16	6.30	115
SMI-252018-330	33.0			15	7.10	110
SMI-252018-390	39.0			14	9.50	90
SMI-252018-470	47.0			13	11.10	80
SMI-252018-560	56.0			12	12.10	75
SMI-252018-680	68.0	20	0.796	11	16.60	70
SMI-252018-820	82.0			10	19.00	65
SMI-252018-101	100.0			9	21.00	60

 Tolerance of inductance: 10~100 μ H: $\pm 10\%$ (K) 0.12~0.82 μ H: $\pm 10\%$ (K) 1~100 μ H: $\pm 5\%$ (J)

■ PRODUCT SPECIFICATIONS

Part No.	Inductance (μ H)	Q Min.	Test Frequency (MHz)	S.R.F.(MHz) Min.	R _{DC} (Ω) Max.	I _{DC} (mA) Max.
SMI-322522-R10	0.10	28	100	700	0.44	450
SMI-322522-R12	0.12	30	25.2	500	0.22	
SMI-322522-R15	0.15			450	0.25	
SMI-322522-R18	0.18			400	0.28	
SMI-322522-R22	0.22			350	0.32	
SMI-322522-R27	0.27			320	0.36	
SMI-322522-R33	0.33			300	0.40	400
SMI-322522-R39	0.39			250	0.45	450
SMI-322522-R47	0.47			220	0.50	
SMI-322522-R56	0.56			180	0.55	
SMI-322522-R68	0.68			160	0.60	
SMI-322522-R82	0.82			140	0.65	
SMI-322522-1R0	1.00	30	7.96	120	0.70	400
SMI-322522-1R2	1.20			100	0.75	390
SMI-322522-1R5	1.50			85	0.85	370
SMI-322522-1R8	1.80			80	0.90	350
SMI-322522-2R2	2.20			75	1.00	320
SMI-322522-2R7	2.70			70	1.10	290
SMI-322522-3R3	3.30			60	1.20	260
SMI-322522-3R9	3.90			55	1.30	250
SMI-322522-4R7	4.70			50	1.50	220
SMI-322522-5R6	5.60			45	1.60	200
SMI-322522-6R8	6.80			40	1.80	180
SMI-322522-8R2	8.20			35	2.00	170
SMI-322522-100	10.0		2.52	30	2.10	150
SMI-322522-120	12.0			25	2.50	140
SMI-322522-150	15.0			20	2.80	130
SMI-322522-180	18.0			20	3.30	120
SMI-322522-220	22.0			20	3.70	110
SMI-322522-270	27.0	30	2.52	18	5.00	80
SMI-322522-330	33.0			17	5.60	70

■ PRODUCT SPECIFICATIONS

Part No.	Inductance (μ H)	Q Min.	Test Frequency (MHz)	S.R.F.(MHz) Min.	R _{DC} (Ω) Max.	I _{DC} (mA) Max.
SMI-322522-390	39.0	30	2.52	16	6.40	65
SMI-322522-470	47.0			15	7.00	60
SMI-322522-560	56.0			13	8.00	55
SMI-322522-680	68.0			12	9.00	50
SMI-322522-820	82.0			11	10.0	45
SMI-322522-101	100.0	20	0.796	10	11.0	40

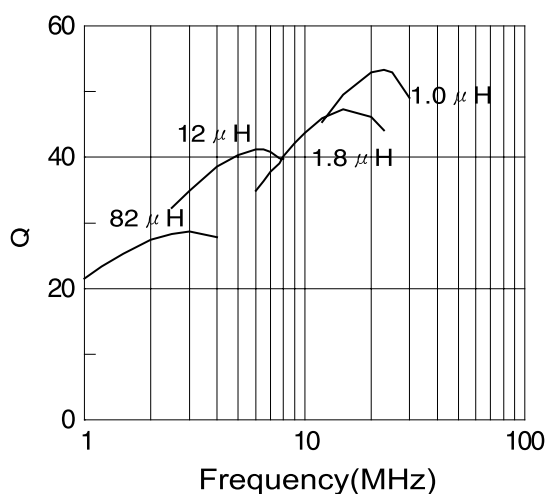
Part No.	Inductance (μ H)	Q Min.	Test Frequency (MHz)	S.R.F.(MHz) Min.	R _{DC} (Ω) Max.	I _{DC} (mA) Max.
SMI-453232-R10	0.10	28	25.2	300	0.44	450
SMI-453232-R12	0.12	30	25.2	280	0.22	
SMI-453232-R15	0.15			250	0.25	
SMI-453232-R18	0.18			220	0.28	
SMI-453232-R22	0.22			200	0.32	
SMI-453232-R27	0.27			180	0.36	
SMI-453232-R33	0.33			165	0.40	
SMI-453232-R39	0.39			150	0.45	
SMI-453232-R47	0.47			145	0.50	
SMI-453232-R56	0.56			140	0.55	
SMI-453232-R68	0.68			135	0.60	
SMI-453232-R82	0.82			130	0.67	
SMI-453232-1R0	1.00	50	7.96	100	0.50	450
SMI-453232-1R2	1.20			80	0.55	430
SMI-453232-1R5	1.50			70	0.60	410
SMI-453232-1R8	1.80			60	0.65	390
SMI-453232-2R2	2.20			55	0.70	380
SMI-453232-2R7	2.70			50	0.75	370
SMI-453232-3R3	3.30			45	0.80	355
SMI-453232-3R9	3.90			40	0.90	330
SMI-453232-4R7	4.70			35	1.00	315
SMI-453232-5R6	5.60			33	1.10	300
SMI-453232-6R8	6.80			27	1.20	285

■ PRODUCT SPECIFICATION

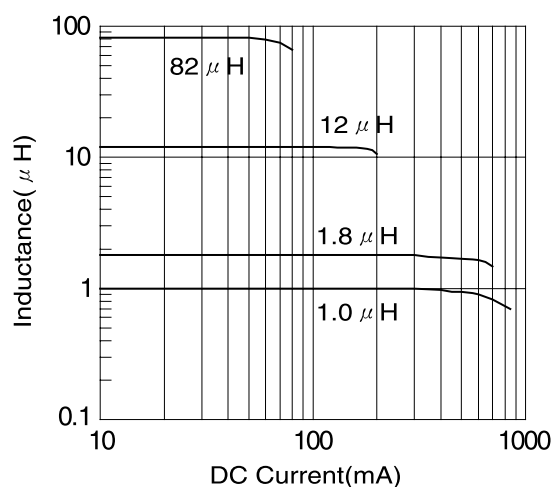
Part No.	Inductance (μ H)	Q Min.	Test Frequency (MHz)	S.R.F.(MHz) Min.	R _{DC} (Ω) Max.	I _{DC} (mA) Max.
SMI-453232-8R2	8.20	50	7.96	23	1.40	270
SMI-453232-100	10.0		2.52	20	1.60	250
SMI-453232-120	12.0			18	2.00	225
SMI-453232-150	15.0			17	2.50	200
SMI-453232-180	18.0			15	2.80	190
SMI-453232-220	22.0			13	3.20	180
SMI-453232-270	27.0			12	3.60	170
SMI-453232-330	33.0			11	4.00	160
SMI-453232-390	39.0	50	2.52	10	4.50	150
SMI-453232-470	47.0				5.00	140
SMI-453232-560	56.0			9.0	5.50	135
SMI-453232-680	68.0				6.00	130
SMI-453232-820	82.0				7.00	120
SMI-453232-101	100	40	0.796	7.0	8.00	110
SMI-453232-121	120			6.0		
SMI-453232-151	150			5.0	9.00	105
SMI-453232-181	180				9.50	102
SMI-453232-221	220			4.0	12.0	100
SMI-453232-271	270	30		3.0	18.0	92
SMI-453232-331	330				20.0	85
SMI-453232-391	390				23.0	80
SMI-453232-471	470				26.0	62
SMI-453232-561	560				30.0	50
SMI-453232-681	680				40.0	
SMI-453232-821	820			2.0	45.0	30
SMI-453232-102	1000	20	0.252		50.0	

■ TYPICAL ELECTRICAL CHARACTERISTIC CURVES (SMI-252018)

Q vs. Freq. Characteristics

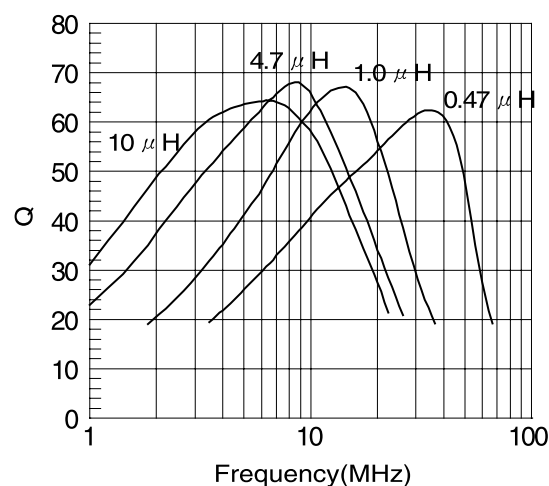


Inductance vs. Current Characteristics

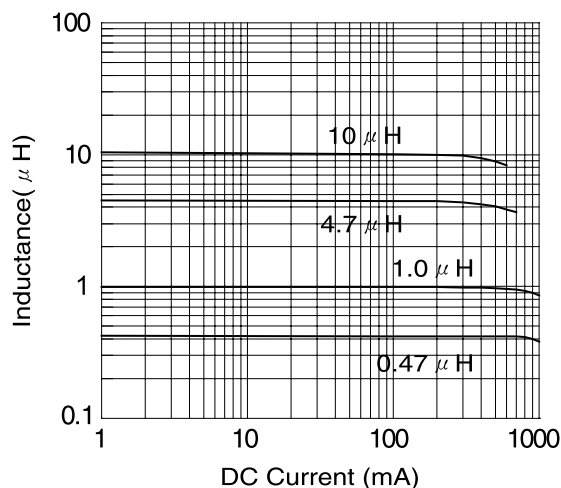


■ TYPICAL ELECTRICAL CHARACTERISTIC CURVES (SMI-322522)

Q vs. Freq. Characteristics

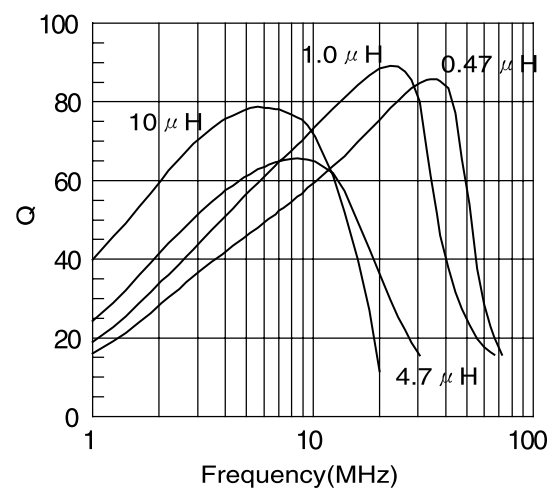


Inductance vs. Current Characteristics



■ TYPICAL ELECTRICAL CHARACTERISTIC CURVES (SMI-453232)

Q vs. Freq. Characteristics



Inductance vs. Current Characteristics

