

# LTF0603GT15N Datasheet



DiGi Electronics Part Number	LTF0603GT15N-DG
Manufacturer	<a href="#">Stackpole Electronics Inc</a>
Manufacturer Product Number	LTF0603GT15N
Description	0603, 2%, 15N Inductance (nH)
Detailed Description	Inductor

<https://www.DiGi-Electronics.com>



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.



## Purchase and inquiry

Manufacturer Product Number:

LTF0603GT15N

Series:

-

Manufacturer:

Stackpole Electronics Inc

Product Status:

Active

## Environmental & Export classification

ECCN:

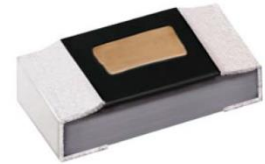
EAR99

HTSUS:

8504.50.8000

## Features:

- Exceptional Q values for small package sizes
- SRF controlled within 10%
- Stable inductance in high frequency circuits
- Highly stable design for critical requirements
- Tight tolerances down to 1% or  $\pm 0.1\text{nH}$
- 100% RoHS compliant and lead free without exemption
- Halogen free
- REACH compliant
- Contact Stackpole for additional inductance values



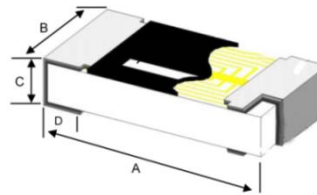
## Applications:

- Wearable devices
- Wireless LANs
- Cable/Satellite receivers
- Security systems
- Smart meters
- Connected appliances
- Various IoT devices

## Inductance and Current Ranges

Type / Code	Inductance (nH)	Current Range (mA)
LTF0201	0.1 ~ 10	400 ~ 80
LTF0402	0.2 ~ 33	800 ~ 75

## Mechanical Specifications



Type / Code	Weight (g) (1000 pc.)	A	B	C	D	Unit
LTF0201	0.23	0.024 $\pm$ 0.002	0.012 $\pm$ 0.002	0.009 $\pm$ 0.002	0.006 $\pm$ 0.002	inches
		0.60 $\pm$ 0.05	0.30 $\pm$ 0.05	0.23 $\pm$ 0.05	0.15 $\pm$ 0.05	mm
LTF0402	0.9	0.039 $\pm$ 0.002	0.020 $\pm$ 0.002	0.013 $\pm$ 0.002	0.008 $\pm$ 0.004	inches
		1.00 $\pm$ 0.05	0.50 $\pm$ 0.05	0.32 $\pm$ 0.05	0.20 $\pm$ 0.10	mm

## Performance Characteristics

Test	Test Specification	Test Condition
Inductance	as specified	Measuring equipment and fixture: 0201: HP4287 + Agilent 16196C 0402: HP4287 + Agilent 16196B
Insulation Resistance	> 1000 Mohm	MIL-STD-202 Method 302 Apply 100 V <sub>DC</sub> for 1 minute
Damp Heat with Load	$\Delta L \leq 10\%$	MIL-STD-202 Method 103B 40 $\pm$ 2°C, 90 ~ 95% R.H. Max working voltage for 1000 hours with 1.5 hours "ON" and 0.5 hour "OFF"
Bending Strength	as specified	JIS-C-5201-1 6.1.4 Bending amplitude 3 mm for 10 seconds
Solderability	95% min. coverage	MIL-STD-202 Method 208H 245 $\pm$ 5°C for 3 seconds
Resistance to Soldering Heat	$\Delta L \leq 10\%$	MIL-STD-202 Method 210E 260 $\pm$ 5°C for 10 seconds

## Performance Characteristics (cont.)

Test	Test Specification	Test Condition
Dielectric Withstand Voltage	> 100V	MIL-STD-202 Method 301 Apply 100 VA (rms) for 1 minute
High Temperature Exposure	$\Delta L \leq 10\%$	JIS-C-5201-1 7.2 85 $\pm$ 2°C, 1000 +48 / -0 hours
Low Temperature Storage	$\Delta L \leq 10\%$	JIS-C-5201-1 7.1 -40 $\pm$ 3°C, 1000 +48 / -0 hours
Temperature Cycle	$\Delta L \leq 10\%$	JIS-C-5201-1 7.4 -40 / RT / 85 / RT, 10 cycles

Storage Temperature: 15 ~ 28°C; Humidity < 80%RH

## Electrical Specifications – LTF0201

Part Number	Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor (MHz) min.	SRF (GHz) min.	DCR ( $\Omega$ ) max.	IDC (mA) max.
LTF0201 _ T0N1	0.1	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.2	400
LTF0201 _ T0N2	0.2	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.2	400
LTF0201 _ T0N3	0.3	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.2	400
LTF0201 _ T0N4	0.4	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.25	350
LTF0201 _ T0N5	0.5	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.25	350
LTF0201 _ T0N6	0.6	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.25	350
LTF0201 _ T0N7	0.7	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.3	300
LTF0201 _ T0N8	0.8	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.3	300
LTF0201 _ T0N9	0.9	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.3	300
LTF0201 _ T1N0	1	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.3	300
LTF0201 _ T1N1	1.1	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.35	300
LTF0201 _ T1N2	1.2	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.35	300
LTF0201 _ T1N3	1.3	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.45	250
LTF0201 _ T1N4	1.4	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.45	250
LTF0201 _ T1N5	1.5	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.45	250
LTF0201 _ T1N6	1.6	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.55	200
LTF0201 _ T1N7	1.7	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.55	200
LTF0201 _ T1N8	1.8	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.55	200
LTF0201 _ T1N9	1.9	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	9	0.55	200
LTF0201 _ T2N0	2	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	8	0.7	200
LTF0201 _ T2N1	2.1	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	8	0.7	200
LTF0201 _ T2N2	2.2	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	8	0.7	200
LTF0201 _ T2N3	2.3	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	8	0.8	150
LTF0201 _ T2N4	2.4	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	8	0.8	150
LTF0201 _ T2N5	2.5	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	8	0.8	150
LTF0201 _ T2N6	2.6	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	8	0.8	150
LTF0201 _ T2N7	2.7	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	8	0.8	150
LTF0201 _ T2N8	2.8	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1	150
LTF0201 _ T2N9	2.9	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1	150
LTF0201 _ T3N0	3	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1	150
LTF0201 _ T3N1	3.1	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1	150
LTF0201 _ T3N2	3.2	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1	150
LTF0201 _ T3N3	3.3	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1	150
LTF0201 _ T3N4	3.4	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.2	150
LTF0201 _ T3N5	3.5	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.2	150
LTF0201 _ T3N6	3.6	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.2	150
LTF0201 _ T3N7	3.7	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.2	150
LTF0201 _ T3N8	3.8	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.2	150
LTF0201 _ T3N9	3.9	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.2	150
LTF0201 _ T4N0	4	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.2	150
LTF0201 _ T4N4	4.4	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.3	140
LTF0201 _ T4N7	4.7	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.4	130
LTF0201 _ T4N9	4.9	$\pm 0.1, 0.2, 0.3$ nH	8 / 500	6	1.6	130

## Electrical Specifications – LTF0201 (cont.)

Part Number	Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor (MHz) min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
LTF0201 _ T5N6	5.6	±2, ±5%	8 / 500	4	1.8	130
LTF0201 _ T6N1	6.1	±2, ±5%	8 / 500	4	2	120
LTF0201 _ T6N8	6.8	±2, ±5%	8 / 500	4	2.3	110
LTF0201 _ T7N4	7.4	±2, ±5%	8 / 500	4	2.8	110
LTF0201 _ T8N2	8.2	±2, ±5%	8 / 500	3	3	110
LTF0201 _ T9N1	9.1	±2, ±5%	8 / 500	3	3.25	100
LTF0201 _ T9N2	9.2	±2, ±5%	8 / 500	3	3.25	100
LTF0201 _ T10N	10	±2, ±5%	8 / 500	2	3.5	80

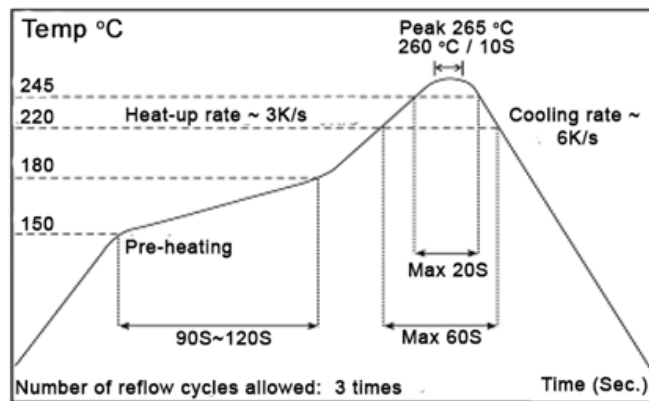
## Electrical Specifications - LTF0402

Part Number	Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor (MHz) min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
LTF0402 _ T0N2	0.2	±0.1, 0.2, 0.3 nH	13 / 500	14	0.10	800
LTF0402 _ T0N3	0.3	±0.1, 0.2, 0.3 nH	13 / 500	14	0.10	800
LTF0402 _ T0N4	0.4	±0.1, 0.2, 0.3 nH	13 / 500	14	0.10	800
LTF0402 _ T0N5	0.5	±0.1, 0.2, 0.3 nH	13 / 500	14	0.15	700
LTF0402 _ T0N6	0.6	±0.1, 0.2, 0.3 nH	13 / 500	14	0.15	700
LTF0402 _ T0N8	0.8	±0.1, 0.2, 0.3 nH	13 / 500	14	0.15	700
LTF0402 _ T0N9	0.9	±0.1, 0.2, 0.3 nH	13 / 500	14	0.15	700
LTF0402 _ T1N0	1.0	±0.1, 0.2, 0.3 nH	13 / 500	12	0.15	700
LTF0402 _ T1N1	1.1	±0.1, 0.2, 0.3 nH	13 / 500	12	0.15	700
LTF0402 _ T1N2	1.2	±0.1, 0.2, 0.3 nH	13 / 500	12	0.15	700
LTF0402 _ T1N3	1.3	±0.1, 0.2, 0.3 nH	13 / 500	10	0.25	700
LTF0402 _ T1N4	1.4	±0.1, 0.2, 0.3 nH	13 / 500	10	0.25	700
LTF0402 _ T1N5	1.5	±0.1, 0.2, 0.3 nH	13 / 500	10	0.25	700
LTF0402 _ T1N6	1.6	±0.1, 0.2, 0.3 nH	13 / 500	10	0.25	560
LTF0402 _ T1N7	1.7	±0.1, 0.2, 0.3 nH	13 / 500	10	0.25	560
LTF0402 _ T1N8	1.8	±0.1, 0.2, 0.3 nH	13 / 500	10	0.25	560
LTF0402 _ T1N9	1.9	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	560
LTF0402 _ T2N0	2.0	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	560
LTF0402 _ T2N1	2.1	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	440
LTF0402 _ T2N2	2.2	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	440
LTF0402 _ T2N3	2.3	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	440
LTF0402 _ T2N4	2.4	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	440
LTF0402 _ T2N5	2.5	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	440
LTF0402 _ T2N6	2.6	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	440
LTF0402 _ T2N7	2.7	±0.1, 0.2, 0.3 nH	13 / 500	8	0.35	440
LTF0402 _ T2N8	2.8	±0.1, 0.2, 0.3 nH	13 / 500	6	0.45	380
LTF0402 _ T2N9	2.9	±0.1, 0.2, 0.3 nH	13 / 500	6	0.45	380
LTF0402 _ T3N0	3.0	±0.1, 0.2, 0.3 nH	13 / 500	6	0.45	380
LTF0402 _ T3N1	3.1	±0.1, 0.2, 0.3 nH	13 / 500	6	0.45	380
LTF0402 _ T3N2	3.2	±0.1, 0.2, 0.3 nH	13 / 500	6	0.45	380
LTF0402 _ T3N3	3.3	±0.1, 0.2, 0.3 nH	13 / 500	6	0.45	380
LTF0402 _ T3N4	3.4	±0.1, 0.2, 0.3 nH	13 / 500	6	0.55	380
LTF0402 _ T3N5	3.5	±0.1, 0.2, 0.3 nH	13 / 500	6	0.55	380
LTF0402 _ T3N6	3.6	±0.1, 0.2, 0.3 nH	13 / 500	6	0.55	380
LTF0402 _ T3N7	3.7	±0.1, 0.2, 0.3 nH	13 / 500	6	0.55	340
LTF0402 _ T3N8	3.8	±0.1, 0.2, 0.3 nH	13 / 500	6	0.55	340
LTF0402 _ T3N9	3.9	±0.1, 0.2, 0.3 nH	13 / 500	6	0.55	340
LTF0402 _ T4N3	4.3	±0.1, 0.2, 0.3 nH	13 / 500	6	0.65	320
LTF0402 _ T4N7	4.7	±0.1, 0.2, 0.3 nH	13 / 500	6	0.65	320
LTF0402 _ T5N4	5.4	±0.1, 0.2, 0.3 nH	13 / 500	6	0.85	280
LTF0402 _ T5N6	5.6	±0.1, 0.2, 0.3 nH	13 / 500	6	0.85	280
LTF0402 _ T5N9	5.9	±0.1, 0.2, 0.3 nH	13 / 500	6	0.85	280
LTF0402 _ T6N5	6.5	±0.1, 0.2, 0.3 nH	13 / 500	6	1.05	260
LTF0402 _ T6N8	6.8	±0.1, 0.2, 0.3 nH	13 / 500	6	1.05	260

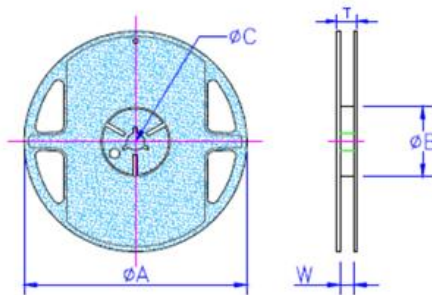
## Electrical Specifications - LTF0402 (cont.)

Part Number	Inductance (nH)	Inductance Tolerance (nH or %)	Quality Factor (MHz) min.	SRF (GHz) min.	DCR ( $\Omega$ ) max.	IDC (mA) max.
LTF0402_T7N2	7.2	$\pm 0.1, 0.2, 0.3$ nH	13 / 500	6	1.05	260
LTF0402_T8N0	8.0	$\pm 0.1, 0.2, 0.3$ nH	13 / 500	5.5	1.25	220
LTF0402_T8N1	8.1	$\pm 0.1, 0.2, 0.3$ nH	13 / 500	5.5	1.25	220
LTF0402_T8N2	8.2	$\pm 0.1, 0.2, 0.3$ nH	13 / 500	5.5	1.25	220
LTF0402_T9N1	9.1	$\pm 0.1, 0.2, 0.3$ nH	13 / 500	5.5	1.25	220
LTF0402_T10N	10.0	$\pm 1, 2, 3, 5\%$	13 / 500	4.5	1.35	200
LTF0402_T10N8	10.8	$\pm 1, 2, 3, 5\%$	13 / 500	4.5	1.35	200
LTF0402_T12N	12.0	$\pm 1, 2, 3, 5\%$	13 / 500	3.7	1.55	180
LTF0402_T13N8	13.8	$\pm 1, 2, 3, 5\%$	13 / 500	3.7	1.75	180
LTF0402_T15N	15.0	$\pm 1, 2, 3, 5\%$	13 / 500	3.3	1.75	130
LTF0402_T17N	17.0	$\pm 1, 2, 3, 5\%$	13 / 500	3.1	1.95	100
LTF0402_T18N	18.0	$\pm 1, 2, 3, 5\%$	13 / 500	3.1	2.15	100
LTF0402_T20N8	20.8	$\pm 1, 2, 3, 5\%$	13 / 500	2.8	2.55	90
LTF0402_T22N	22.0	$\pm 1, 2, 3, 5\%$	13 / 500	2.8	2.65	90
LTF0402_T27N	27.0	$\pm 1, 2, 3, 5\%$	13 / 500	2.5	3.25	75
LTF0402_T33N	33.0	$\pm 5\%$	13 / 500	2.5	4.50	75

## Reflow Chart:

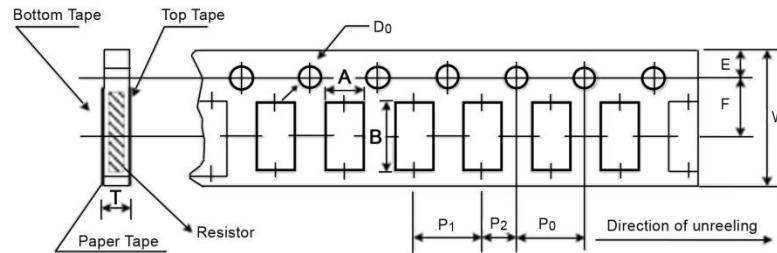


## Packaging Specifications



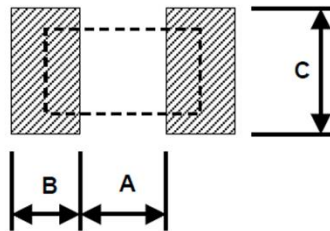
Type / Code	A	B	C	W	T	Unit
All Sizes	7.008 $\pm$ 0.039 178.00 $\pm$ 1.00	2.362 $\pm$ 0.039 60.00 $\pm$ 1.00	0.531 $\pm$ 0.028 13.50 $\pm$ 0.70	0.374 $\pm$ 0.039 9.50 $\pm$ 1.00	0.453 $\pm$ 0.039 11.50 $\pm$ 1.00	inches mm

## Paper Tape Specifications



Type / Code	A	B	W	E	F	Unit
LTF0201	0.016 ± 0.002 0.40 ± 0.05	0.028 ± 0.002 0.70 ± 0.05	0.315 ± 0.004 8.00 ± 0.10	0.069 ± 0.002 1.75 ± 0.05	0.138 ± 0.002 3.50 ± 0.05	inches mm
LTF0402	0.028 ± 0.002 0.70 ± 0.05	0.046 ± 0.002 1.16 ± 0.05	0.315 ± 0.004 8.00 ± 0.10	0.069 ± 0.002 1.75 ± 0.05	0.138 ± 0.002 3.50 ± 0.05	inches mm
Type / Code	P0	P1	P2	D0	T	Unit
LTF0201	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.079 ± 0.002 2.00 ± 0.05	0.061 ± 0.002 1.55 ± 0.05	0.017 ± 0.001 0.42 ± 0.02	inches mm
LTF0402	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.079 ± 0.002 2.00 ± 0.05	0.061 ± 0.002 1.55 ± 0.05	0.016 ± 0.001 0.40 ± 0.03	inches mm

## Solder Land Pattern Specifications



Type / Code	A	B	C	Unit
LTF0201	0.012 0.30	0.010 0.25	0.012 ± 0.008 0.30 ± 0.20	inches mm
LTF0402	0.020 0.50	0.018 0.45	0.024 ± 0.008 0.60 ± 0.20	inches mm

## RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

## RoHS Compliance Status

Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition	Lead-Free Mfg. Effective Date (Std Product Series)	Lead-Free Effective Date Code (YY/WW)
LTF	Thin Film Surface Mount Chip Inductor	SMD	YES	100% Matte Sn over Ni	May-04	04/18

## “Conflict Metals” Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the “conflict region” of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

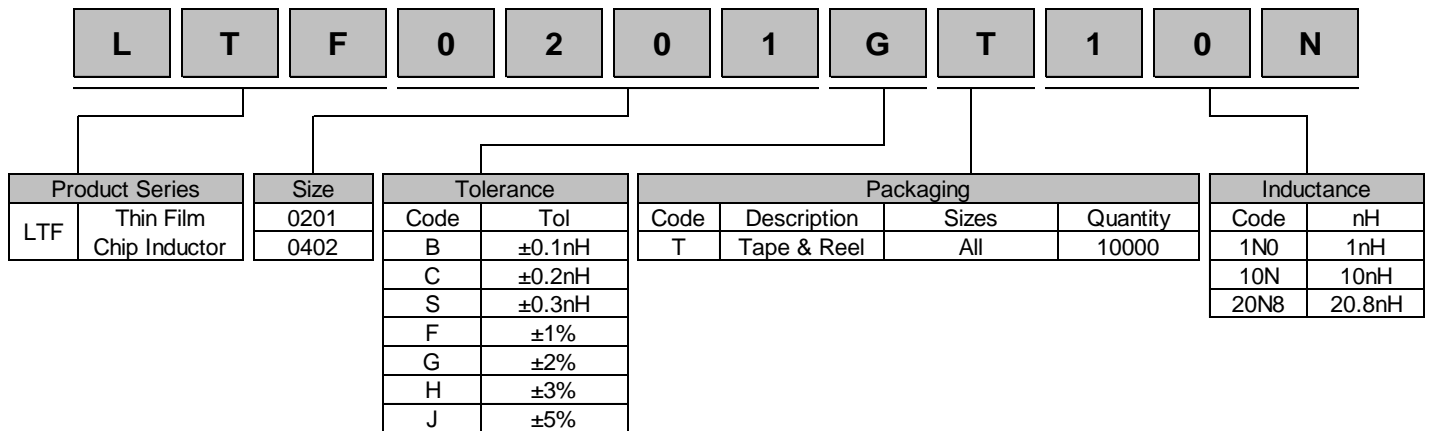
## Compliance to “REACH”

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, “The Registration, Evaluation, Authorization and Restriction of Chemicals”, otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

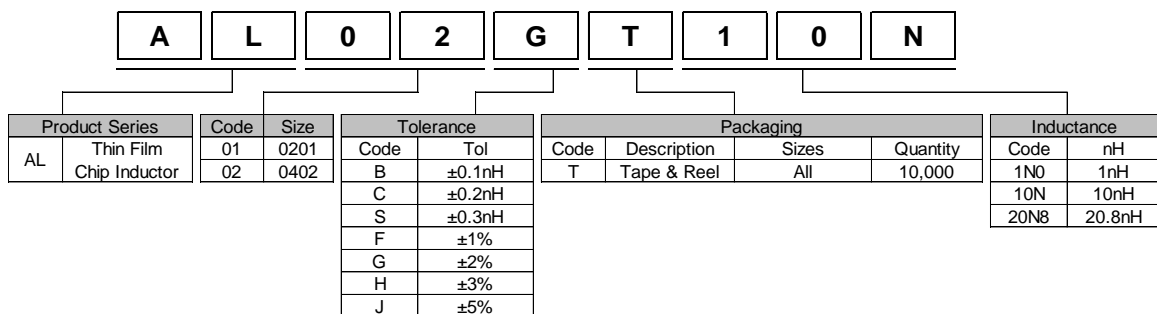
## Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

## How to Order



## Legacy Part Number:





## OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we stricly control the quality of products and services. Welcome your RFQ to

Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.