tyco Electronics

SMD Chip Inductor

SIGMA INDUCTORS

Type 3612 Series

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The 3612 series is a standard 12:10 moulded winding on ferrite, of particularly high quality and reliability. Packaged in reels of 2000 pieces these devices are used on automatic pick and place machines for high speed mounting. Wide solder coated integrated terminals aid accurate placement. The 3612 series is offered in five versions, the M, L, S, T and P styles. The M is an economy version, the L offers low inductance values, the S is shielded whilst the T is the standard style. The P style is a recently introduced power version offering surprisingly high current carrying capability.

Key Features

- Inductance of 0.01µH to 470µH
- Suitable for Dip and Wave Solder
- Small Size - 3.2 x 2.5mm (1210)
- Temperature Range -20°C to +100°C
- Taped to IEC 286 Pt3
- Laboratory Design Kits Available
- High Reliability

Characteristics - Electrical - Style M (Economy)

Inductance Code	Inductance (µH)	Tolerance (±%)	Q Min	LQ Test Freq. (MHz)	S.R.F. (MHz)	Rdc Max (ohms)	Idc (mA) Max
R22	0.22	10	25	25.2	230	0.29	360
R27	0.27	10	25	25.2	210	0.32	345
R33	0.33	10	25	25.2	190	0.35	330
R39	0.39	10	25	25.2	175	0.39	305
R47	0.47	10	25	25.2	160	0.44	290
R56	0.56	10	25	25.2	150	0.49	275
R68	0.68	10	25	25.2	135	0.55	260
R82	0.82	10	25	25.2	125	0.61	245
1R0	1.0	5/10	30	7.96	115	0.69	230
1R2	1.2	5/10	30	7.96	100	0.75	215
1R5	1.5	5/10	30	7.96	[illegible]	0.75	210
1R8	1.8	5/10	30	7.96	85	0.82	200
2R2	2.2	5/10	30	7.96	[illegible]	0.95	190
2R7	2.7	5/10	30	7.96	75	[illegible]	180
3R3	3.3	5/10	30	[illegible]	65	[illegible]20	180
3R9	3.9	5/10	30	[illegible]96	60	1.30	175
4R7	4.7	5/10	30	7.96	55	1.50	165
5R6	5.6	5/10	30	7.96	[illegible]	1.60	160
6R8	6.8	5/10	[illegible]	[illegible]96	45	1.80	150
8R2	8.2	5/10	[illegible]	7.96	40	2.00	140
100	10.0	5/10	30	2.52	36	2.10	140
120	12.0	5/10	30	2.52	33	2.50	125
150	15.0	5/10	30	[illegible]52	30	2.80	120
180	18.0	5/10	30	2.52	27	3.30	110
220	22.0	5/10	30	2.52	25	3.70	105
270	27.0	5/10	30	2.52	22	5.00	90
330	33.0	5/10	[illegible]	2.52	20	5.60	85
390	39.0	5/10	30	2.52	20	6.40	80
470	47.0	5/10	30	2.52	15	7.00	75
560	56.0	5/10	30	2.52	15	8.00	70
680	68.0	[illegible]	30	2.52	15	9.00	65
82[illegible]	[illegible]	5/10	30	2.52	11	10.00	60
101	100.0	5/10	20	0.796	10	10.00	60
121	120.0	5/10	20	0.796	10	11.00	55
[illegible]	[illegible]	5/10	20	0.796	8	15.00	50
[illegible]	180.0	5/10	20	0.796	7	17.00	50
221	220.0	5/10	20	0.796	7	21.00	45

Characteristics - Electrical - Style S (Shielded)

Inductance Code	Inductance (µH)	Tolerance (±%)	Q Min	Q Test Freq. (MHz)	S.R.F. (MHz) Min	Rdc Max (W)	Idc (mA) Max
100	10	10	40	5.0	30	1.80	18
120	12	10	40	5.0	28	2.00	17
150	15	10	40	5.0	25	2.20	15
180	18	10	40	5.0	23	2.50	13
220	22	10	40	5.0	20	2.80	12
270	27	10	40	5.0	18	3.20	10
330	33	10	40	5.0	17	3.50	10
390	39	10	40	5.0	15	3.80	9
470	47	10	40	5.0	14	4.00	8
560	56	10	40	5.0	13	4.50	7
680	68	10	40	1.5	12	5.00	6
820	82	10	40	1.5	11	6.00	6
101	100	10	40	1.5	10	7.00	5
121	120	10	40	1.5	9	8.00	5
151	150	10	40	1.5	5	9.00	5
181	180	10	40	1.5	5	11.00	5
221	220	10	40	1.5	4	12.00	5
271	270	10	40	1.5	4	14.00	5

OBSOLETE

Characteristics - Electrical - Style P (High Current)

Inductance Code	Inductance (µH)	Tolerance (±%)	Q Min	LQ Test Freq. (MHz)	S.R.F. (MHz)	Rdc Max (ohms)	Idc (mA) Max
1R0	1.0	20	7	7.96	150	0.15	600
1R5	1.5	20	7	7.96	110	0.18	550
2R2	2.2	20	7	7.96	80	0.23	500
3R3	3.3	20	7	7.96	58	0.28	400
4R7	4.7	20	7	7.96	46	0.34	350
6R8	6.8	20	7	7.96	38	0.42	300
100	10.0	10	15	2.52	23	0.50	240
120	12.0	10	15	2.52	21	0.60	230
150	15.0	10	15	2.52	18	0.74	220
180	18.0	10	15	2.52	17	0.90	205
220	22.0	10	15	2.52	[illegible]	1.15	185
270	27.0	10	15	2.52	13	1.45	165
330	33.0	10	15	2.52	[illegible]	1.65	155
390	39.0	10	15	2.52	11	[illegible]	145
470	47.0	10	15	[illegible]	9.5	[illegible]25	135
560	56.0	10	15	[illegible]52	8.5	3.30	110
680	68.0	10	15	2.52	7.5	3.70	105
820	82.0	10	15	2.52	[illegible]	4.20	100
101	100.0	10	[illegible]	[illegible]796	6.5	5.00	90
121	120.0	10	[illegible]	0.796	6.0	7.00	75
151	150.0	10	20	0.796	5.5	8.00	70
181	180.0	10	20	0.79[illegible]	5.0	9.50	65
221	220.0	[illegible]	20	[illegible]96	4.0	11.00	60
271	270.0	10	20	0.796	3.5	14.50	55
331	330.0	10	20	0.796	3.0	16.00	50

Characteristics - Electrical - Style [illegible] (Low Induct[illegible]ce)

Inductance Code	Inductance (µH)	Tolerance (%)	Q Min	Q Test Freq. (MHz)	Q Test Freq. (MHz)	S.R.F. (MHz)	Rdc Max (ohms)	Idc (mA) Max
47N	0.047	20	10	100	100	680	0.20	450
56N	[illegible]	20	10	100	100	600	0.22	420
68N	0.068	20	10	100	100	540	0.25	400
[illegible]N	0.082	20	10	100	100	500	0.27	380
R[illegible]	[illegible]	20	10	100	100	450	0.30	360
[illegible]12	0.12	20	10	25.2	25.2	400	0.67	240
R15	0.15	20	10	25.2	25.2	350	0.72	230
R18	0.18	20	10	25.2	25.2	320	0.81	220
[illegible]	0.22	10	10	1.0	25.2	280	0.90	210
R27	0.27	10	10	1.0	25.2	250	1.00	200
R33	0.33	10	10	1.0	25.2	220	1.10	190
R39	0.39	10	10	1.0	25.2	200	1.20	180
R47	0.47	10	10	1.0	25.2	180	1.40	175
R56	0.56	10	10	1.0	25.2	160	1.50	170
R68	0.68	10	10	1.0	25.2	150	1.70	155
R82	0.82	10	10	1.0	25.2	135	1.90	145
1R0	1.00	5	13	1.0	7.96	120	2.10	125
1R2	1.20	5	13	1.0	7.96	110	2.30	120
1R5	1.50	5	13	1.0	7.96	95	2.70	115
1R8	1.80	5	13	1.0	7.96	85	3.00	110
2R2	2.20	5	13	1.0	7.96	80	3.20	110
2R7	2.70	5	13	1.0	7.96	70	3.60	105
3R3	3.30	5	13	1.0	7.96	62	4.20	100
3R9	3.90	5	13	1.0	7.96	57	4.40	95
4R7	4.70	5	13	1.0	7.96	52	7.70	70
5R6	5.60	5	13	1.0	7.96	46	8.70	65
6R8	6.80	5	13	1.0	7.96	42	10.00	60
8R2	8.20	5	13	1.0	7.96	38	11.00	60

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Characteristics - Electrical - Style T (Standard)

Inductance Code	Inductance (µH)	Tolerance (±%)	Q Min	LQ Test Freq. (MHz)	S.R.F. (MHz)	Rdc Max (ohms)	Idc (mA) Max
010	0.010	5	15	100	2500	0.13	450
012	0.012	5	17	100	2300	0.14	450
015	0.015	5	19	100	2100	0.16	450
018	0.018	5	21	100	1900	0.18	450
022	0.022	5	23	100	1700	0.20	450
027	0.027	5	23	100	1500	0.22	450
033	0.033	5	25	100	1400	0.24	450
039	0.039	5	25	100	1300	0.27	450
047	0.047	5	26	100	1200	0.30	450
056	0.056	5	26	100	1100	0.33	450
068	0.068	5	27	100	1000	0.36	450
082	0.082	5	27	100	900	0.40	450
R10	0.10	5	28	100	850	0.44	450
R12	0.12	5	30	25.2	500	0.[illegible]	450
R15	0.15	5	30	25.2	450	0.25	450
R18	0.18	5	30	25.2	400	0.28	450
R22	0.22	5	30	25.2	350	0.32	450
R27	0.27	5	30	25.2	300	0.36	450
R33	0.33	5	30	25.2	300	0.40	450
R39	0.39	5	30	25.2	250	0.45	450
R47	0.47	5	30	25.2	220	0.50	450
R56	0.56	5	30	25.2	180	0.55	450
R68	0.68	5	30	25.2	160	0.60	450
R82	0.82	5	30	25.2	140	0.65	450
1R0	1.0	5	30	7.96	120	0.70	400
1R2	1.2	5	30	7.96	100	0.75	390
1R5	1.5	5	30	7.96	85	0.85	370
1R8	1.8	5	30	7.96	80	0.90	350
2R2	2.2	5	30	7.96	75	1.00	320
2R7	2.7	5	30	7.96	70	1.10	290
3R3	3.3	5	30	7.96	60	1.20	260
3R9	3.9	5	30	7.96	55	1.30	250
4R7	4.7	5	30	7.96	50	1.50	220
5R6	5.6	5	30	7.96	45	1.60	200
6R8	6.8	5	30	7.96	40	1.80	180
8R2	8.2	5	30	7.96	35	2.00	170
100	10.0	5	30	2.52	30	2.10	150
120	12.0	5	30	2.52	20	2.50	140
150	15.0	5	30	2.52	20	2.80	130
180	18.0	5	30	2.52	20	3.30	120
220	22.0	5	30	2.52	20	3.70	110
270	27.0	5	30	2.52	20	5.00	80
330	33.0	5	30	2.52	17	5.60	70
390	39.0	5	30	2.52	16	6.40	65
470	47.0	5	30	2.52	15	7.00	60
560	56.0	5	30	2.52	13	8.00	55
680	68.0	5	30	2.52	12	9.00	50
820	82.0	5	30	2.52	11	10.00	45
101	100.0	5	20	0.796	10	10.00	40
121	120.0	5	20	0.796	10	11.00	70
151	150.0	5	20	0.796	8	15.00	65
181	180.0	5	20	0.796	7	17.00	60
221	220.0	5	20	0.796	7	21.00	50
271	270.0	5	20	0.796	6	28.00	45
331	330.0	5	20	0.796	5	34.00	40
391	390.0	5	20	0.796	5	38.00	35
471	470.0	5	20	0.796	4	40.00	25

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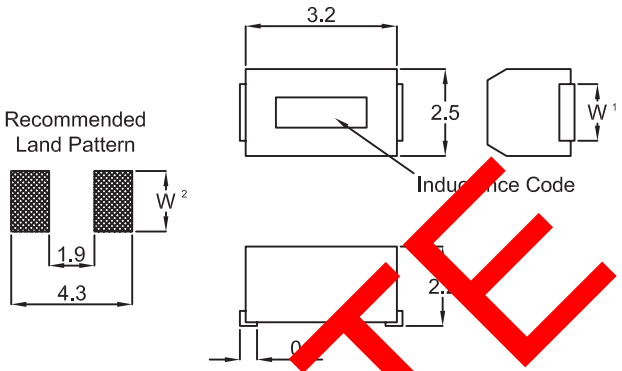
Type 3612 Series

Temperature

Temperature Range (Storage):	-40°C to +100°C
Temperature Range (Operating):	-20°C to +100°C

Dimensions



Packa	W¹	W²
Type		1.30
Type M:		
Style S:		2.15
Style L:		
Style P:		

How to Order

3612		1R5	K
Common Part	Style	Inductance	Tolerance
3612 - 12:10 Size	T - Standard Series L - Low Inductance P - High Current M - Economy S - Shielded	See Relevant Table for Inductance Code	J - ±5% K - ±10% M - 20%