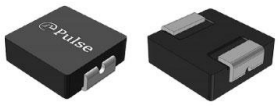
PA5405.122NLT Datasheet



DiGi Electronics Part Number	PA5405.122NLT-DG
Manufacturer	Pulse Electronics
Manufacturer Product Number	PA5405.122NLT
Description	FIXED IND 1.2UH 21A 5 MOHM SMD
Detailed Description	1.2 µH Shielded Molded Inductor 21 A 5mOhm Max Nonstandard

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
PA5405.122NLT	Pulse Electronics
Series:	Product Status:
PA5405	Active
Type:	Material - Core:
Molded	-
Inductance:	Tolerance:
1.2 µH	±20%
Current Rating (Amps):	Current - Saturation (Isat):
21 A	37A
Shielding:	DC Resistance (DCR):
Shielded	5mOhm Max
Q @ Freq:	Frequency - Self Resonant:
-	-
Ratings:	Operating Temperature:
-	-55°C ~ 125°C
Inductance Frequency - Test:	Features:
100 kHz	-
Mounting Type:	Package / Case:
Surface Mount	Nonstandard
Supplier Device Package:	Size / Dimension:
-	0.531" L x 0.492" W (13.50mm x 12.50mm)
Height - Seated (Max):	
0.138" (3.50mm)	

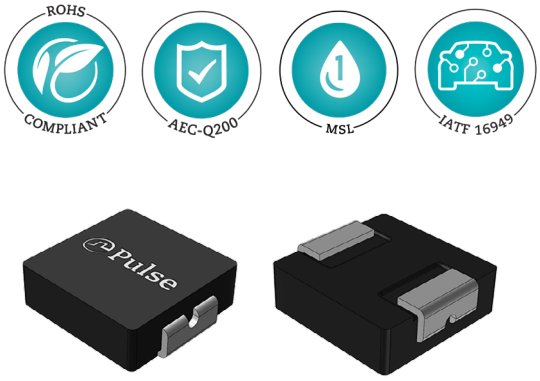
Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8504.50.4000	

SMT Power Inductor

High Current Molded Power Inductor - PA5405 & PM5405 Series

Pulse
a YAGEO company



- **Height:** *3.5mm Max*
- **Footprint:** *14mm x 12.8mm Max*
- **Current Rating:** *up to 24A*
- **Inductance Range:** *1 to 47uH*
- *High current, low DCR, and high efficiency*
- *Shielded construction and compact design*
- *Minimized acoustic noise and minimized leakage flux noise*
- *200 Vdc Isolation Between Terminal and Core*
- *Available in Commercial (PA) and Automotive (PM) grades*

Electrical Specifications @ 25°C - Operating Temperature -55°C to +125°C

Commercial[6,7]	Automotive[6,7]	Inductance[5] 100KHz, 1.0V	Rated[3] Current	DC Resistance		Saturation[2] Current
			TYP.	TYP.	MAX.	TYP.
		uH±20%	A	mΩ	mΩ	A
PA5405.102NLT	PM5405.102NLT	1.0	24	2.7	3.5	40
PA5405.122NLT	PM5405.122NLT	1.2	21	4	5	37
PA5405.152NLT	PM5405.152NLT	1.5	19	4.8	5.5	35
PA5405.182NLT	PM5405.182NLT	1.8	17	5.2	7	30
PA5405.222NLT	PM5405.222NLT	2.2	16	6.3	8	29
PA5405.332NLT	PM5405.332NLT	3.3	12	11	13.5	27
PA5405.472NLT	PM5405.472NLT	4.7	10	15.3	18.5	24
PA5405.562NLT	PM5405.562NLT	5.6	9.5	18	22	19
PA5405.682NLT	PM5405.682NLT	6.8	9	20	24	18
PA5405.822NLT	PM5405.822NLT	8.2	8.5	23	28	16
PA5405.103NLT	PM5405.103NLT	10	7.5	29	34	14
PA5405.153NLT	PM5405.153NLT	15	6.5	55	65	10
PA5405.223NLT	PM5405.223NLT	22	4.5	83	99	7
PA5405.333NLT	PM5405.333NLT	33	3.5	132	160	6
PA5405.473NLT	PM5405.473NLT	47	3	181	218	5.5

SMT Power Inductor

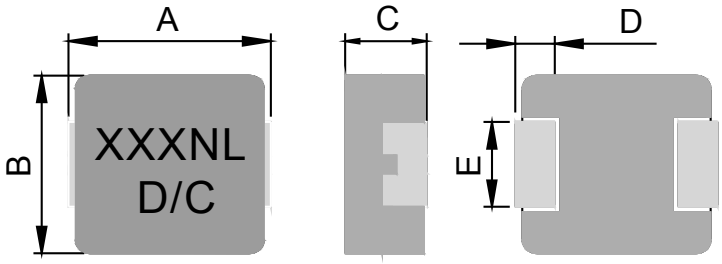
High Current Molded Power Inductor - PA5405 & PM5405 Series

Notes:

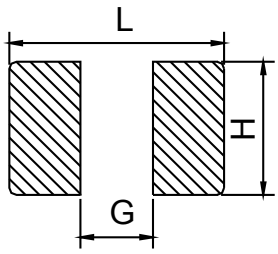
1. Actual temperature of the component during system operation (ambient plus temperature rise) must be within the standard operating range.
2. The saturation current is the current at which the initial inductance drops approximately 30% at the stated ambient temperature. This current is determined by placing the compnent in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effect) to the component.
3. The rated current is the DC current required to raise the component temperature by approximately 40˚C. Take note that the components' performance 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 125˚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. Please note that the inductance tolerance of all parts are ±20%, except those indicated by an * which are +/- 30%.
6. 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.
7. The PM prefix parts are AEC-Q200 qualified and has full automotive IATF16949 certification. 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.
8. Special characteristics ▽

Mechanical

PA5405/PM5405



FINAL LAYOUT



SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	L	G	H
PA5405/PM5405	13.5+/-0.5	12.5+/-0.3	3.3+/-0.2	2.3+/-0.3	4.7+/-0.3	14.2	8	5

All Dimensions in mm.

SMT Power Inductor

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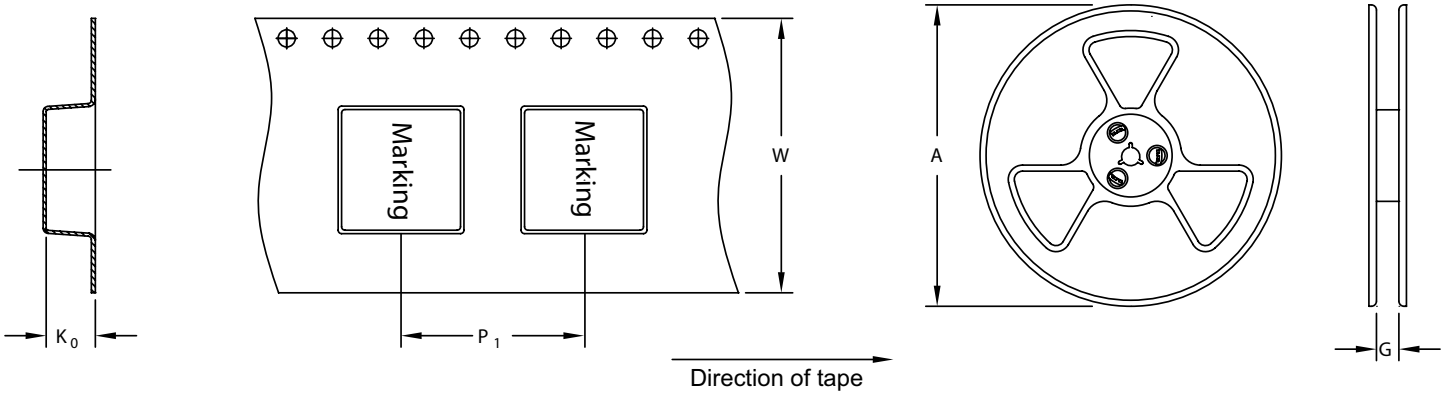
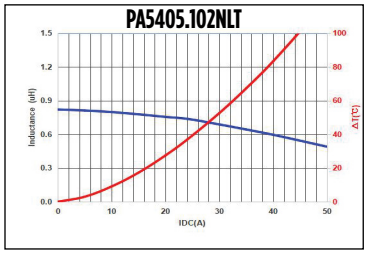
TAPE & REEL INFO

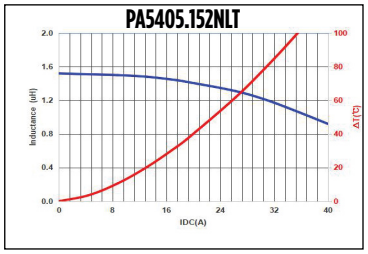


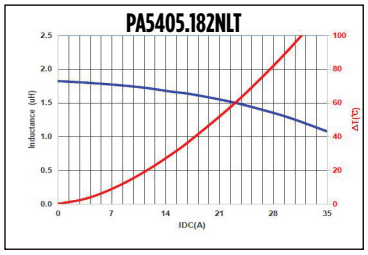
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA5405/PM5405	Ø330	24.4	16	24	4	500

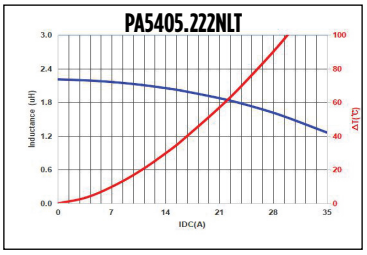
Typical Performance Curves

PA5405/PM5405









SMT Power Inductor

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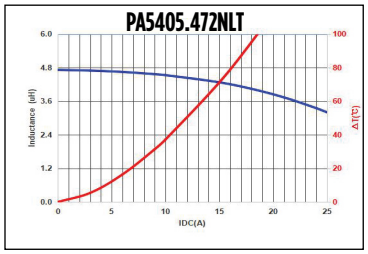

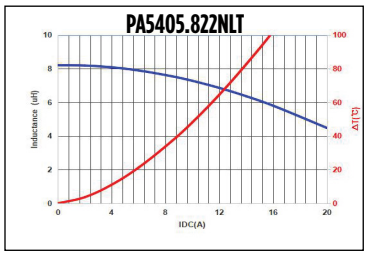

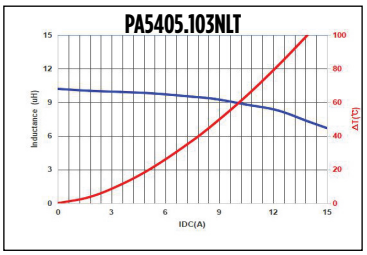

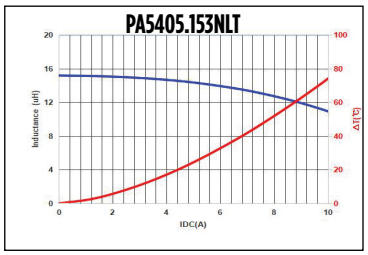

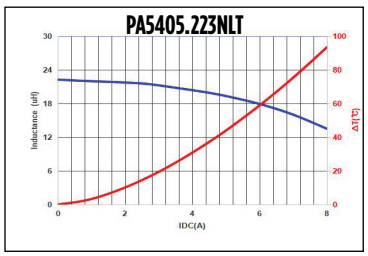

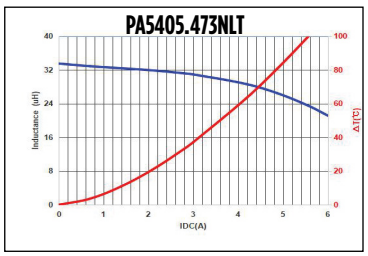

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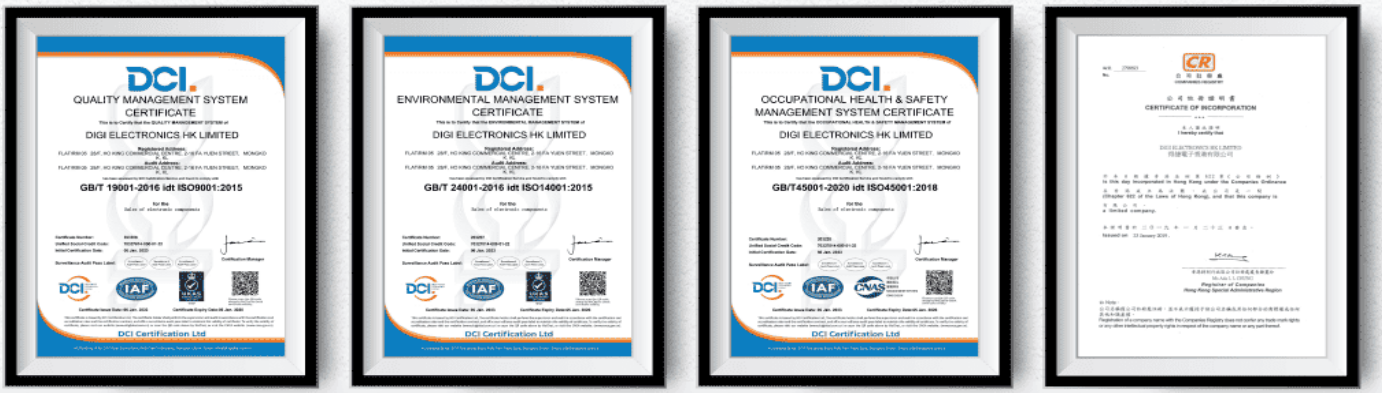

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