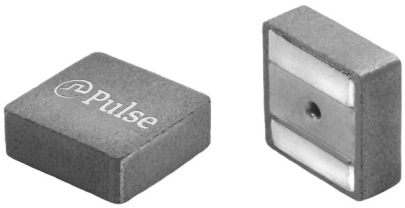
SMT Power Inductors

High Current Composite Inductor - PA5001.XXXNLT and PM2201.XXXNLT

Pulse a YAGEO company





- ***Height:*** *2.1mm Max*
- ***Footprint:*** *4.3mm x 4.3mm Max*
- ***Current Rating:*** *up to 38Apk*
- ***Inductance Range****: 0.10uH to 2.20uH*
- *High current, low DCR, and high efficiency*
- *Rated Voltage between Terminals: 60V*
- *Minimized acoustic noise and minimized leakage flux noise*
- *Available in Commercial (PA5001) and Automotive (PM2201) grades*

Electrical Specifications @ 25°C, Operating Temperature Range -55°C to +155°C

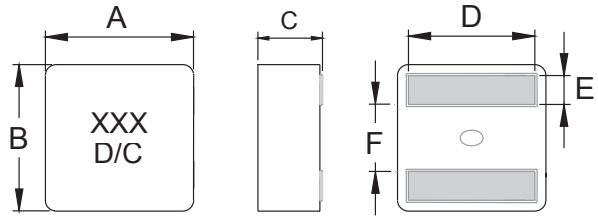
Part Number		▽ Inductance 100KHz, 0.1V	Rated[3] Current	DC Resistance		Saturation[2] Current	K Factor for Core Loss
Commerical	Automotive[6]			TYP.	MAX.		
		uH±20%	A	mΩ	mΩ	A	
PA5001.101NLT	**PM2201.101NLT**	**0.10**	**18**	**2.2**	**2.42**	**33**	**947.4**
PA5001.221NLT	**PM2201.221NLT**	**0.22**	**16.8**	**4.1**	**4.6**	**18.8**	**602.9**
PA5001.361NLT	**PM2201.361NLT**	**0.36**	**14.5**	**5.6**	**6.3**	**15.0**	**442.1**
PA5001.401NLT	**PM2201.401NLT**	**0.40**	**14**	**6.9**	**7.73**	**13.5**	**442.1**
PA5001.471NLT	PM2201.471NLT	0.47	12.5	7.8	8.58	13.0	-
PA5001.561NLT	**PM2201.561NLT**	**0.56**	**12**	**8.4**	**9.3**	**12.6**	**349**
PA5001.601NLT	PM2201.601NLT	0.60	11.7	8.6	9.52	12.3	-
PA5001.721NLT	**PM2201.721NLT**	**0.72**	**10.5**	**10.4**	**11.6**	**10.6**	**288.3**
PA5001.102NLT	**PM2201.102NLT**	**1.00**	**9.6**	**13.3**	**14.6**	**8.8**	**245.6**
PA5001.122NLT	**PM2201.122NLT**	**1.20**	**9**	**16.2**	**17.9**	**7.8**	**213.9**
PA5001.152NLT	**PM2201.152NLT**	**1.50**	**7.6**	**21.0**	**23.5**	**7.4**	**189.5**
PA5001.182NLT	**PM2201.182NLT**	**1.80**	**7**	**25.0**	**28**	**7.0**	**170**
PA5001.222NLT	PM2201.222NLT	2.20	5.6	35.2	38.7	6.0	-

Notes:

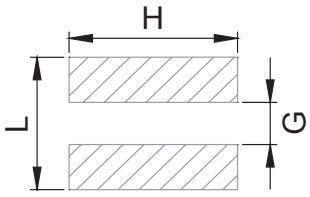
1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
2. The saturation current is the current at which the initial inductance is guaranteed to drop by no more than 40%. The typical inductance at a specified current can be found on the typical performance curves.
3. The rated current is the DC current required to raise the component temperature by approximately 40 ° C. Take note that the components' performanc varies depending on the system condition. It is suggested that the component be tested at the system level, to verify the temperature rise of the component during system operation.
4. The part temperature (ambient+temp rise) should not exceed 155 ° C under worst case operating conditions. Circuit design, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
5. Parts shown in bold are standard catalog parts and are available through sample stock and distribution. Parts in lighter font are available but are not necessarily held in sample stock or distribution and lead times may be longer. Please contact Pulse for availablity.
6. The PM2201.XXXNLT part numbers are AEC-Q200 and IATF16949 certified. The mechanical dimensions are 100% tested in production but do not necessarily meet a product capability index (Cpk) >1.33 and therefore may not strictly conform to PPAP.
7. Special Characteristics ▽

Mechanical

PA5001.XXXNLT and PM2201.XXXNLT



FINAL LAYOUT

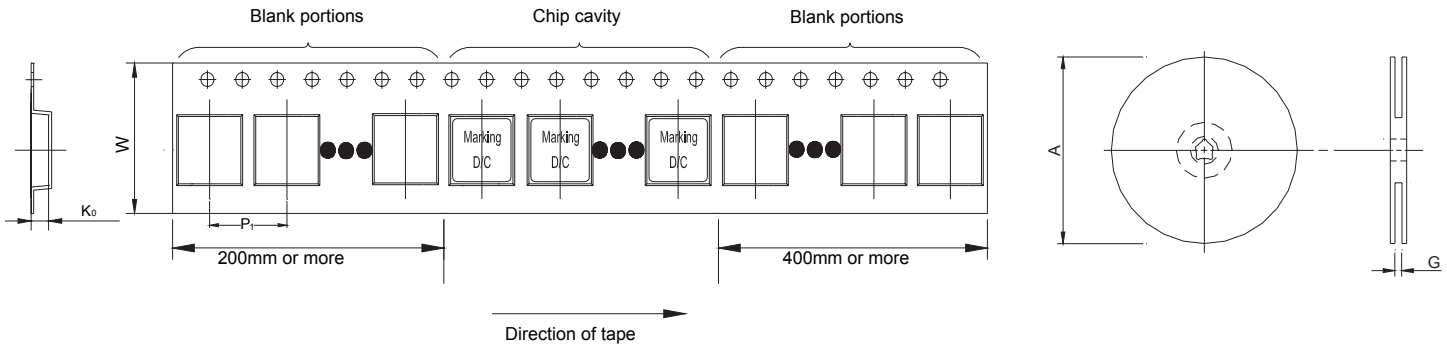


SUGGESTED PAD LAYOUT

Series	Mechanical	A	B	C	D	E	F	L	G	H
PA5001/PM2201	N/A	4.1±0.2	4.1±0.2	1.9±0.2	3.4±0.3	0.88±0.2	1.6±0.25	3.4 (REF)	1.4 (REF)	3.8 (REF)

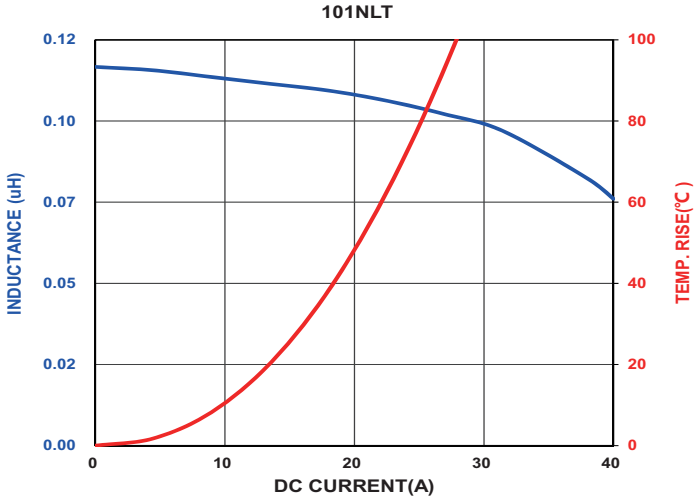
All Dimensions in mm.

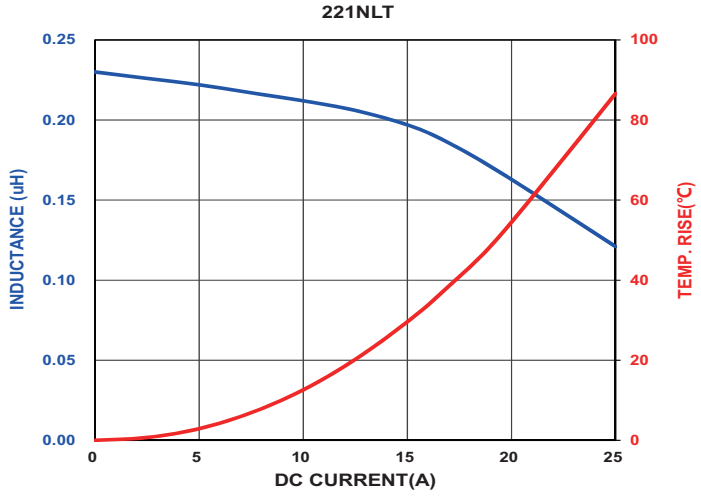
TAPE & REEL INFO

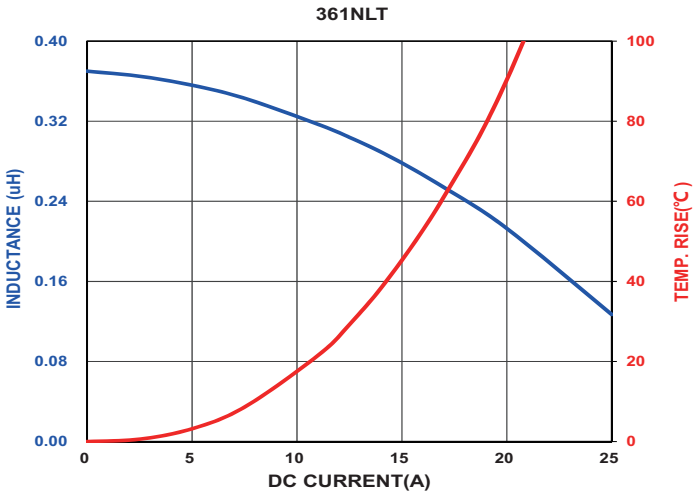


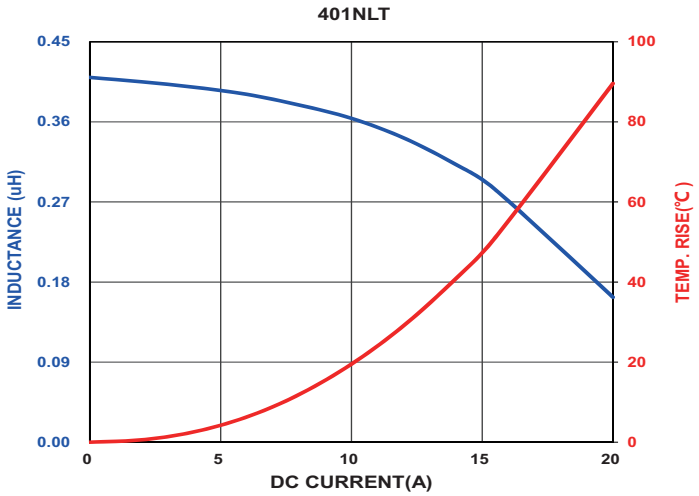
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA5001/PM2201	Ø330	12.4	8	12	2.3	3000

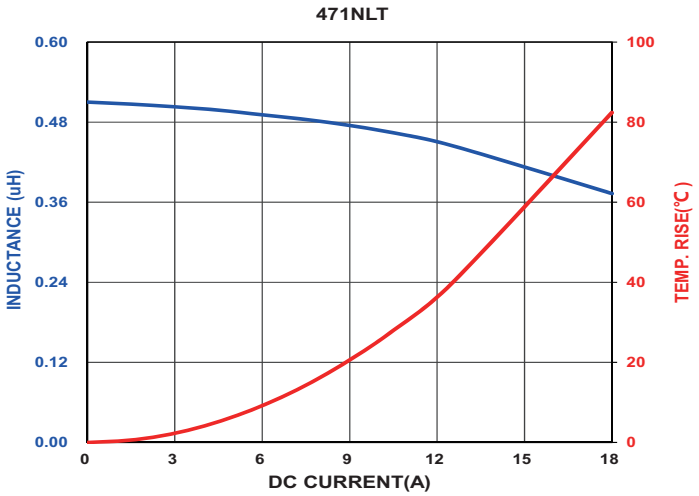
Typical Performance Curves

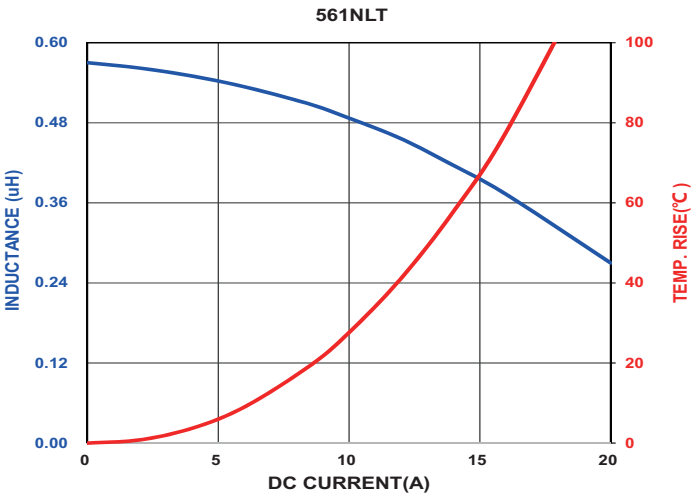


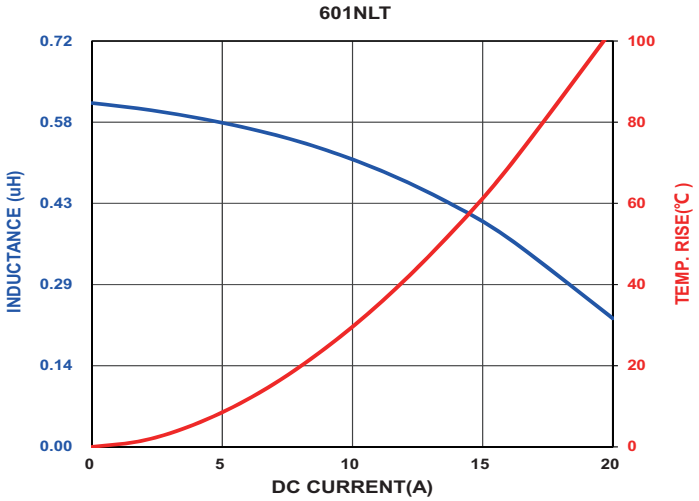


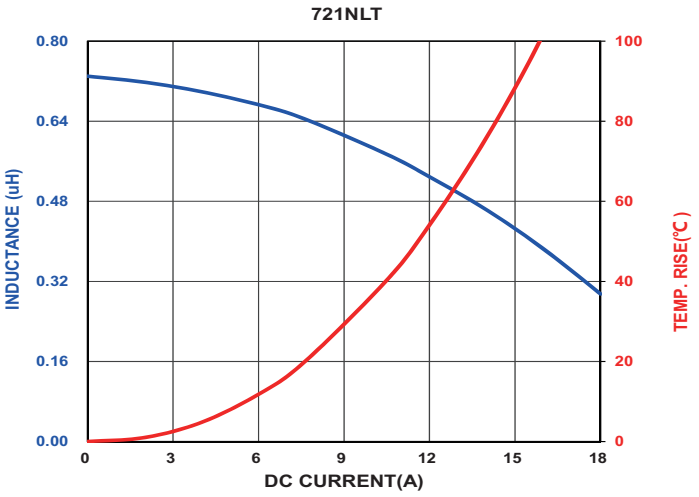

361NLT
INDUCTANCE (uH)
0.40
0.32
0.24
0.16
0.08
0.00
TEMP. RISE(℃)
100
80
60
40
20
0
0
5
10
15
20
25
DC CURRENT(A)

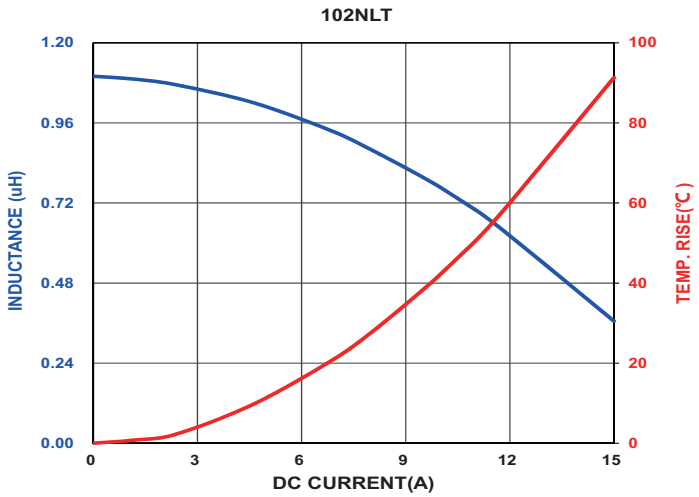

401NLT
INDUCTANCE (uH)
0.45
0.36
0.27
0.18
0.09
0.00
TEMP. RISE(℃)
100
80
60
40
20
0
0
5
10
15
20
DC CURRENT(A)

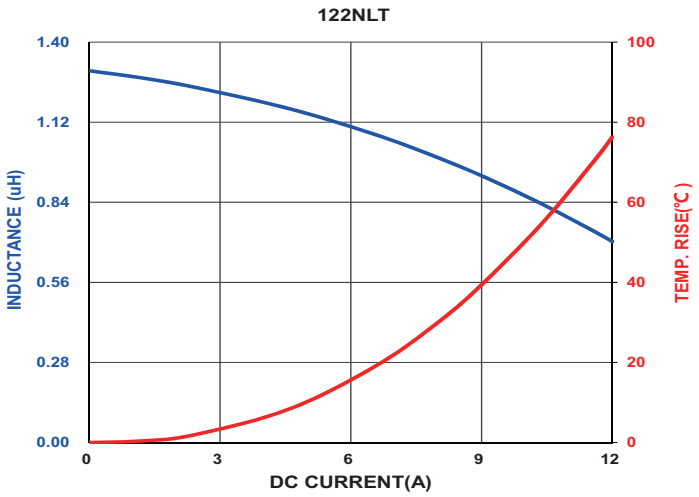

471NLT
INDUCTANCE (uH)
0.60
0.48
0.36
0.24
0.12
0.00
TEMP. RISE(℃)
100
80
60
40
20
0
0
3
6
9
12
15
18
DC CURRENT(A)

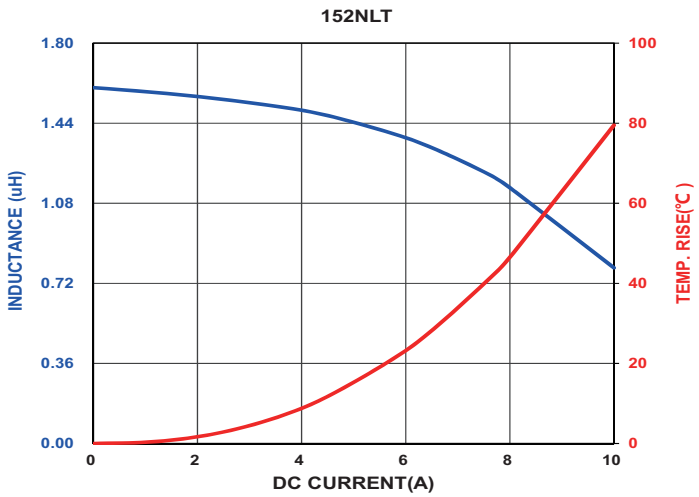

561NLT
INDUCTANCE (uH)
0.60
0.48
0.36
0.24
0.12
0.00
TEMP. RISE(℃)
100
80
60
40
20
0
0
5
10
15
20
DC CURRENT(A)

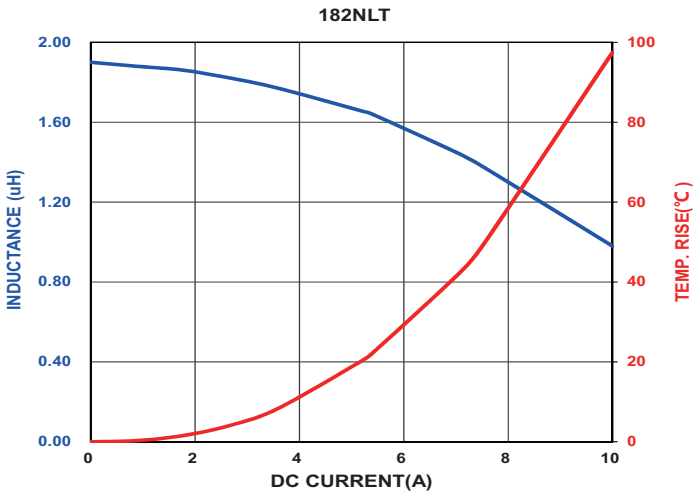

601NLT
INDUCTANCE (uH)
0.72
0.58
0.43
0.29
0.14
0.00
TEMP. RISE(℃)
100
80
60
40
20
0
0
5
10
15
20
DC CURRENT(A)

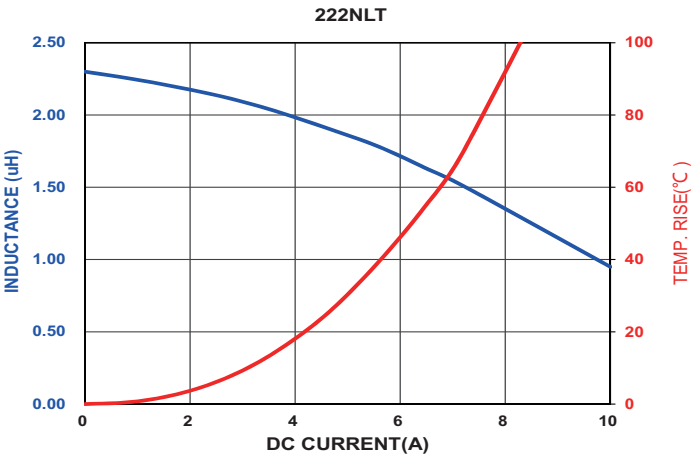

721NLT
INDUCTANCE (uH)
0.80
0.64
0.48
0.32
0.16
0.00
TEMP. RISE(℃)
100
80
60
40
20
0
0
3
6
9
12
15
18
DC CURRENT(A)


102NLT
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
1.20
0.96
0.72
0.48
0.24
0.00
100
80
60
40
20
0
0
3
6
9
12
15

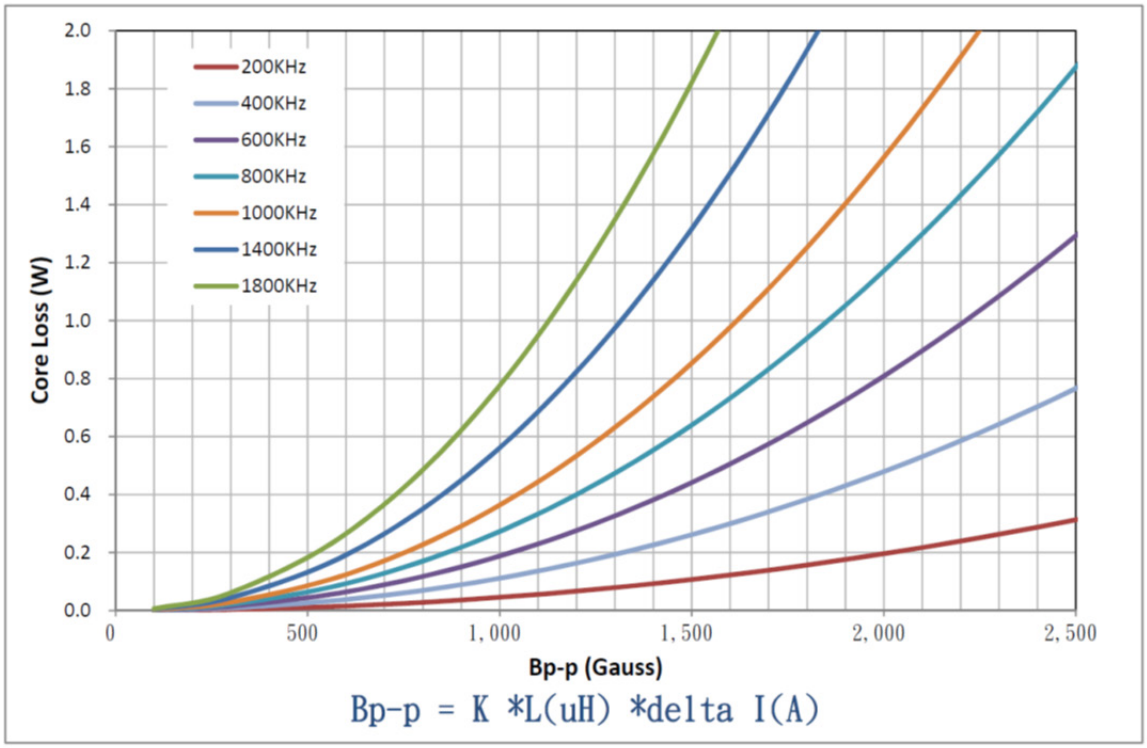

122NLT
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
1.40
1.12
0.84
0.56
0.28
0.00
100
80
60
40
20
0
0
3
6
9
12


152NLT
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
1.80
1.44
1.08
0.72
0.36
0.00
100
80
60
40
20
0
0
2
4
6
8
10


182NLT
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
2.00
1.60
1.20
0.80
0.40
0.00
100
80
60
40
20
0
0
2
4
6
8
10


222NLT
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
2.50
2.00
1.50
1.00
0.50
0.00
100
80
60
40
20
0
0
2
4
6
8
10

CORE LOSS vs FLUX DENSITY



For More Information:
Americas - prodinfo_power@pulseelectronics.com | **Europe -** power-apps-europe@pulseelectronics.com | **Asia -** power-apps-asia@pulseelectronics.com

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2021. Pulse Electronics, Inc. All rights reserved.

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

Pulse Electronics:

BSPQ000603043N0B00 PD380-4000S1NF PG2290.151HLT W1902 W3078 W3334B0150 PAT6261.003NLT PE-67100NL BSPQ000603041N4B00 DPX1608LKF3R2460A PA0369NL BBUP00201209121Y00 JXD0-2015NL P0585NL PA4320.104NLT PA4341.301NLT PD617-6000M243 JXD2-0Z10NL PA4343.451NLT AWCS0012070736NJ00 BDHE002520122R2MQ1 PA2744NL PA4320.334NLT PA4341.221NLT ANT1204F007R0870A E5J88-032-02-L PA4343.361NLT PE-68386NLT PGL6395.121HLT W1093