TDK's New Winding Type Chip Inductor

GLF,GLC Series

TDK Electronics Europe GmbH - September 2004

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Item Line-Up

Area[mm²] \ Height[mm]		0.80mm	1.25mm	1.80mm
1.28mm²	1.60X0.80	**GLF1608Type** L:1uH to 22uH Rdc:0.70ohm(10uH) Idc:90mA(10uH)	GLF_Type:Low Rdc Type GLF_Type:Low Profile Type GLC_Type:High Idc Type	
2.50mm²	2.00X1.25	**GLF201208Type** L:1uH to 47uH Rdc:1.10ohm(10uH) Idc:170mA(10uH)	**GLF2012Type** L:1uH to 100uH Rdc:0.36ohm(10uH) Idc:140mA(10uH)	
4.50mm²	2.50X1.80		**GLF251812Type** L:1uH to 100uH Rdc:0.60ohm(10uH) Idc:325mA(10uH)	**GLF2518Type** L:1uH to 100uH Rdc:0.20ohm(10uH) Idc:210mA(10uH) **GLC2518Type** L:1uH to 100uH Rdc:0.30ohm(10uH) Idc:300mA(10uH)

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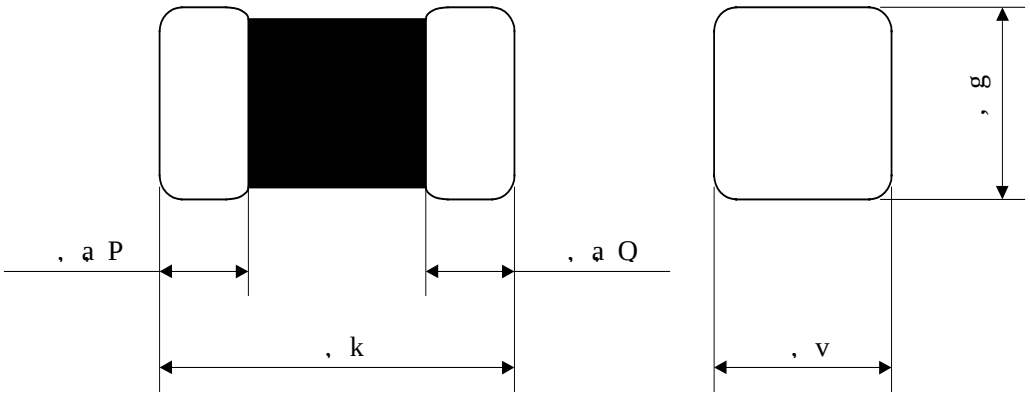
Shapes and Dimensions



	L [mm] ±0.10	W [mm] ±0.10	H [mm] ±0.10	B1 [mm] ±0.15	B2 [mm] ±0.15	Weight [mg]
GLF1608Type	**1.60**	**0.80**	**0.80**	**0.40**	**0.40**	**5mg**
GLF2012Type	**2.00**	**1.25**	**1.25**	**0.50**	**0.50**	**15mg**
GLF2518Type	**2.50**	**1.80**	**1.80**	**0.60**	**0.60**	**35mg**
GLF201208Type	**2.00**	**1.25**	**0.80**	**0.45**	**0.45**	**10mg**
GLF251812Type	**2.50**	**1.80**	**1.25**	**0.50**	**0.50**	**25mg**
GLC2518Type	**2.50**	**1.80**	**1.80**	**0.60**	**0.60**	**35mg**

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Electrical Characteristics [GLF1608Type]

ITEM	Inductance & Tolerance	Rdc[ohm] ±30%	Idc[mA] L:10%Down Max.	Idc[mA] L:20%Down Max.	Idc[mA] temp. has to 20Deg.C Max.
GLF1608T1R0M	1.0µH±20%	0.17	125	220	400
GLF1608T2R2M	2.2µH±20%	0.33	85	160	275
GLF1608T4R7M	4.7µH±20%	0.55	70	115	220
GLF1608T100M	10µH±20%	0.70	50	90	180
GLF1608T220M	22µH±20%	3.00	35	60	100

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Electrical Characteristics [GLF2012Type]

ITEM	Inductance & Tolerance	Rdc[ohm] ±30%	Idc[mA] L:10%Down Max.	Idc[mA] L:20%Down Max.	Idc[mA] temp. has to 20Deg.C Max.
GLF2012T1R0M	1.0µH±20%	0.07	275	400	850
GLF2012T2R2M	2.2µH±20%	0.10	210	300	700
GLF2012T4R7M	4.7µH±20%	0.24	120	200	450
GLF2012T100K	10µH±10%	0.36	100	140	360
GLF2012T220K	22µH±10%	1.00	75	100	220
GLF2012T470K	47µH±10%	1.70	50	75	170
GLF2012T101K	100µH±10%	4.00	30	50	110

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Electrical Characteristics [GLF2518Type]

ITEM	Inductance & Tolerance	Rdc[ohm]	Idc[mA]		
			L:10%Down Max.	L:20%Down Max.	temp. has to 20Deg.C Max.
GLF2518T1R0M	1.0µH±20%	0.05±30%	500	675	1200
GLF2518T2R2M	2.2µH±20%	0.08±30%	340	450	950
GLF2518T4R7M	4.7µH±20%	0.11±30%	240	320	800
GLF2518T100K	10µH±10%	0.20±20%	165	210	600
GLF2518T220K	22µH±10%	0.45±20%	115	150	400
GLF2518T470K	47µH±10%	0.85±20%	85	100	275
GLF2518T101K	100µH±10%	1.90±20%	55	75	175

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Electrical Characteristics [GLF201208Type]

ITEM	Inductance & Tolerance	Rdc[ohm]	Idc[mA]		
			L:10%Down Max.	L:20%Down Max.	temp. has to 20Deg.C Max.
GLF201208T1R0M	1.0µH±20%	0.19±20%	340	460	650
GLF201208T2R2M	2.2µH±20%	0.56±20%	220	300	350
GLF201208T4R7M	4.7µH±20%	0.74±20%	160	230	300
GLF201208T100M	10µH±20%	1.10±20%	130	170	250
GLF201208T220M	22µH±20%	3.50±20%	80	110	150
GLF201208T470M	47µH±20%	5.30±20%	60	90	120

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Electrical Characteristics [GLF251812Type]

ITEM	Inductance & Tolerance	Rdc[ohm]	Idc[mA]		
			L:10%Down Max.	L:20%Down Max.	temp. has to 20Deg.C Max.
GLF251812T1R0M	1.0µH±20%	0.10±20%	650	800	900
GLF251812T2R2M	2.2µH±20%	0.20±20%	450	600	625
GLF251812T4R7M	4.7µH±20%	0.38±20%	275	450	450
GLF251812T100M	10µH±20%	0.60±20%	200	325	350
GLF251812T220M	22µH±20%	1.20±20%	140	250	250
GLF251812T470M	47µH±20%	2.50±20%	100	175	175
GLF251812T101M	100µH±20%	4.70±20%	80	125	125

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Electrical Characteristics [GLC2518Type]

ITEM	Inductance & Tolerance	Rdc[ohm]	Idc[mA]		
			L:10%Down Max.	L:20%Down Max.	temp. has to 20Deg.C Max.
GLC2518T1R0M	1.0µH±20%	0.08±30%	850	-----	980
GLC2518T2R2M	2.2µH±20%	0.13±30%	650	-----	750
GLC2518T4R7M	4.7µH±20%	0.20±30%	475	-----	600
GLC2518T100K	10µH±10%	0.36±20%	350	-----	470
GLC2518T220K	22µH±10%	0.90±20%	225	-----	300
GLC2518T470K	47µH±10%	1.90±20%	170	-----	200
GLC2518T101K	100µH±10%	3.50±20%	110	-----	150

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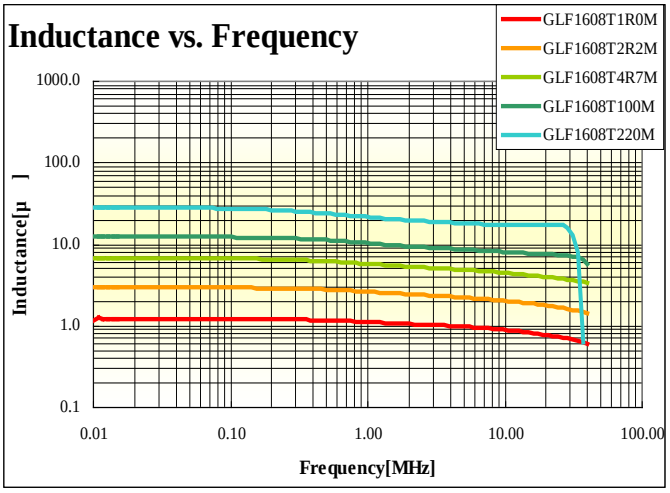
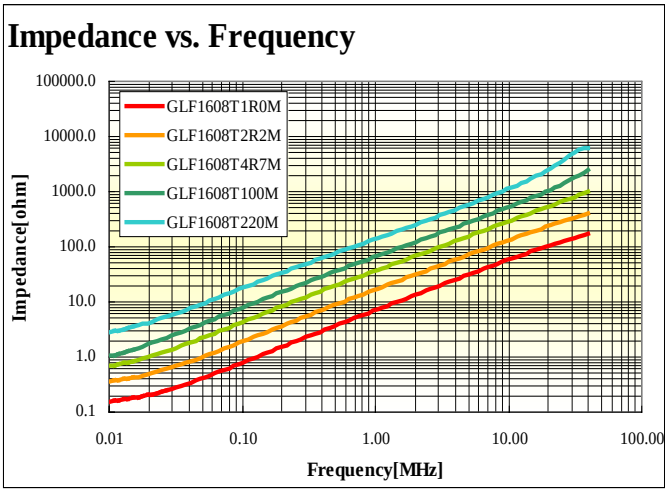
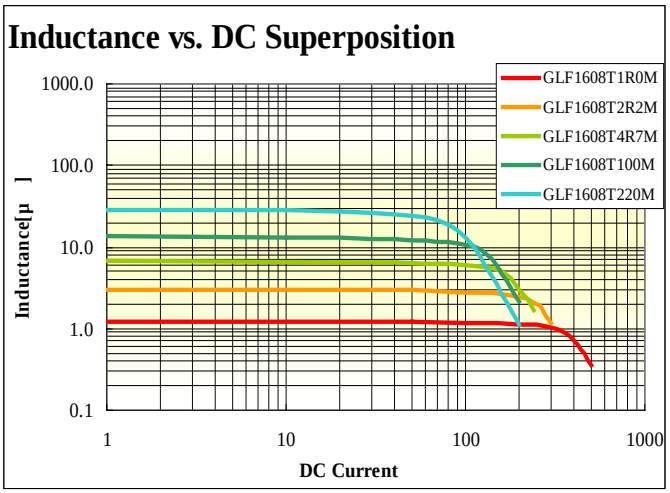
Typical Electrical Characteristics [GLF1608Type]







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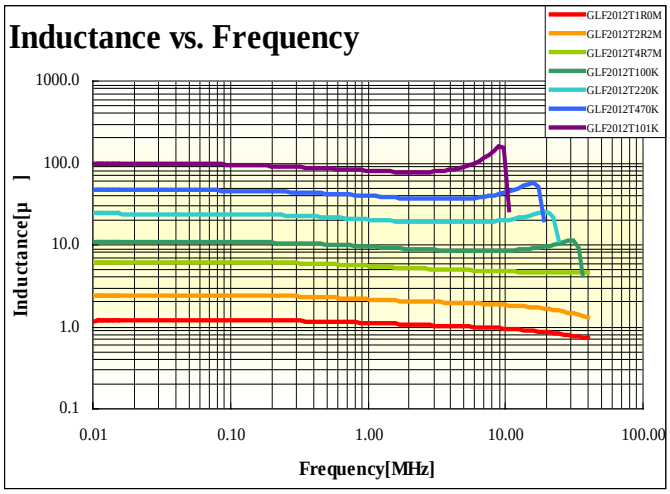
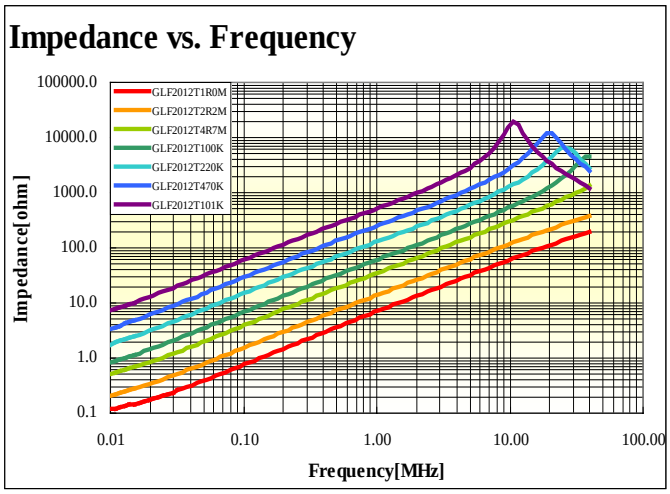
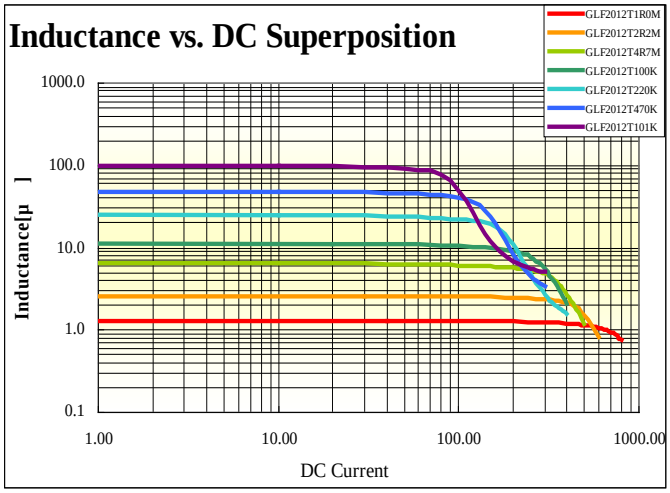
Typical Electrical Characteristics [GLF2012Type]







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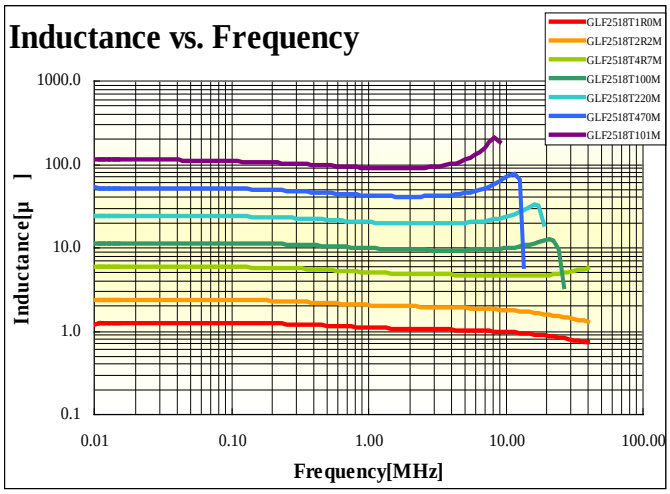
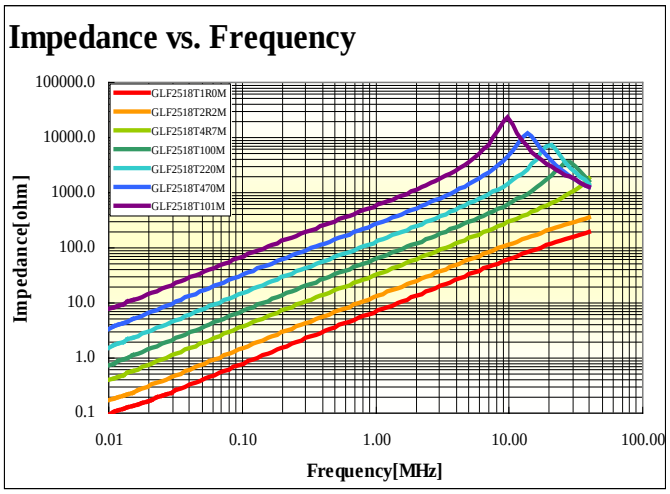
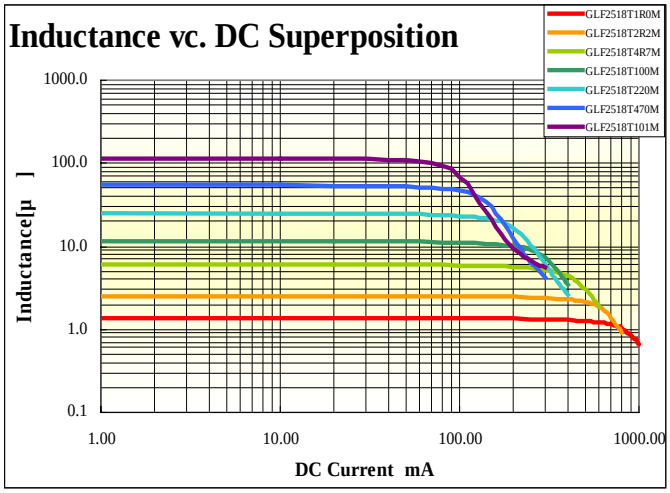
Typical Electrical Characteristics [GLF2518Type]







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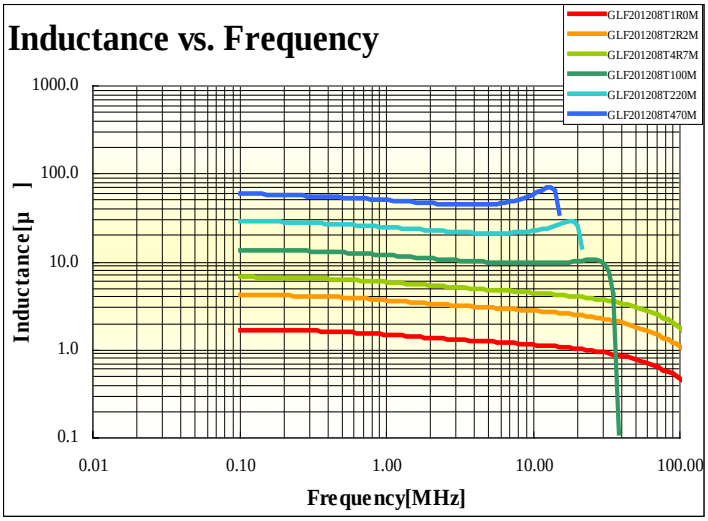
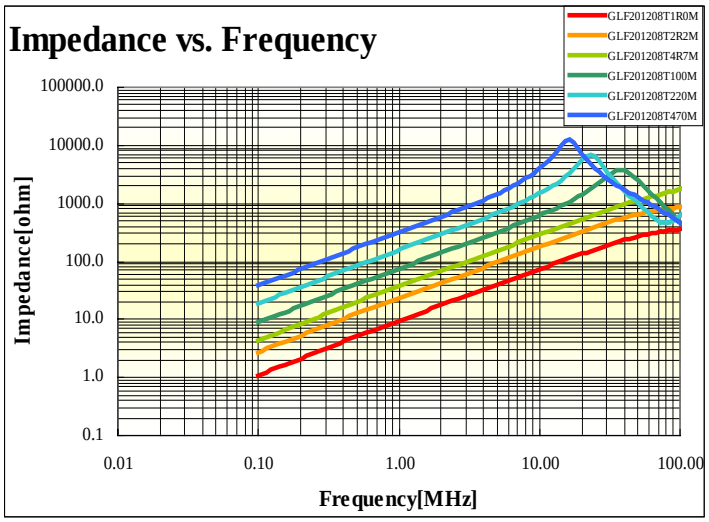
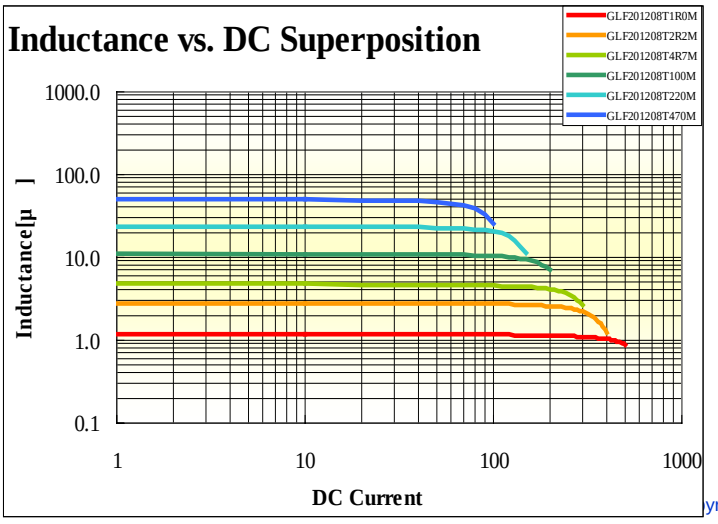
Typical Electrical Characteristics [GLF201208Type]







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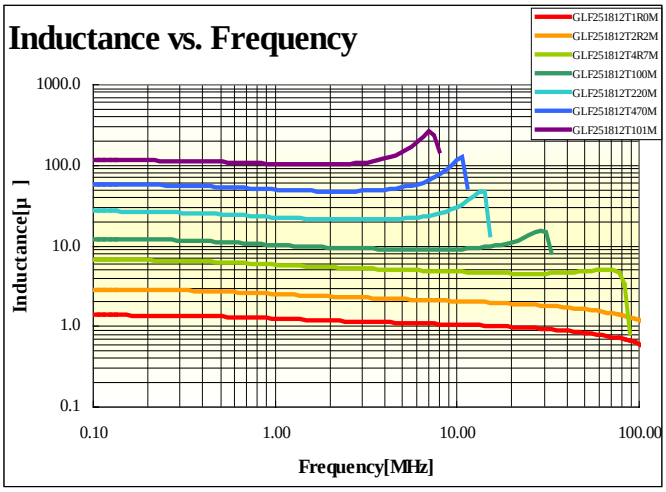
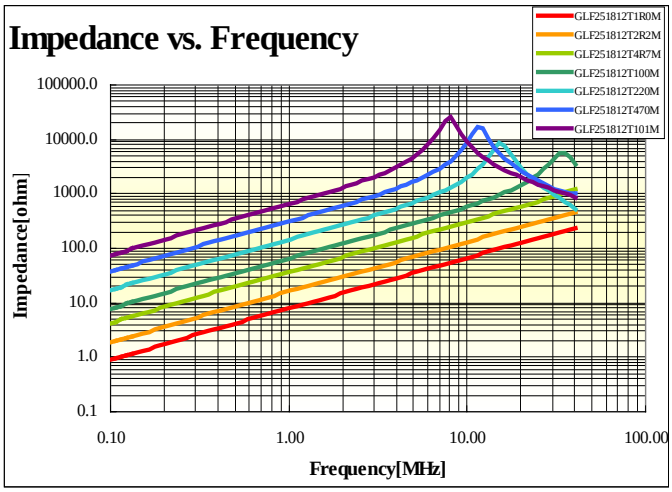
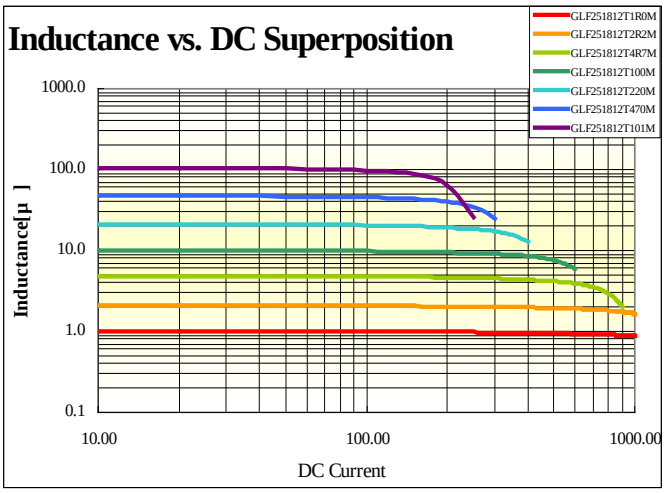
Typical Electrical Characteristics [GLF251812Type]







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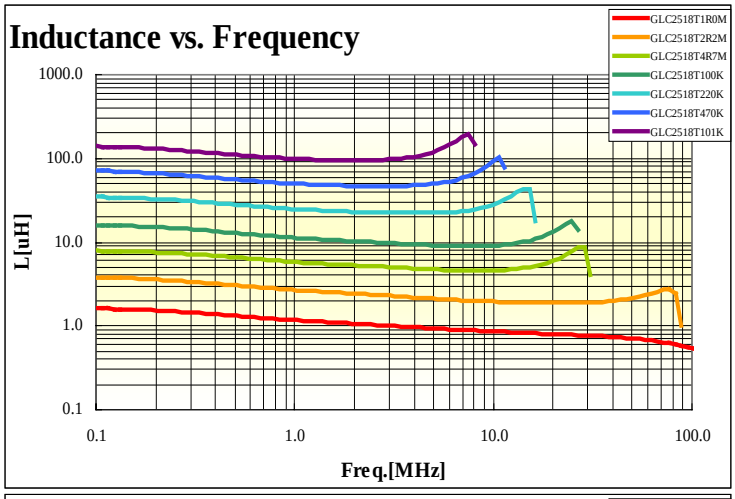
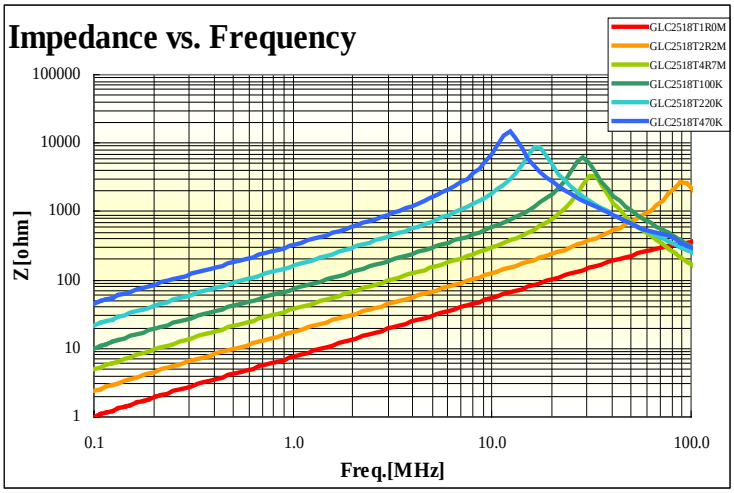
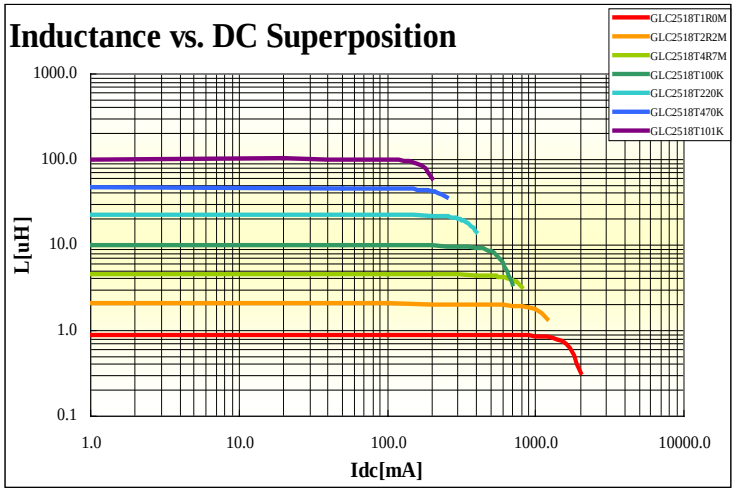
Typical Electrical Characteristics [GLC2518Type]







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Ratings

Temperature rise:	**20C° max.**
Storage temperature range:	**-40C° to 105C°**
Operating temperature range:	**-20C° to 105C°**

Country of origin

Japan

(TDK Shonai Manufacturing Corporation/Yamagata)

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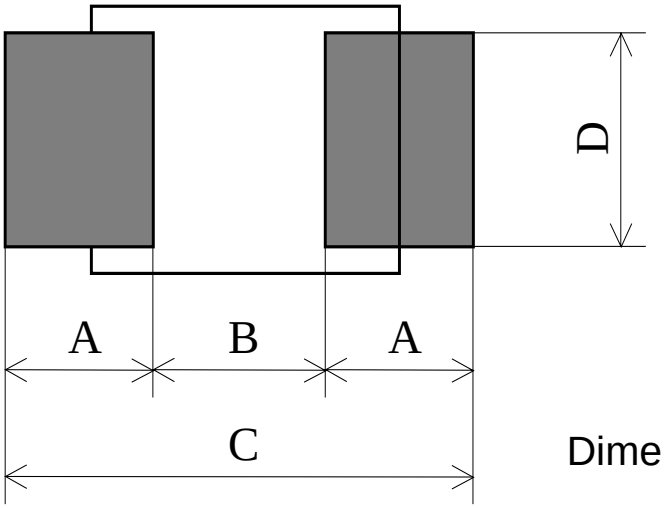
The Recommended Land Pattern



Dimension in [mm]

	A [mm]	B [mm]	C [mm]	D [mm]
GLF1608Type	**0.70**	**0.70**	**2.10**	**0.70**
GLF2012Type **GLF201208Type**	**0.80**	**1.00**	**2.60**	**0.80**
GLF2518Type **GLF251812Type** **GLC2518Type**	**0.90**	**1.30**	**3.10**	**1.60**

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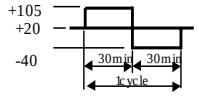
Reliability requirements

Test Item	Test Condition	Specification	TEST RESULT
Temperature characteristics	The test shall be performed after the sample has stabilized in an ambient temperature of -40 to +105 ,and the value calculated based on the value applicable in a normal temperature of +20 .	L_{20} ±10%	L / -40C / 20C / 105C Avg. -3.91 0.00 3.81 Max. -3.09 0.00 4.79 Min. -4.55 0.00 2.50
Thermal shock	The test shall be performed upon completion of 100 cycles in accordance with the conditions in the figure below, the measurement shall be made after the sample has been left in a normal temperature and normal humidity more than 12hours. 	No mechanical damege. L/Lo ±10%	L / Initial / Final Avg. 0.00 0.22 Max. 0.00 1.38 Min. 0.00 -0.69
Low temperature storage	This test shall be performed upon completion of 1000±12hours in an atmosphere with a temperature of -40±2 Upon completion of the test, the measurement shall be made after The sample has been left in a normal temperature and normal humidity more than 12hours.	No mechanical damege. L/Lo ±10%	L / Initial / Final Avg. 0.00 1.22 Max. 0.00 3.56 Min. 0.00 -0.32
Continuous operation in high temperature	The sample shall be left for 1000±12hours in an atmosphere with a temperature of +105±2 , under supplying rated current.Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidiy more than 12hours.	No mechanical damege. L/Lo ±10%	L / Initial / Final Avg. 0.00 0.75 Max. 0.00 1.52 Min. 0.00 0.22
Continuous operation in moisture	The sample shall be left for 1000±12hours in an atmosphere with a temperature of +60±3 and a humidity(RH)of 90-95%,under supplying rated current.Upon completion of the test,the measurement shall be made after the sample has been left in a normal temprature and normal humidity mora than 12hours. 12hours.	No mechanical damege. L/Lo ±10%	L / Initial / Final Avg. 0.00 0.51 Max. 0.00 2.14 Min. 0.00 -0.49

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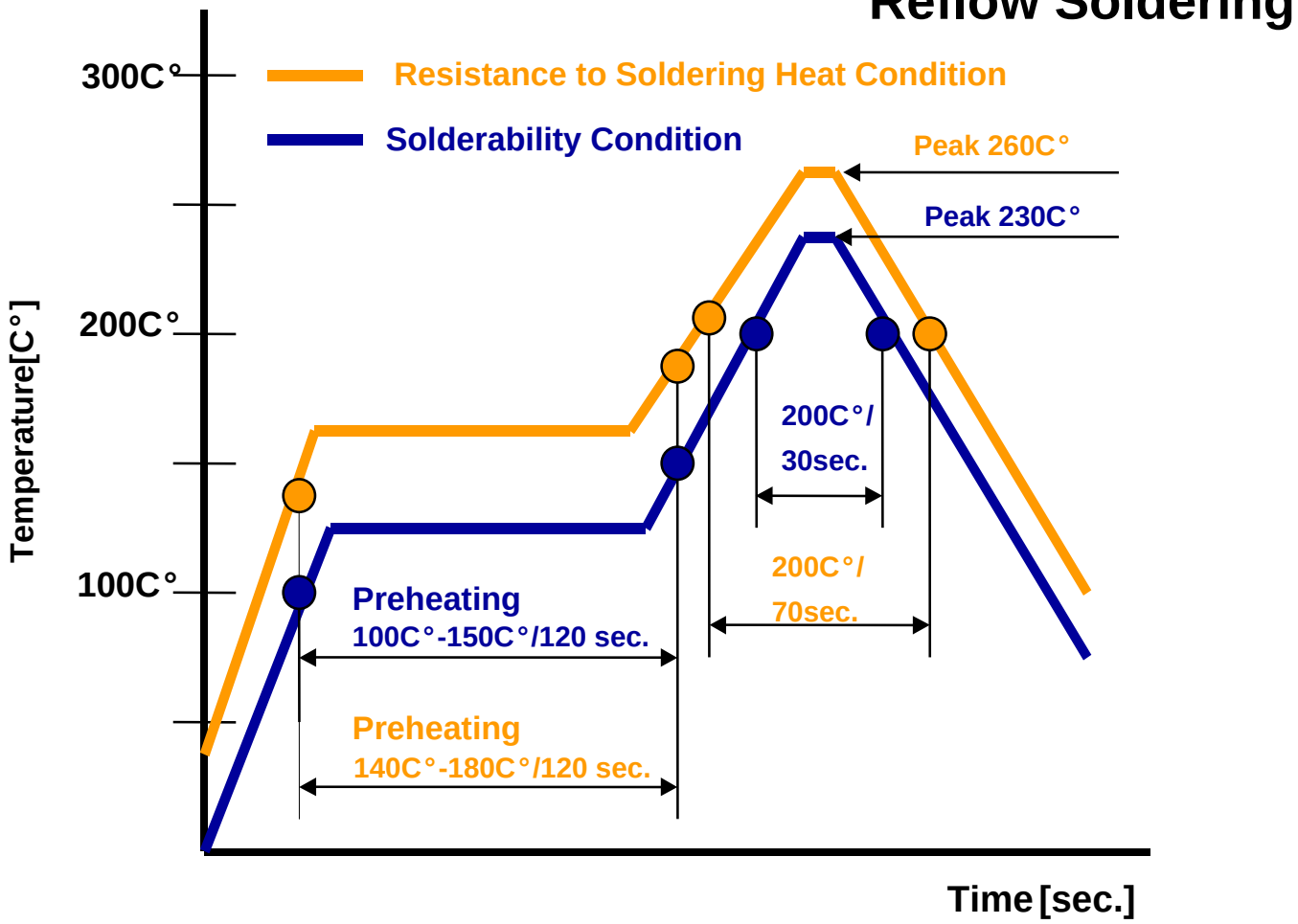
Recommended Soldering Conditions

Reflow Soldering



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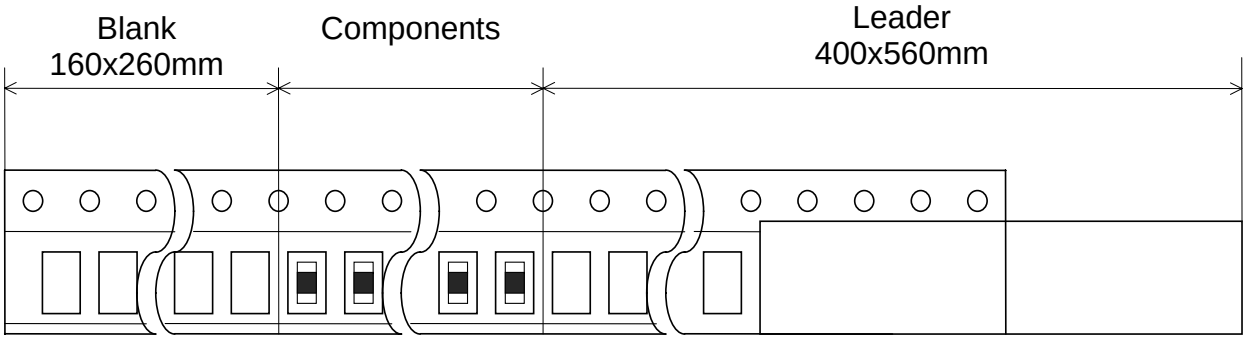
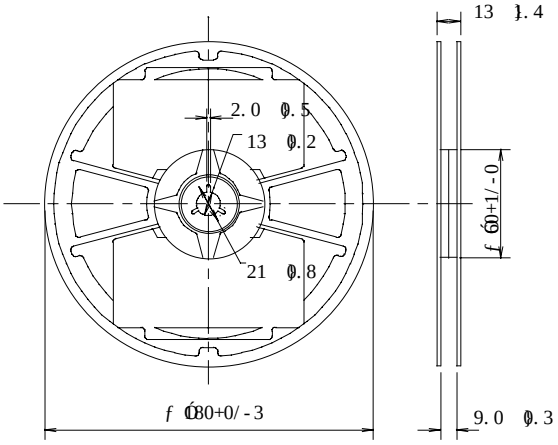
Technical Part and Leader Part Tape



	Packing number
GLF1608Type **GLF201208Type**	**4,000pieces**
GLF2012Type **GLF2518Type** **GLF251812Type** **GLC2518Type**	**2,000pieces**

Reel Dimension



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