

Sprague-Goodman

ENGINEERING BULLETIN

SG-800H.1

Supercedes SG-800G

SURFCOIL® SMT INDUCTORS

FEATURES

- Lead free, ROHS Compliant
- High Q
- High self-resonant frequency including nonmagnetic models in microwave range
- Shielded series use ferrite filled encapsulation to reduce external magnetic coupling
- Low DC resistance
- Carrier and reel packaging is standard
- Ten case sizes

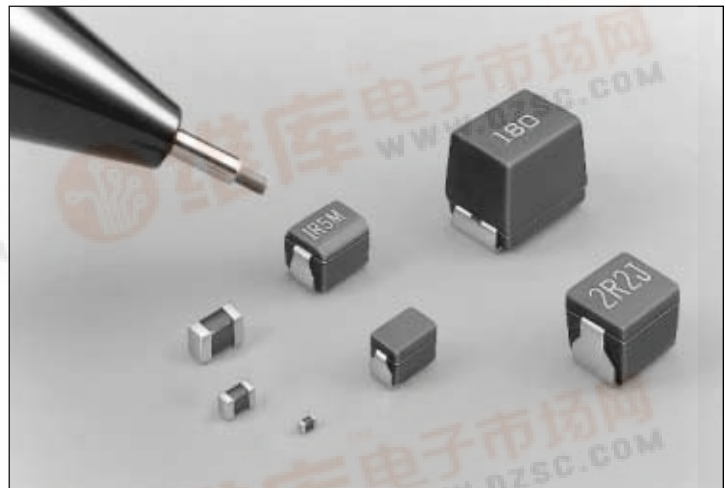
SPECIFICATIONS

Electrical

- Inductance & Q, etc.: See tables
- Temperature range -20°C to $+85^{\circ}\text{C}$, except GLY, GLYC, GLZ, GLZB and GLZP Models are -40°C to $+85^{\circ}\text{C}$
 - Change of L = $\pm 10\%$ max, except GLX, GLY, GLYC, GLZ, GLZB and GLZP Models are $\pm 5\%$
 - Change of Q = $\pm 20\%$ max, except GLY, GLYC, GLZ, GLZB and GLZP Models are $\pm 25\%$
- Rated Current: See tables. Current rating is determined by either or both of the following conditions:
 1. Self heating raises SURFCOIL temperature 20°C
 2. Inductance value reduced by 10% from saturation effect

Mechanical (Chip Inductors)

- Suitable for wave flow soldering, infrared, and vapor phase reflow (typically over 90% coverage)
- Withstands soldering temperatures without damage
- Fully encapsulated and thermally cycled for stability and highest reliability



Encapsulation: Epoxy resin all series; GLC, GLD and GLW have ferrite filler for closed magnetic circuit.

Core: Ferrite (except high frequency GLA and GLU series, which are nonmagnetic)

Coil: Polyurethane enameled copper wire

Terminal: Phosphor-Bronze tin plated

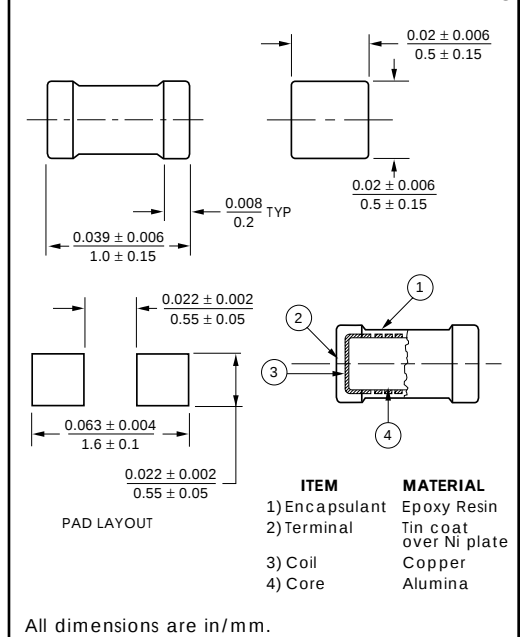
[View applies to molded bobbin wound types]



GLZ SERIES — LASER CUT 0402 SIZE

Inductance L (nH)	Standard Inductance Tolerance	Model No.	SRF (MHz) min	Q min	Q/L Test Freq. (MHz)	Rated Current (mA)	DCR (Ω) max
1.0	± 0.3 nH	GLZ1N030	6000	8	100	400	0.05
1.2	± 0.3 nH	GLZ1N225	6000	8	100	400	0.06
1.5	± 0.3 nH	GLZ1N520	6000	8	100	400	0.07
1.8	± 0.3 nH	GLZ1N817	6000	8	100	400	0.08
2.2	± 0.3 nH	GLZ2N214	6000	8	100	400	0.09
2.7	± 0.3 nH	GLZ2N711	5500	8	100	400	0.10
3.3	± 0.3 nH	GLZ3N309	5500	8	100	400	0.12
3.9	± 0.3 nH	GLZ3N908	5200	8	100	360	0.15
4.7	± 0.3 nH	GLZ4N706	4800	8	100	360	0.17
5.6	± 0.3 nH	GLZ5N605	4600	8	100	340	0.19
6.8	± 5%	GLZ6N805	4000	8	100	320	0.30
8.2	± 5%	GLZ8N205	3500	8	100	320	0.35
10.0	± 5%	GLZ10N05	2800	8	100	320	0.41
12.0	± 5%	GLZ12N05	2800	8	100	320	0.45
15.0	± 5%	GLZ15N05	2500	8	100	240	0.60
18.0	± 5%	GLZ18N05	2200	8	100	240	0.70
22.0	± 5%	GLZ22N05	2000	8	100	200	0.80
27.0	± 5%	GLZ27N05	1800	8	100	200	1.20
33.0	± 5%	GLZ33N05	1800	8	100	170	1.40
39.0	± 5%	GLZ39N05	1800	8	100	150	1.70
47.0	± 5%	GLZ47N05	1800	8	100	140	2.10
56.0	± 5%	GLZ56N05	1500	8	100	130	2.50
68.0	± 5%	GLZ68N05	1500	8	100	120	4.00
82.0	± 5%	GLZ82N05	1400	8	100	110	4.50
100.0	± 5%	GLZR1005	1200	8	100	90	5.50

GLZ GLZB and GLZP Series Outline Drawing



GLZB SERIES — HIGH Q LASER CUT 0402 SIZE

Inductance L (nH)	Standard Inductance Tolerance	Inductance Test Freq. (MHz)	Model No.	SRF (MHz) min	Q Typ (800 MHz)	Q min (100 MHz)	Rated Current (mA)	DCR (Ω) max
1.0	± 0.2 nH	100	GLZB1N020	6000	41	10	400	0.05
1.2	± 0.2 nH	100	GLZB1N217	6000	41	10	400	0.06
1.5	± 0.2 nH	100	GLZB1N513	6000	40	10	400	0.07
1.8	± 0.2 nH	100	GLZB1N811	6000	40	10	400	0.08
2.2	± 0.2 nH	100	GLZB2N209	6000	40	10	400	0.09
2.7	± 0.2 nH	100	GLZB2N707	5500	40	10	400	0.10
3.3	± 0.2 nH	100	GLZB3N306	5500	39	10	400	0.12
3.9	± 0.2 nH	100	GLZB3N905	5200	39	10	360	0.15
4.7	± 0.2 nH	100	GLZB4N704	4800	39	10	360	0.17
5.6	± 0.2 nH	100	GLZB5N604	4600	39	10	340	0.19
6.8	± 0.2 nH	100	GLZB6N803	4000	39	10	320	0.30
8.2	± 0.2 nH	100	GLZB8N202	3500	39	10	320	0.35
10.0	± 2%	100	GLZB10002	2800	39	10	320	0.41
12.0	± 2%	100	GLZB12002	2800	38	10	320	0.45
15.0	± 2%	100	GLZB15002	2500	36	10	240	0.60
18.0	± 2%	100	GLZB18002	2200	36	10	240	0.70
22.0	± 2%	100	GLZB22002	2200	36	10	200	0.80
27.0	± 2%	100	GLZB27002	1800	36	10	200	1.20
33.0	± 2%	100	GLZB33002	1800	35	10	170	1.40
39.0	± 2%	100	GLZB39002	1800	35	10	170	1.70

GLZP SERIES — HIGH CURRENT LOW DCR LASER CUT 0402 SIZE

Inductance L (nH)	Standard Inductance Tolerance	Model No.	SRF (GHz) min	Q min	Q/L Test Frequency (MHz)	Rated Current (A)	DCR (Ω) max
2.2	± 0.3 nH	GLZP2N214	5.3	7	100	1.9	0.04
2.7	± 0.3 nH	GLZP2N711	5.3	7	100	1.8	0.05
3.3	± 0.3 nH	GLZP3N309	5.0	7	100	1.5	0.07
3.9	± 0.3 nH	GLZP3N908	4.8	7	100	1.4	0.08
4.7	± 0.3 nH	GLZP4N706	4.6	7	100	1.3	0.10
5.6	± 0.3 nH	GLZP5N605	4.2	7	100	1.2	0.12
6.8	± 5%	GLZP6N805	4.0	7	100	1.1	0.16
8.2	± 5%	GLZP8N205	3.7	7	100	0.90	0.21
10.0	± 5%	GLZP10N05	3.2	7	100	0.75	0.26

GLY SERIES — LASER CUT 0603 SIZE

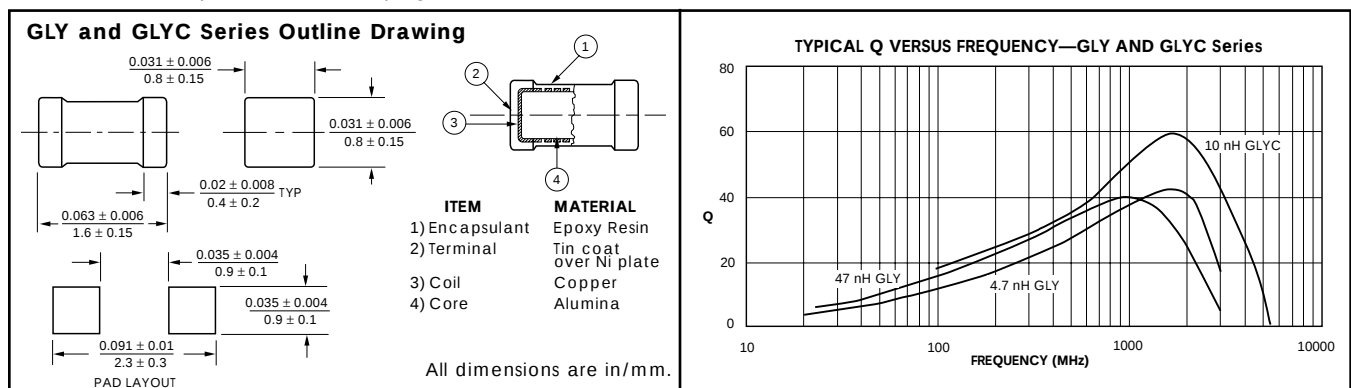
Inductance L (nH) (100 MHz)	Standard Inductance Tolerance*	Model No.	SRF (GHz) min	Q Typ (800 MHz)	Q min (100 MHz)	Rated Current (mA)	DCR (Ω) max
1.0	± 0.3 nH	GLY1N030	6.0	47	7	500	0.05
1.2	± 0.3 nH	GLY1N225	6.0	47	7	500	0.06
1.5	± 0.3 nH	GLY1N520	6.0	47	8	500	0.07
1.8	± 0.3 nH	GLY1N817	6.0	45	8	500	0.08
2.2	± 0.3 nH	GLY2N214	6.0	35	8	500	0.09
2.7	± 0.3 nH	GLY2N711	6.0	35	8	500	0.10
3.3	± 0.3 nH	GLY3N309	5.5	35	9	500	0.12
3.9	$\pm 5\%$	GLY3N905	5.5	36	9	450	0.15
4.7	$\pm 5\%$	GLY4N705	4.8	36	9	450	0.17
5.6	$\pm 5\%$	GLY5N605	4.6	36	9	430	0.18
6.8	$\pm 5\%$	GLY6N805	3.5	36	9	430	0.20
8.2	$\pm 5\%$	GLY8N205	3.5	36	9	400	0.28
10.0	$\pm 5\%$	GLY10N05	2.8	37	10	400	0.32
12.0	$\pm 5\%$	GLY12N05	2.8	37	10	400	0.35
15.0	$\pm 5\%$	GLY15N05	2.5	38	10	350	0.41
18.0	$\pm 5\%$	GLY18N05	2.3	39	10	350	0.45
22.0	$\pm 5\%$	GLY22N05	2.0	40	10	300	0.50
27.0	$\pm 5\%$	GLY27N05	2.0	41	10	300	0.55
33.0	$\pm 5\%$	GLY33N05	1.8	40	10	300	0.60
39.0	$\pm 5\%$	GLY39N05	1.8	39	11	300	0.80
47.0	$\pm 5\%$	GLY47N05	1.8	38	11	250	0.95
56.0	$\pm 5\%$	GLY56N05	1.8	35	12	250	1.2
68.0	$\pm 5\%$	GLY68N05	1.5	35	12	250	1.3
82.0	$\pm 5\%$	GLY82N05	1.5	33	12	250	1.5
100.0	$\pm 5\%$	GLYR1005	1.3	30	12	200	1.8
120.0	$\pm 5\%$	GLYR1205	1.2	25	5	130	3.0
150.0	$\pm 5\%$	GLYR1505	1.1	22	5	100	4.5
180.0	$\pm 5\%$	GLYR1805	1.0	20	4	80	6.5
220.0	$\pm 5\%$	GLYR2205	0.9	17	4	70	7.5

* ± 0.2 nH inductance tolerance is available for inductance values from 1.0 to 8.2 nH. $\pm 2\%$ inductance tolerance is available for inductance values of 10.0 nH and up. Consult factory regarding these special units.

GLYC SERIES — HIGH CURRENT LOW DCR LASER CUT 0603 SIZE

Inductance L (nH) (100 MHz)	Standard Inductance Tolerance	Model No.	SRF (GHz) min	Q min (100 MHz)	Rated Current (A)	DCR (m Ω) max
2.2	$\pm 10\%$	GLYC2N210	6.0	8	2.1	30
2.7	$\pm 10\%$	GLYC2N710	5.0	8	2.1	30
3.3	$\pm 10\%$	GLYC3N310	5.0	8	2.1	40
3.9	$\pm 10\%$	GLYC3N910	5.2	9	2.1	40
4.7	$\pm 10\%$	GLYC4N710	4.8	9	2.1	50
5.6	$\pm 10\%$	GLYC5N610	4.6	9	2.1	55
6.8	$\pm 10\%$	GLYC6N810	4.0	9	1.9	55
8.2	$\pm 10\%$	GLYC8N210	3.5	9	1.7	60
10.0	$\pm 10\%$	GLYC10N10	2.8	9	1.4	65
12.0	$\pm 10\%$	GLYC12N10	2.5	9	1.3	80
15.0	$\pm 10\%$	GLYC15N10	2.2	9	0.9	100
18.0	$\pm 10\%$	GLYC18N10	2.0	9	0.8	120
22.0	$\pm 10\%$	GLYC22N10	1.8	9	0.7	150

Carrier and reel specifications on page 12.

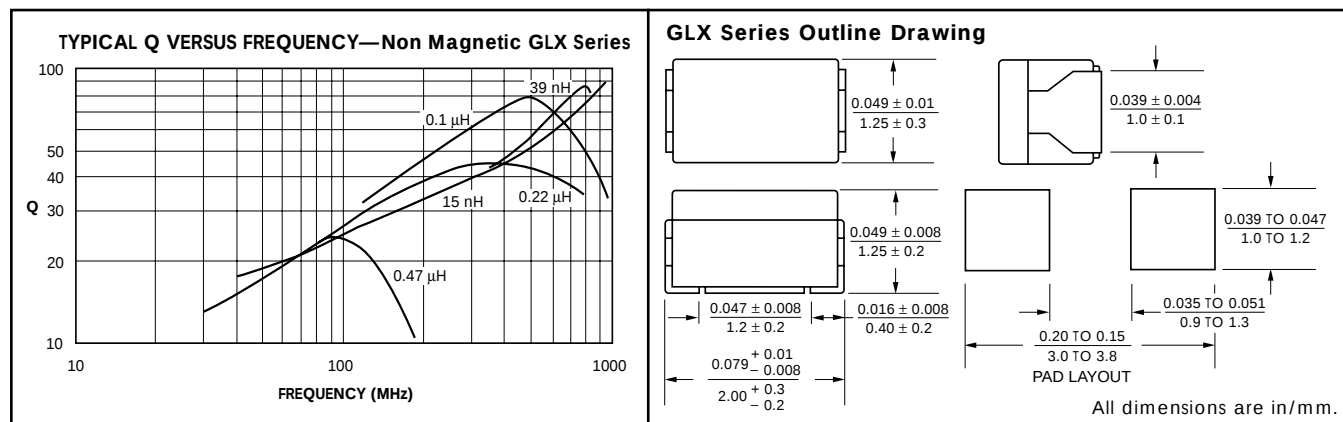




GLX SERIES — HIGH FREQUENCY NONMAGNETIC WIREWOUND 0805 SIZE

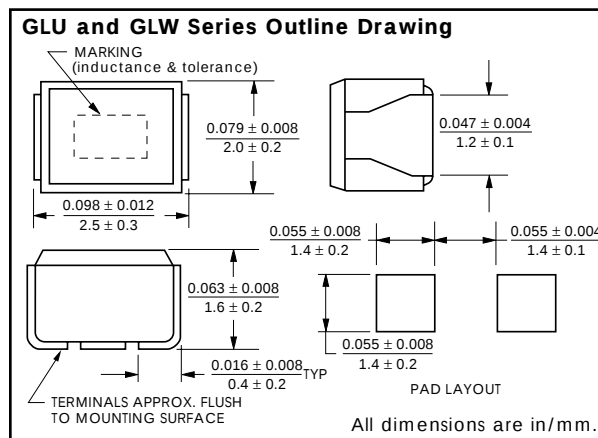
Inductance L (μH)	Standard Inductance Tolerance*	Model No.	SRF (MHz) min	Q min	Q/L Test Frequency (MHz)	Rated Current (mA)	DCR (Ω) max
0.010	± 10%	GLX10N10	2500	10	100	540	0.18
0.012	± 10%	GLX12N10	2500	10	100	535	0.23
0.015	± 10%	GLX15N10	2500	12	100	520	0.23
0.018	± 10%	GLX18N10	2000	12	100	480	0.29
0.022	± 10%	GLX22N10	2000	15	100	465	0.29
0.027	± 10%	GLX27N10	1800	15	100	455	0.34
0.033	± 10%	GLX33N10	1500	15	100	395	0.39
0.039	± 10%	GLX39N10	1500	15	100	390	0.40
0.047	± 10%	GLX47N10	1000	15	100	385	0.46
0.056	± 10%	GLX56N10	1000	15	100	360	0.51
0.068	± 10%	GLX68N10	800	15	100	340	0.57
0.082	± 10%	GLX82N10	800	15	100	330	0.62
0.10	± 10%	GLXR1010	800	8	25.2	285	0.86
0.12	± 10%	GLXR1210	600	8	25.2	275	0.99
0.15	± 10%	GLXR1510	600	10	25.2	230	1.47
0.18	± 10%	GLXR1810	600	10	25.2	195	1.61
0.22	± 10%	GLXR2210	500	10	25.2	170	1.83
0.27	± 10%	GLXR2710	300	10	25.2	165	1.95
0.33	± 10%	GLXR3310	200	10	25.2	160	2.16
0.39	± 10%	GLXR3910	150	10	25.2	150	2.37
0.47	± 10%	GLXR4710	150	10	25.2	145	2.56
0.56	± 10%	GLXR5610	100	10	25.2	140	2.69
0.68	± 10%	GLXR6810	100	10	25.2	130	3.02
0.82	± 10%	GLXR8210	80	10	25.2	125	3.38
1.00	± 10%	GLX1R010	80	8	7.96	120	3.87

*±5% Inductance tolerance is available for inductance values of 0.033 μH and up.



GLW SERIES — HIGH CURRENT MOLDED BOBBIN WOUND 1008 SIZE

Inductance L (μH)	Standard Inductance Tolerance	Model No.	SRF (MHz) min	Q min	Q/L Test Freq. (MHz)	Rated Current (mA)	DCR (Ω) max
1.0	± 20%	GLW1R020	95	10	7.96	475	0.45
1.5	± 20%	GLW1R520	85	10	7.96	435	0.55
2.2	± 20%	GLW2R220	65	10	7.96	390	0.65
3.3	± 20%	GLW3R320	55	8	7.96	340	0.85
4.7	± 20%	GLW4R720	43	8	7.96	285	1.2
6.8	± 10%	GLW6R810	39	8	7.96	275	1.3
10.0	± 10%	GLW10010	32	20	2.52	210	2.2
12.0	± 10%	GLW12010	25	20	2.52	195	2.7
15.0	± 10%	GLW15010	21	20	2.52	175	3.2
22.0	± 10%	GLW22010	18	20	2.52	160	4.0
33.0	± 10%	GLW33010	16	20	2.52	120	6.5



GLU SERIES — MOLDED BOBBIN WOUND 1008 SIZE

Inductance L (μH)	Standard Inductance Tolerance*	Model No.	SRF (MHz) min	Q min	Q/L Test Freq. (MHz)	Rated Current (mA)	DCR (Ω) max
0.22	± 10%	GLUR2210M	230	25	25.2	190	0.70
0.27	± 10%	GLUR2710M	210	25	25.2	180	0.75
0.33	± 10%	GLUR3310M	190	25	25.2	170	0.85
0.39	± 10%	GLUR3910M	175	25	25.2	160	0.95
0.47	± 10%	GLUR4710M	160	25	25.2	155	1.00
0.56	± 10%	GLUR5610M	150	25	25.2	150	1.10
0.68	± 10%	GLUR6810M	135	25	25.2	140	1.25
0.82	± 10%	GLUR8210M	125	25	25.2	130	1.40
1.00	± 10%	GLU1R010	115	25	7.96	195	0.65
1.20	± 10%	GLU1R210	100	25	7.96	180	0.75
1.50	± 10%	GLU1R510	90	25	7.96	170	0.85
1.80	± 10%	GLU1R810	85	25	7.96	160	0.95
2.20	± 10%	GLU2R210	80	25	7.96	155	1.05
2.70	± 10%	GLU2R710	75	25	7.96	145	1.20
3.30	± 10%	GLU3R310	65	25	7.96	135	1.30
3.90	± 10%	GLU3R910	60	25	7.96	130	1.40
4.70	± 10%	GLU4R710	55	25	7.96	125	1.55
5.60	± 10%	GLU5R610	50	25	7.96	120	1.75
6.80	± 10%	GLU6R810	45	25	7.96	115	1.95
8.20	± 10%	GLU8R210	40	25	7.96	105	2.20
10.0	± 5%	GLU10005	32	25	2.52	80	3.5
12.0	± 5%	GLU12005	30	25	2.52	75	3.8
15.0	± 5%	GLU15005	28	25	2.52	70	4.4
18.0	± 5%	GLU18005	25	25	2.52	65	5.0
22.0	± 5%	GLU22005	22	25	2.52	60	5.8
27.0	± 5%	GLU27005	21	20	2.52	115	6.3
33.0	± 5%	GLU33005	20	20	2.52	110	7.1
39.0	± 5%	GLU39005	18	20	2.52	90	9.5
47.0	± 5%	GLU47005	17	20	2.52	80	11.0
56.0	± 5%	GLU56005	16	20	2.52	75	12.1
68.0	± 5%	GLU68005	15	20	2.52	70	16.6
82.0	± 5%	GLU82005	13	20	2.52	65	19.0
100.0	± 5%	GLU10105	12	15	0.796	60	21.0

* ± 5% Inductance tolerance is available for inductance values up to 8.2 μH. Carrier and reel specifications on page 12.

GLU SERIES — NONMAGNETIC HIGH FREQUENCY MOLDED BOBBIN WOUND 1008 SIZE

Inductance L (μH)	Standard Inductance Tolerance*	Model No.	SRF (MHz) min	Q min	Q/L Test Freq. (MHz)	Rated Current (mA)	DCR (Ω) max
0.010	± 10%	GLU10N10	2500	10	100	280	0.32
0.012	± 10%	GLU12N10	2200	10	100	270	0.34
0.015	± 10%	GLU15N10	1800	10	100	255	0.38
0.018	± 10%	GLU18N10	1550	10	100	250	0.40
0.022	± 10%	GLU22N10	1350	15	100	240	0.43
0.027	± 10%	GLU27N10	1150	15	100	230	0.47
0.033	± 10%	GLU33N10	1000	15	100	220	0.51
0.039	± 10%	GLU39N10	890	15	100	215	0.55
0.047	± 10%	GLU47N10	770	15	100.	205	0.59
0.056	± 10%	GLU56N10	670	15	100.	200	0.63
0.068	± 10%	GLU68N10	590	15	100.	190	0.68
0.082	± 10%	GLU82N10	520	15	100.	185	0.73
0.10	± 10%	GLUR1010	460	10	25.2	175	0.80
0.12	± 10%	GLUR1210	400	10	25.2	170	0.87
0.15	± 10%	GLUR1510	340	10	25.2	160	0.98
0.18	± 10%	GLUR1810	300	10	25.2	155	1.05
0.22	± 10%	GLUR2210	260	10	25.2	145	1.15
0.27	± 10%	GLUR2710	230	10	25.2	140	1.25
0.33	± 10%	GLUR3310	200	10	25.2	135	1.37
0.39	± 10%	GLUR3910	180	10	25.2	130	1.47
0.47	± 10%	GLUR4710	160	10	25.2	125	1.58
0.56	± 10%	GLUR5610	145	10	25.2	120	1.70
0.68	± 10%	GLUR6810	130	10	25.2	110	1.85
0.82	± 10%	GLUR8210	100	10	25.2	100	2.10

*±5% Inductance tolerance is available for inductance values of 0.033 μH and up. Carrier and reel specifications on page 12.



GLA SERIES — MOLDED BOBBIN WOUND 1210 SIZE

Inductance L (μH)	Standard Inductance Tolerance †	Model No.	SRF (MHz) min	Q min	Q/L Test Freq. (MHz)	Rated Current (mA)	DCR (Ω) max
0.22	± 10%	GLAR2210M	230	25	25.2	360	0.29
0.27	± 10%	GLAR2710M	210	25	25.2	345	0.32
0.33	± 10%	GLAR3310M	190	25	25.2	330	0.35
0.39	± 10%	GLAR3910M	175	25	25.2	305	0.39
0.47	± 10%	GLAR4710M	160	25	25.2	290	0.44
0.56	± 10%	GLAR5610M	150	25	25.2	275	0.49
0.68	± 10%	GLAR6810M	135	25	25.2	260	0.55
0.82	± 10%	GLAR8210M	125	25	25.2	245	0.61
1.00	± 10%	GLA1R010	115	30 *	7.96	230	0.69
1.20	± 10%	GLA1R210	100	30 *	7.96	215	0.75
1.50	± 10%	GLA1R510	90	30 *	7.96	210	0.75
1.80	± 10%	GLA1R810	85	30 *	7.96	200	0.82
2.20	± 10%	GLA2R210	80	30 *	7.96	190	0.95
2.70	± 10%	GLA2R710	75	30 *	7.96	180	1.1
3.30	± 10%	GLA3R310	65	30 *	7.96	180 *	1.2 *
3.90	± 10%	GLA3R910	60	30 *	7.96	175 *	1.3 *
4.70	± 10%	GLA4R710	55	30 *	7.96	165 *	1.5
5.60	± 10%	GLA5R610	50	30 *	7.96	160 *	1.6 *
6.80	± 10%	GLA6R810	45	30 *	7.96	150 *	1.8 *
8.20	± 10%	GLA8R210	40	30 *	7.96	140 *	2.0 *
10.0	± 10%	GLA10010	36	30	2.52	140 *	2.1 *
12.0	± 10%	GLA12010	33	30	2.52	125 *	2.5 *
15.0	± 10%	GLA15010	30	30	2.52	120 *	2.8 *
18.0	± 10%	GLA18010	27	30	2.52	110 *	3.3 *
22.0	± 10%	GLA22010	25	30	2.52	105 *	3.7 *
27.0	± 10%	GLA27010	22	30	2.52	90 *	5.0 *
33.0	± 10%	GLA33010	20	30	2.52	85 *	5.6 **
39.0	± 10%	GLA39010	20	30	2.52	80 *	6.4 **
47.0	± 10%	GLA47010	15	30	2.52	75	7.0
56.0	± 10%	GLA56010	15	30	2.52	70	8.0
68.0	± 10%	GLA68010	15	30	2.52	65	9.0
82.0	± 10%	GLA82010	11	30 *	2.52	60	10.0
100.0	± 10%	GLA10110	10	20 *	0.796	60	10.0
120.0	± 10%	GLA12110	10	20 *	0.796	55	11.0
150.0	± 10%	GLA15110	8	20	0.796	50	15.0
180.0	± 10%	GLA18110	7	20	0.796	50	17.0
220.0	± 10%	GLA22110	7	20	0.796	45	21.0

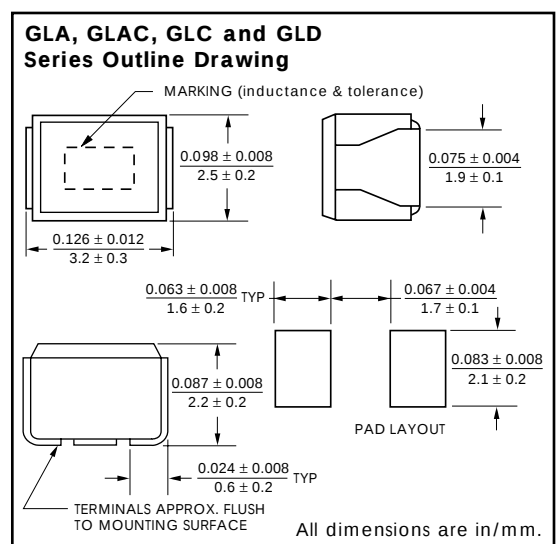
† Inductance values from 1.0 μH and up also available with ±5% inductance tolerance. Consult factory regarding these special units.

* Rerated 12/91

**Rerated 6/97

GLAC SERIES — HIGH POWER LOW DCR SHIELDED MOLDED BOBBIN WOUND 1210 SIZE

Inductance L (μH)	Standard Inductance Tolerance	Model No.	SRF (MHz) min	Q min	Q/L Test Freq. (MHz)	Rated Current (mA)	DCR (Ω) max
1.0	± 20%	GLAC1R020	100	7	7.96	500	0.09
1.5	± 20%	GLAC1R520	80	7	7.96	390	0.10
2.2	± 20%	GLAC2R220	65	7	7.96	350	0.13
3.3	± 20%	GLAC3R320	50	7	7.96	270	0.16
4.7	± 20%	GLAC4R720	46	7	7.96	240	0.18
6.8	± 20%	GLAC6R820	36	7	7.96	200	0.25
10.0	± 10%	GLAC10010	29	10	2.52	160	0.34
15.0	± 10%	GLAC15010	25	10	2.52	145	0.42
22.0	± 10%	GLAC22010	18	10	2.52	115	0.65
33.0	± 10%	GLAC33010	16	10	2.52	95	0.91
47.0	± 10%	GLAC47010	13	10	2.52	80	1.30
68.0	± 10%	GLAC68010	10	10	2.52	60	1.95
100.0	± 10%	GLAC10110	8	20	0.796	50	3.12
150.0	± 10%	GLAC15110	7	20	0.796	45	4.03
220.0	± 10%	GLAC22110	5	20	0.796	35	7.15
330.0	± 10%	GLAC33110	4	20	0.796	30	9.23





GLA SERIES — NONMAGNETIC HIGH FREQUENCY MOLDED BOBBIN WOUND 1210 SIZE

Inductance L (μH)	Standard Inductance Tolerance	Inductance Test Freq. (MHz)	Model No.	SRF (MHz) min	Q min	Q Test Frequency (MHz)	Rated Current (mA)	DCR (Ω) max
0.047	± 20%	100.0	GLA47N20	680	10	100.0	450	0.20
0.056	± 20%	100.0	GLA56N20	600	10	100.0	420	0.22
0.068	± 20%	100.0	GLA68N20	540	10	100.0	400	0.25
0.082	± 20%	100.0	GLA82N20	500	10	100.0	380	0.27
0.10	± 20%	100.0	GLAR1020	450	10	100.0	360	0.30
0.12	± 20%	25.2	GLAR1220	400	10	25.2	240	0.67
0.15	± 20%	25.2	GLAR1520	350	10	25.2	230	0.72
0.18	± 20%	25.2	GLAR1820	320	10	25.2	220	0.81
0.22	± 10%	1.0	GLAR2210	280	10	25.2	210	0.90
0.27	± 10%	1.0	GLAR2710	250	10	25.2	200	1.0
0.33	± 10%	1.0	GLAR3310	220	10	25.2	190	1.1
0.39	± 10%	1.0	GLAR3910	200	10	25.2	180	1.2
0.47	± 10%	1.0	GLAR4710	180	10	25.2	175	1.4
0.56	± 10%	1.0	GLAR5610	160	10	25.2	170	1.5
0.68	± 10%	1.0	GLAR6810	150	10	25.2	155	1.7
0.82	± 10%	1.0	GLAR8210	135	10	25.2	145	1.9
1.00	± 5%	1.0	GLA1R005	120	13	7.96	125	2.1
1.20	± 5%	1.0	GLA1R205	110	13	7.96	120	2.3
1.50	± 5%	1.0	GLA1R505	95	13	7.96	115	2.7
1.80	± 5%	1.0	GLA1R805	85	13	7.96	110	3.0
2.20	± 5%	1.0	GLA2R205	80	13	7.96	110	3.2
2.70	± 5%	1.0	GLA2R705	70	13	7.96	105	3.6
3.30	± 5%	1.0	GLA3R305	62	13	7.96	100	4.2
3.90	± 5%	1.0	GLA3R905	57	13	7.96	95	4.4
4.70	± 5%	1.0	GLA4R705	52	13	7.96	70	7.7
5.60	± 5%	1.0	GLA5R605	46	13	7.96	65	8.7
6.80	± 5%	1.0	GLA6R805	42	13	7.96	60	10.0
8.20	± 5%	1.0	GLA8R205	38	13	7.96	60	11.0

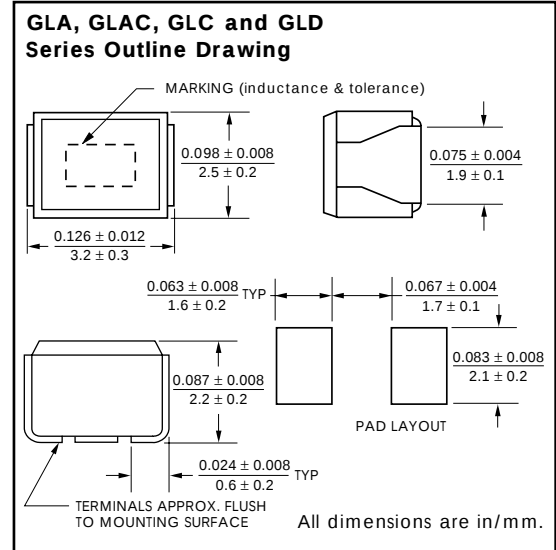
GLC SERIES — SHIELDED MOLDED BOBBIN WOUND 1210 SIZE

Inductance L (μH)	Standard Inductance Tolerance	Inductance Test Freq. (MHz)	Model No.	SRF (MHz) min	Q min	Q Test Frequency (MHz)	Rated Current (mA)	DCR (Ω) max
10.0	± 10%	1.0	GLC10010	30	40	5.0	18	1.8
12.0	± 10%	1.0	GLC12010	28	40	5.0	17	2.0
15.0	± 10%	1.0	GLC15010	25	40	5.0	15	2.2
18.0	± 10%	1.0	GLC18010	23	40	5.0	13	2.5
22.0	± 10%	1.0	GLC22010	20	40	5.0	12	2.8
27.0	± 10%	1.0	GLC27010	18	40	5.0	10	3.2
33.0	± 10%	1.0	GLC33010	17	40	5.0	10	3.5
39.0	± 10%	1.0	GLC39010	15	40	5.0	9	3.8
47.0	± 10%	1.0	GLC47010	14	40	5.0	8	4.0
56.0	± 10%	1.0	GLC56010	13	40	5.0	7	4.5
68.0	± 10%	1.0	GLC68010	12	40	1.5	6	5.0
82.0	± 10%	1.0	GLC82010	11	40	1.5	6	6.0
100.0	± 10%	1.0	GLC10110	10	40	1.5	5	7.0
120.0	± 10%	1.0	GLC12110	9	40	1.5	5	8.0
150.0	± 10%	0.1	GLC15110	5	40	1.5	5	9.0
180.0	± 10%	0.1	GLC18110	5	40	1.5	5	11.0
220.0	± 10%	0.1	GLC22110	4	40	1.5	5	12.0
270.0	± 10%	0.1	GLC27110	4	40	1.5	5	14.0



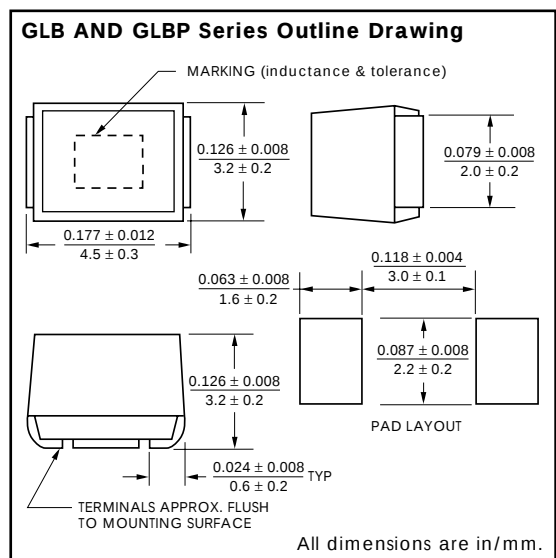
GLD SERIES — HIGH CURRENT SHIELDED MOLDED BOBBIN WOUND 1210 SIZE

Inductance L (μH)	Standard Inductance Tolerance	Model No.	SRF (MHz) min	Q min	Q/L Test Freq. (MHz)	Rated Current (mA)	DCR (Ω) max
1.0	± 20%	GLD1R020	150	7	7.96	600	0.15
1.5	± 20%	GLD1R520	110	7	7.96	550	0.18
2.2	± 20%	GLD2R220	80	7	7.96	500	0.23
3.3	± 20%	GLD3R320	58	7	7.96	400	0.28
4.7	± 20%	GLD4R720	46	7	7.96	350	0.34
6.8	± 20%	GLD6R820	38	7	7.96	300	0.42
10.0	± 10%	GLD10010	23	15	2.52	240	0.50
12.0	± 10%	GLD12010	21	15	2.52	230	0.60
15.0	± 10%	GLD15010	18	15	2.52	220	0.74
18.0	± 10%	GLD18010	17	15	2.52	205	0.90
22.0	± 10%	GLD22010	15	15	2.52	185	1.15
27.0	± 10%	GLD27010	13	15	2.52	165	1.45
33.0	± 10%	GLD33010	12	15	2.52	155	1.65
39.0	± 10%	GLD39010	11	15	2.52	145	1.90
47.0	± 10%	GLD47010	9.5	15	2.52	135	2.25
56.0	± 10%	GLD56010	8.5	15	2.52	110	3.30
68.0	± 10%	GLD68010	7.5	15	2.52	105	3.70
82.0	± 10%	GLD82010	7.0	15	2.52	100	4.20
100.0	± 10%	GLD10110	6.5	20	0.796	90	5.00
120.0	± 10%	GLD12110	6.0	20	0.796	75	7.00
150.0	± 10%	GLD15110	5.5	20	0.796	70	8.00
180.0	± 10%	GLD18110	5.0	20	0.796	65	9.50
220.0	± 10%	GLD22110	4.0	20	0.796	60	11.00
270.0	± 10%	GLD27110	3.5	20	0.796	55	14.50
330.0	± 10%	GLD33110	3.0	20	0.796	50	16.00



GLBP SERIES — HIGH CURRENT LOW DCR SHIELDED MOLDED BOBBIN WOUND 1812 SIZE

Inductance L (μH)	Standard Inductance Tolerance	Model No.	SRF (MHz) min	Q min	Q/L Test Freq. (MHz)	Rated Current (mA)	DCR (Ω) max
10.0	± 10%	GLBP10010	19	10	2.52	360	0.65
12.0	± 10%	GLBP12010	17	10	2.52	340	0.70
15.0	± 10%	GLBP15010	15	10	2.52	320	0.80
18.0	± 10%	GLBP18010	14	10	2.52	310	0.90
22.0	± 10%	GLBP22010	13	10	2.52	300	1.00
27.0	± 10%	GLBP27010	11	10	2.52	270	1.20
33.0	± 10%	GLBP33010	10	10	2.52	250	1.40
39.0	± 10%	GLBP39010	9.5	10	2.52	230	1.60
47.0	± 10%	GLBP47010	8.5	10	2.52	210	1.90
56.0	± 10%	GLBP56010	8.0	10	2.52	190	2.20
68.0	± 10%	GLBP68010	7.0	10	2.52	170	2.60
82.0	± 10%	GLBP82010	6.5	10	2.52	160	3.50
100.0	± 10%	GLBP10110	6.0	20	0.796	150	4.00
120.0	± 10%	GLBP12110	5.5	20	0.796	130	4.50
150.0	± 10%	GLBP15110	5.0	20	0.796	120	6.50
180.0	± 10%	GLBP18110	4.5	20	0.796	110	7.50
220.0	± 10%	GLBP22110	4.0	20	0.796	90	9.00



GLB SERIES — MOLDED BOBBIN WOUND 1812 SIZE

Inductance L (μH)	Standard Inductance Tolerance*	Inductance Test Freq. (MHz)	Model No.	SRF (MHz) min	Q min	Q Test Frequency (MHz)	Rated Current (mA)	DCR (Ω) max
0.22	± 20%	1.0	GLBR2220	230	30	25.20	700	0.30
0.27	± 20%	1.0	GLBR2720	200	30	25.20	650	0.32
0.33	± 20%	1.0	GLBR3320	180	30	25.20	630	0.35
0.39	± 20%	1.0	GLBR3920	155	30	25.20	620	0.37
0.47	± 20%	1.0	GLBR4720	135	30	25.20	580	0.40
0.56	± 20%	1.0	GLBR5620	120	30	25.20	560	0.42
0.68	± 20%	1.0	GLBR6820	105	30	25.20	530	0.48
0.82	± 20%	1.0	GLBR8220	90	30	25.20	500	0.50
1.00	± 20%	1.0	GLB1R020	80	30	25.20	470	0.52
1.20	± 20%	1.0	GLB1R220	70	30	25.20	460	0.55
1.50	± 20%	1.0	GLB1R520	60	30	25.20	430	0.61
1.80	± 20%	1.0	GLB1R820	50	30	7.96	410	0.61
2.20	± 20%	1.0	GLB2R220	45	50	7.96	410	0.61
2.70	± 20%	1.0	GLB2R720	43	50	7.96	400	0.61
3.30	± 20%	1.0	GLB3R320	39	50	7.96	380	0.66
3.90	± 20%	1.0	GLB3R920	36	50	7.96	360	0.74
4.70	± 20%	1.0	GLB4R720	33	50	5.00	350	0.81
5.60	± 20%	1.0	GLB5R620	30	50	5.00	330	0.88
6.80	± 20%	1.0	GLB6R820	26	50	5.00	310	1.00
8.20	± 20%	1.0	GLB8R220	24	50	5.00	250	1.60
10.0	± 10%	1.0	GLB10010	22	50	5.00	235	1.8
12.0	± 10%	1.0	GLB12010	20	50	5.00	225	1.9
15.0	± 10%	1.0	GLB15010	18	50	5.00	215	2.1
18.0	± 10%	1.0	GLB18010	16	50	2.52	205	2.3
22.0	± 10%	1.0	GLB22010	15	50	2.52	195	2.6
27.0	± 10%	1.0	GLB27010	13	50	2.52	185	2.9
33.0	± 10%	1.0	GLB33010	12	50	2.52	175	3.1
39.0	± 10%	1.0	GLB39010	10	50	2.52	165	3.6
47.0	± 10%	1.0	GLB47010	9.7	50	2.52	130	4.2
56.0	± 10%	0.1	GLB56010	9.0	40	2.52	125	4.7
68.0	± 10%	0.1	GLB68010	8.2	40	2.52	115	5.3
82.0	± 10%	0.1	GLB82010	7.5	40	2.52	110	5.9
100.0	± 10%	0.1	GLB10110	6.7	40	2.52	105	8.8
120.0	± 10%	0.1	GLB12110	6.1	40	1.50	100	10.0
150.0	± 10%	0.1	GLB15110	5.5	40	1.50	95	11.0
180.0	± 10%	0.1	GLB18110	5.1	40	1.50	85	13.0
220.0	± 10%	0.1	GLB22110	4.5	40	0.796	85	13.0
270.0	± 10%	0.1	GLB27110	4.1	40	0.796	80	14.0
330.0	± 10%	0.1	GLB33110	3.7	40	0.796	75	16.0
390.0	± 10%	0.1	GLB39110	3.3	40	0.796	70	19.0
470.0	± 10%	0.1	GLB47110	3.3	30	0.796	55	31.0
560.0	± 10%	0.1	GLB56110	2.7	30	0.796	50	35.0
680.0	± 10%	0.1	GLB68110	2.5	30	0.796	50	39.0
820.0	± 10%	0.1	GLB82110	2.4	30	0.796	45	45.0
1000.0	± 10%	0.1	GLB10210	2.1	30	0.796	40	53.0

* Inductance values from 1.00 to 8.2 μH also available with ±10% inductance tolerance.

Inductance values from 10.0 μH and up also available with ±5% inductance tolerance.

Consult factory regarding these special units.

Carrier and reel specifications on page 12.



GL06 SERIES — ECONOMY SURFACOIL® AIR CORE INDUCTORS

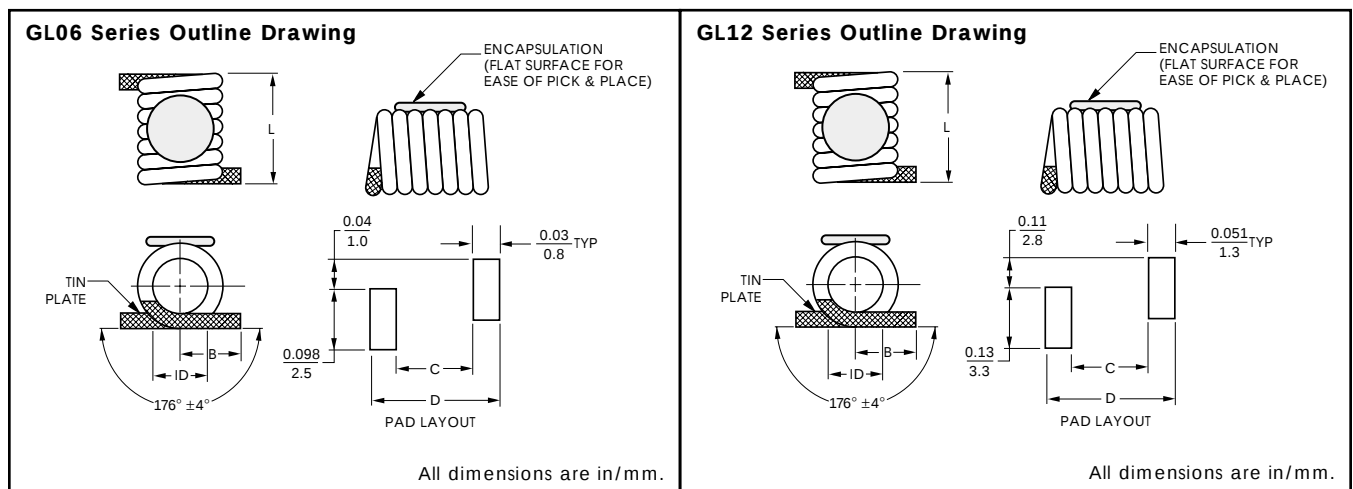
Inductance L (nH)	Standard Inductance Tolerance*	Model No.	Q min	Q/L Test Frequency (MHz)	ID (in/mm)	B (in/mm)	L (in/mm)	C (in/mm)	D (in/mm)
1.65	± 10%	GL06A01N6510	100	800	0.018 / 0.45	0.061 / 1.55	0.088 / 2.23	0.04 / 1.00	0.10 / 2.6
2.55	± 10%	GL06A02N5510	100	800	0.020 / 0.52	0.052 / 1.32	0.090 / 2.29	0.04 / 1.00	0.10 / 2.6
3.85	± 10%	GL06A03N8510	100	800	0.020 / 0.52	0.058 / 1.46	0.098 / 2.50	0.04 / 1.00	0.10 / 2.6
5.40	± 5%	GL06A05N4005	100	800	0.021 / 0.54	0.106 / 2.69	0.84 / 2.14	0.04 / 1.00	0.10 / 2.6
5.60	± 5%	GL06A05N6005	100	800	0.021 / 0.54	0.059 / 1.50	0.164 / 4.16	0.112 / 2.85	0.18 / 4.5
7.15	± 5%	GL06A07N1505	100	800	0.026 / 0.65	0.064 / 1.62	0.172 / 4.38	0.112 / 2.85	0.18 / 4.5
8.80	± 5%	GL06A08N8005	100	800	0.026 / 0.65	0.064 / 1.62	0.165 / 4.19	0.112 / 2.85	0.18 / 4.5
9.85	± 5%	GL06A09N8505	100	800	0.026 / 0.65	0.065 / 1.65	0.163 / 4.15	0.112 / 2.85	0.18 / 4.5
12.55	± 5%	GL06A12N5505	100	800	0.030 / 0.7	0.061 / 1.55	0.163 / 4.15	0.112 / 2.85	0.18 / 4.5

*Tighter tolerances are available, consult factory.

GL12 SERIES — ECONOMY SURFACOIL® AIR CORE INDUCTORS

Inductance L (nH)	Standard Inductance Tolerance*	Model No.	Q min	Q/L Test Frequency (MHz)	ID (in/mm)	B (in/mm)	L (in/mm)	C (in/mm)	D (in/mm)
2.5	± 10%	GL12A02N5010	100	150	0.053 / 1.35	0.091 / 2.3	0.11 / 2.9	0.065 / 1.65	0.17 / 4.2
5.0	± 10%	GL12A05N0010	100	150	0.053 / 1.35	0.082 / 2.1	0.135 / 3.45	0.065 / 1.65	0.17 / 4.2
8.0	± 10%	GL12A08N0010	100	150	0.061 / 1.55	0.10 / 2.6	0.15 / 3.7	0.065 / 1.65	0.17 / 4.2
12.5	± 10%	GL12A12N5010	100	150	0.060 / 1.53	0.11 / 2.7	0.2 / 4	0.065 / 1.65	0.17 / 4.2
18.5	± 10%	GL12A18N5010	100	150	0.061 / 1.55	0.10 / 2.6	0.135 / 3.45	0.065 / 1.65	0.17 / 4.2
17.5	± 10%	GL12A17N5010	100	150	0.061 / 1.55	0.11 / 2.7	0.25 / 6.4	0.19 / 4.7	0.29 / 7.3
22.5	± 5%	GL12A22N5005	100	150	0.061 / 1.55	0.11 / 2.7	0.27 / 6.8	0.19 / 4.7	0.29 / 7.3
28.0	± 5%	GL12A28N0005	100	150	0.061 / 1.55	0.11 / 2.7	0.26 / 6.6	0.19 / 4.7	0.29 / 7.3
35.5	± 5%	GL12A35N5005	100	150	0.061 / 1.55	0.11 / 2.8	0.24 / 6.2	0.19 / 4.7	0.29 / 7.3
43.0	± 5%	GL12A43N0005	100	150	0.061 / 1.55	0.11 / 2.8	0.26 / 6.6	0.19 / 4.7	0.29 / 7.3

*Tighter tolerances are available, consult factory.



Carrier and reel specifications are on the web at www.spraguegoodman.com/800/800p1/html

GL15 SERIES — ECONOMY SURFCHOIL® AIR CORE INDUCTORS

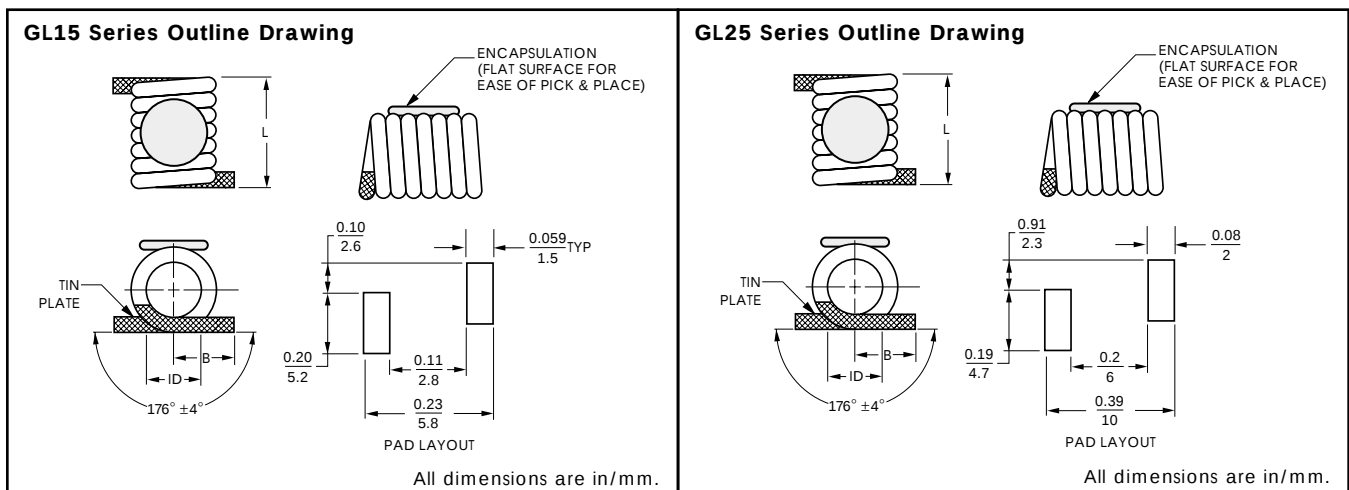
Inductance L (nH)	Standard Inductance Tolerance*	Model No.	Q min	Q/L Test Frequency (MHz)	ID (in/mm)	B (in/mm)	L (in/mm)
22.0	150	GL15A22N0005	100	150	0.096/2.45	0.1/3	0.2/5
27.0	150	GL15A27N0005	100	150	0.08/2.2	0.1/3	0.18/4.5
33.0	150	GL15A33N0005	100	150	0.096/2.45	0.1/3	0.21/5.3
39.0	150	GL15A39N0005	100	150	0.087/2.2	0.1/3	0.19/4.9
47.0	150	GL15A47N0005	100	150	0.098/2.5	0.11/2.8	0.19/4.8
56.0	150	GL15A56N0005	100	150	0.091/2.3	0.12/3.1	0.12/4.7
68.0	150	GL15A68N0005	100	150	0.100/2.55	0.11/2.8	0.17/4.4
82.0	150	GL15A82N0005	100	150	0.098/2.5	0.12/3.1	0.18/4.5
100.0	150	GL15AR100005	100	150	0.096/2.45	0.1/3	0.18/4.6
120.0	150	GL15AR120005	100	150	0.11/2.8	0.1/3	0.18/4.6

*Tighter tolerances are available, consult factory.

GL25 SERIES — ECONOMY SURFCHOIL® AIR CORE INDUCTORS

Inductance L (nH)	Standard Inductance Tolerance*	Model No.	Q min	Q/L Test Frequency (MHz)	ID (in/mm)	B (in/mm)	L (in/mm)
90.0	50	GL25A90N0005	90	50	0.12/3.05	0.1/3	0.35/8.8
111.0	50	GL25AR111005	90	50	0.12/3.05	0.1/3	0.35/8.8
130.0	50	GL25AR130005	90	50	0.12/3.05	0.11/2.9	0.34/8.6
150.0	50	GL25AR150005	90	50	0.128/3.25	0.1/3	0.33/8.4
169.0	50	GL25AR169005	90	50	0.128/3.25	0.1/3	0.33/8.4
206.0	50	GL25AR206005	90	50	0.128/3.25	0.1/3	0.3/8
222.0	50	GL25AR222005	90	50	0.128/3.25	0.13/3.3	0.33/8.5
246.0	50	GL25AR246005	90	50	0.128/3.25	0.14/3.5	0.4/9
307.0	50	GL25AR307005	90	50	0.13/3.4	0.13/3.3	0.34/8.6
380.0	50	GL25AR380005	90	50	0.14/3.5	0.12/3.1	0.33/8.4
422.0	50	GL25AR422005	90	50	0.14/3.6	0.12/3.1	0.33/8.5
491.0	50	GL25AR491005	90	50	0.14/3.6	0.124/3.15	0.33/8.5
538.0	50	GL25AR538005	90	50	0.144/0.365	0.1/3	0.34/8.6

*Tighter tolerances are available, consult factory.



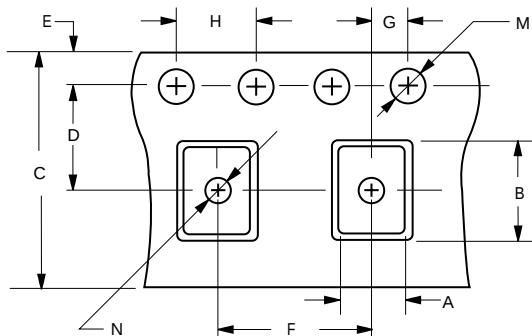
Carrier and reel specifications are on the web at www.spraguegoodman.com/800/800p1/html



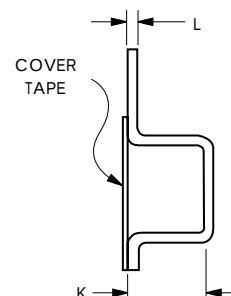
CARRIER SPECIFICATIONS

Dimension	A	B	C	D	E	F	G	H	K	L	M	N
Model Series	Tolerance	$\pm \frac{0.008}{0.2}$	$\pm \frac{0.008}{0.2}$	$\pm \frac{0.012}{0.3}$	$\pm \frac{0.002}{0.05}$	$\pm \frac{0.004}{0.1}$	$\pm \frac{0.004}{0.1}$	$\pm \frac{0.002}{0.05}$	$\pm \frac{0.004}{0.1}$	$\pm \frac{0.008}{0.2}$	$\pm \frac{0.002}{0.05}$	$\pm \frac{0.004}{0.1}$
GLA, GLAC, GLC, GLD	$\frac{0.11}{2.8}$	$\frac{0.14}{3.6}$	$\frac{0.31}{8.0}$	$\frac{0.14}{3.5}$	$\frac{0.069}{1.75}$	$\frac{0.16}{4.0}$	$\frac{0.079}{2.0}$	$\frac{0.16}{4.0}$	$\frac{0.091}{2.3}$	$\frac{0.01}{0.3}$	$\frac{0.059}{1.5}$	—
GLB, GLBP	$\frac{0.14}{3.6}$	$\frac{0.19}{4.9}$	$\frac{0.472}{12.0}$	$\frac{0.22}{5.5}$	$\frac{0.069}{1.75}$	$\frac{0.31}{8.0}$	$\frac{0.079}{2.0}$	$\frac{0.16}{4.0}$	$\frac{0.13}{3.4}$	$\frac{0.01}{0.3}$	$\frac{0.059}{1.5}$	—
GLU, GLW	$\frac{0.095}{2.4}$	$\frac{0.11}{2.9}$	$\frac{0.31}{8.0}$	$\frac{0.14}{3.5}$	$\frac{0.069}{1.75}$	$\frac{0.16}{4.0}$	$\frac{0.079}{2.0}$	$\frac{0.16}{4.0}$	$\frac{0.073}{1.85}$	$\frac{0.01}{0.3}$	$\frac{0.059}{1.5}$	$\frac{0.043}{1.1}$
GLX	$\frac{0.057}{1.45}$	$\frac{0.089}{2.25}$	$\frac{0.31}{8.0}$	$\frac{0.14}{3.5}$	$\frac{0.069}{1.75}$	$\frac{0.16}{4.0}$	$\frac{0.079}{2.0}$	$\frac{0.16}{4.0}$	$\frac{0.055}{1.4}$	$\frac{0.0098}{0.25}$	$\frac{0.059}{1.5}$	$\frac{0.043}{1.1}$
GLY, GLYC	$\frac{0.039}{1.0}$	$\frac{0.071}{1.8}$	$\frac{0.31}{8.0}$	$\frac{0.14}{3.5}$	$\frac{0.069}{1.75}$	$\frac{0.16}{4.0}$	$\frac{0.079}{2.0}$	$\frac{0.16}{4.0}$	$\frac{0.039}{1.0}$	$\frac{0.0098}{0.25}$	$\frac{0.059}{1.5}$	—
GLZ, GLZB, GLZP	$\frac{0.028}{0.71}$	$\frac{0.048}{1.21}$	$\frac{0.31}{8.0}$	$\frac{0.14}{3.5}$	$\frac{0.069}{1.75}$	$\frac{0.16}{4.0}$	$\frac{0.079}{2.0}$	$\frac{0.16}{4.0}$	—	—	—	—

Carrier Outline Drawing



Not to scale.

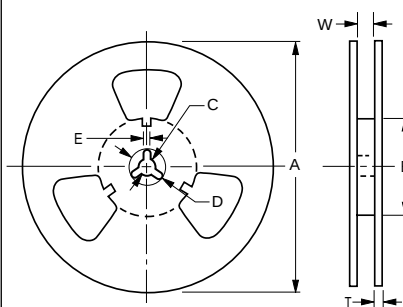


All dimensions are in/mm.

REEL SPECIFICATIONS

Dimension	Qty	A	B	C	D	E	T	W
Model Series	Tolerance	$\pm \frac{0.079}{2.0}$	$\pm \frac{0.02}{0.5}$	$\pm \frac{0.02}{0.5}$	$\pm \frac{0.03}{0.8}$	$\pm \frac{0.02}{0.5}$	$\pm \frac{0.02}{0.5}$	$\pm \frac{0.01}{0.3}$
GLA, GLAC, GLC, GLD, GLU, GLW	2,000	$\frac{7.01}{178}$	$\frac{2.4}{60}$	$\frac{0.51}{13}$	$\frac{0.83}{21}$	$\frac{0.079}{2.0}$	$\frac{0.043}{1.1}$	$\frac{0.35}{9.0}$
GLX, GLY, GLYC	3,000	$\frac{7.01}{178}$	$\frac{2.4}{60}$	$\frac{0.51}{13}$	$\frac{0.83}{21}$	$\frac{0.079}{2.0}$	$\frac{0.043}{1.1}$	$\frac{0.35}{9.0}$
GLB, GLBP	500	$\frac{7.01}{178}$	$\frac{2.4}{60}$	$\frac{0.51}{13}$	$\frac{0.83}{21}$	$\frac{0.079}{2.0}$	$\frac{0.043}{1.1}$	$\frac{0.51}{13}$
GLZ, GLZB, GLZP	10,000	$\frac{7.01}{178}$	$\frac{2.4}{60}$	$\frac{0.51}{13}$	$\frac{0.83}{21}$	$\frac{0.079}{2.0}$	$\frac{0.043}{1.1}$	$\frac{0.35}{9.0}$

Reel Outline Drawing



Not to scale. All dimensions are in/mm.