PA5404.103NLT Datasheet

DiGi Electronics Part Number	PA5404.103NLT-DG
Manufacturer	Pulse Electronics
Manufacturer Product Number	PA5404.103NLT
Description	FIXED IND 10UH 3.8A 69 MOHM SMD
Detailed Description	10 µH Shielded Molded Inductor 3.8 A 69mOhm Max Nonstandard

https://www.DiGi-Electronics.com

Tel: +00 852-30501935

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Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
PA5404.103NLT	Pulse Electronics
Series:	Product Status:
PA5404	Active
Type:	Material - Core:
Molded	-
Inductance:	Tolerance:
10 µH	±20%
Current Rating (Amps):	Current - Saturation (Isat):
3.8 A	7.5A
Shielding:	DC Resistance (DCR):
Shielded	69mOhm Max
Q @ Freq:	Frequency - Self Resonant:
-	15MHz
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:
-	0.287" L x 0.260" W (7.30mm x 6.60mm)
Height - Seated (Max):	
0.197" (5.00mm)	

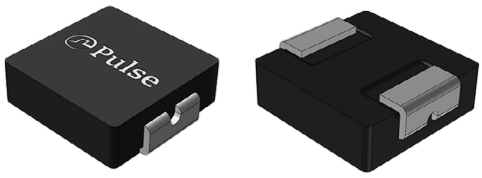
Environmental & Export classification

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

SMT Power Inductors

High Current Molded Power Inductor - PA5404 & PM5404 Series

Pulse
a YAGEO company



- **Height:** *5.0mm Max*
- **Footprint:** *7.6mm x 6.9mm Max*
- **Current Rating:** *up to 32A*
- **Inductance Range:** *0.1 to 68uH*
- *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	SRF
			TYP.	TYP.	MAX.	TYP.	Typ
		uH±20%	A	mΩ	mΩ	A	MHz
PA5404.101NLT	PM5404.101NLT	0.10*	32	0.65	0.78	65	350
PA5404.111NLT	PM5404.111NLT	0.11*	32	0.65	0.78	65	350
PA5404.151NLT	PM5404.151NLT	0.15*	30	1.3	1.7	50	210
PA5404.221NLT	PM5404.221NLT	0.22	25	1.6	1.9	35	150
PA5404.331NLT	PM5404.331NLT	0.33	25	2.5	3	32	100
PA5404.401NLT	PM5404.401NLT	0.4	23	3.1	3.7	31	100
PA5404.471NLT	PM5404.471NLT	0.47	22	3.5	3.9	30	95
PA5404.561NLT	PM5404.561NLT	0.56	20	3.6	4.2	27	80
PA5404.601NLT	PM5404.601NLT	0.6	19	3.8	4.3	25	80
PA5404.681NLT	PM5404.681NLT	0.68	18	4	4.5	24	75
PA5404.821NLT	PM5404.821NLT	0.82	16.5	4.6	4.9	22	70
PA5404.102NLT	PM5404.102NLT	1.0	15	6.1	6.5	20	50
PA5404.122NLT	PM5404.122NLT	1.2	14	6.7	7.5	18	45
PA5404.152NLT	PM5404.152NLT	1.5	12	8.6	9	16.5	43
PA5404.182NLT	PM5404.182NLT	1.8	12	9.5	11	15	38
PA5404.222NLT	PM5404.222NLT	2.2	10	11.2	12	14	30
PA5404.332NLT	PM5404.332NLT	3.3	8	19	20.9	12	26
PA5404.472NLT	PM5404.472NLT	4.7	6.5	28	30.8	10	22
PA5404.492NLT	PM5404.492NLT	4.9	6.3	32	38	9.5	21
PA5404.562NLT	PM5404.562NLT	5.6	6	43.5	49	9	20
PA5404.682NLT	PM5404.682NLT	6.8	5.5	46	51.5	8.5	18

SMT Power Inductors

High Current Molded Power Inductor - PA5404 & PM5404 Series

Pulse a YAGEO company

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	SRF
			TYP.	TYP.	MAX.	TYP.	TYP.
		uH±20%	A	mΩ	mΩ	A	MHz
PA5404.822NLT	PM5404.822NLT	8.2	5	56	63	8	16
PA5404.103NLT	PM5404.103NLT	10.0	3.8	60	69	7.5	15
PA5404.123NLT	PA5404.123NLT	12	3.5	68	80	6.7	13
PA5404.153NLT	PM5404.153NLT	15	3.5	81	92	6	12
PA5404.223NLT	PM5404.223NLT	22	2.5	140	170	5.5	9
PA5404.333NLT	PM5404.333NLT	33	2	173	200	3.5	8
PA5404.423NLT	PM5404.423NLT	42	2	212	245	2.8	8
PA5404.473NLT	PM5404.473NLT	47	1.9	290	330	2.7	8
PA5404.563NLT	PM5404.563NLT	56	1.6	342	396	2.1	7
PA5404.683NLT	PM5404.683NLT	68	1.2	386	445	2	6

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 ▽

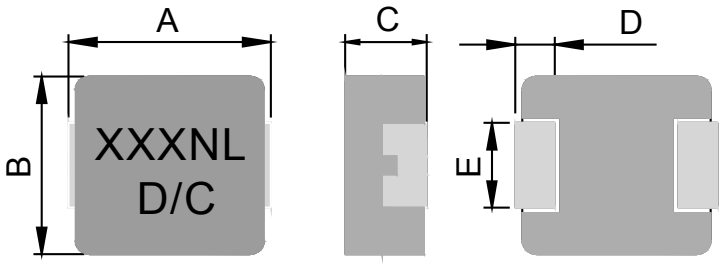
SMT Power Inductors

High Current Molded Power Inductor - PA5404 & PM5404 Series

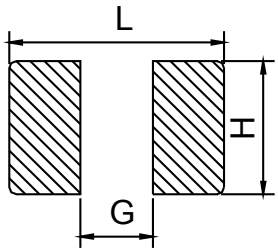
Pulse a YAGEO company

Mechanical

PA5404/PM5404



FINAL LAYOUT

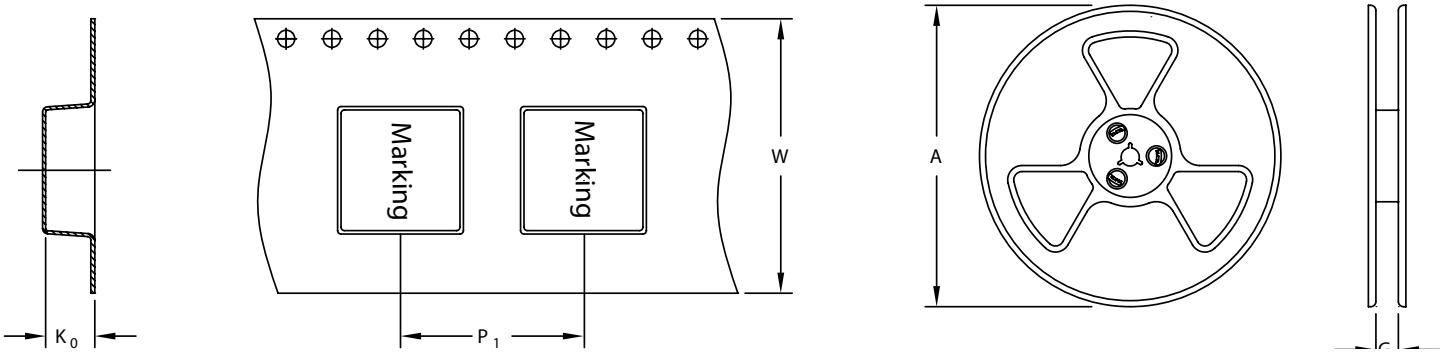


SUGGESTED PAD LAYOUT

Series	A	B	C	D	E	L	G	H
PA5404/PM5404	7.3+/-0.3	6.6+/-0.3	4.8+/-0.2	1.8+/-0.2	3.0+/-0.3	8.4	2.5	3.5

All Dimensions in mm.

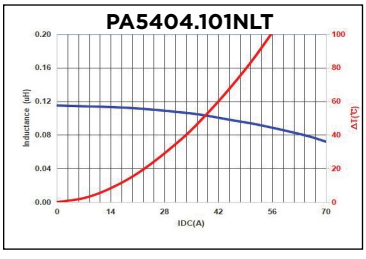
TAPE & REEL INFO

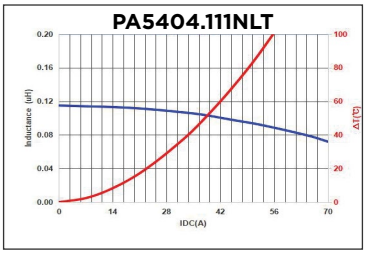


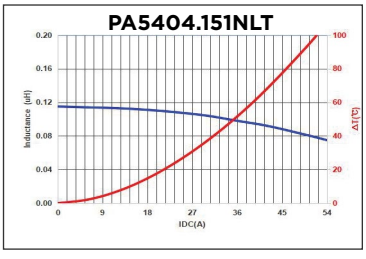
SURFACE MOUNTING TYPE, REEL/TAPE LIST						
	REEL SIZE (mm)		TAPE SIZE (mm)			QTY
	A	G	P_1	W	K_0	PCS/REEL
PA5404/PM5404	Ø330	16.4	12	16	5.3	800

Typical Performance Curves

PA5404/PM5404







SMT Power Inductors

High Current Molded Power Inductor - PA5404 & PM5404 Series

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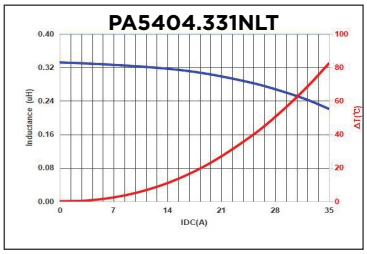
PA5404.221NLT

PA5404.331NLT



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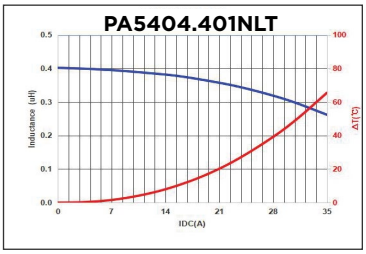

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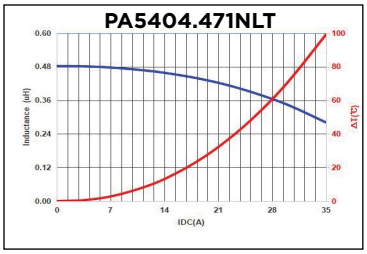

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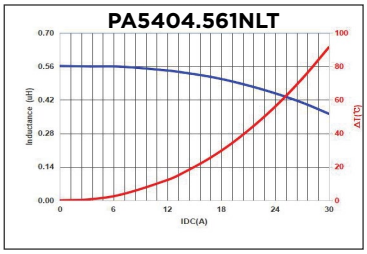

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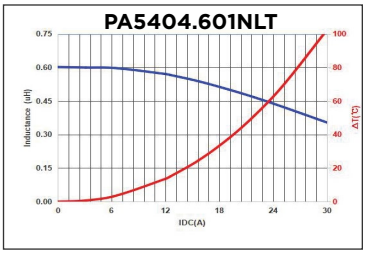

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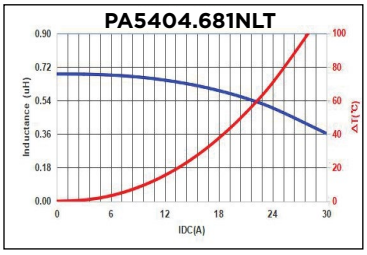

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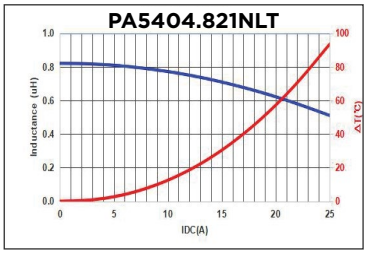

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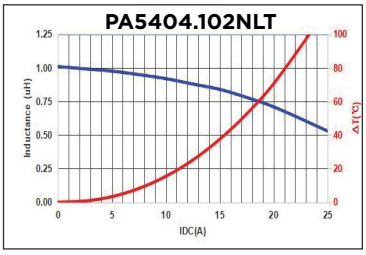

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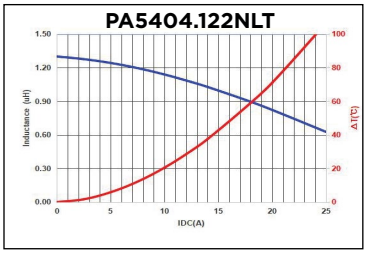

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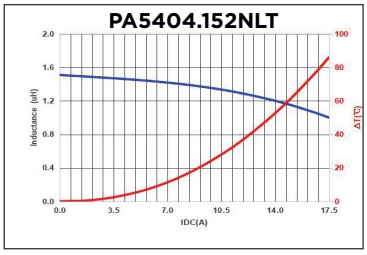

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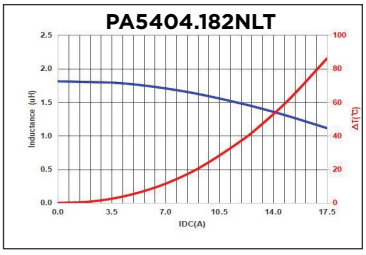
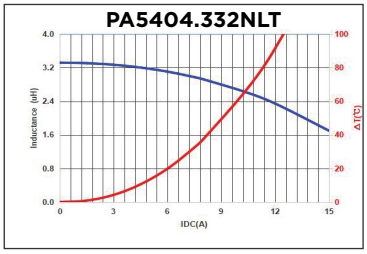


PA5404.222NLT

PA5404.332NLT



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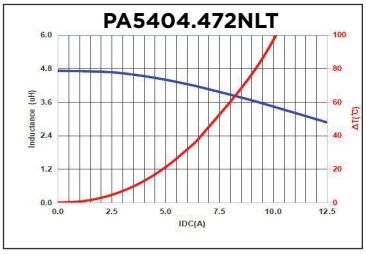
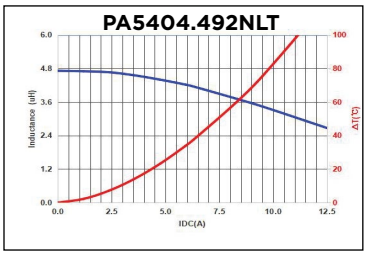


SMT Power Inductor

Shielded Drum Core - PA4331.XXXNLT Series

PA5404.492NLT



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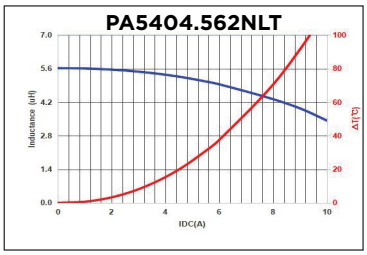

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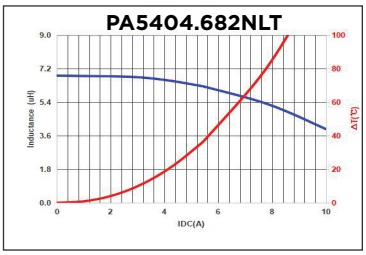

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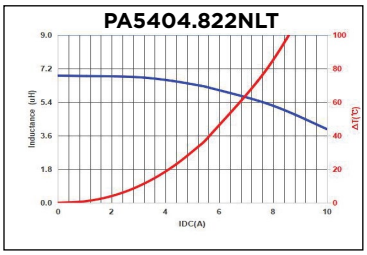

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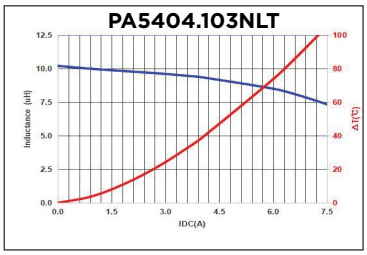

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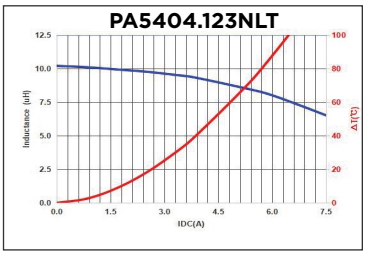

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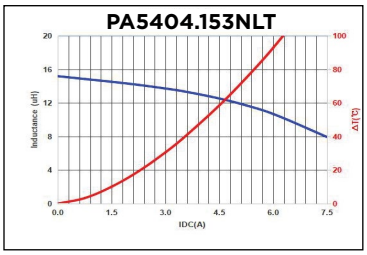

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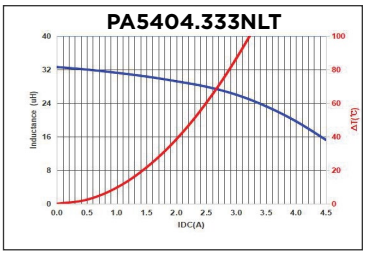

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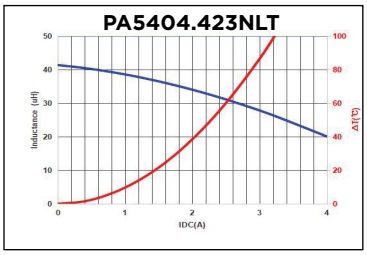

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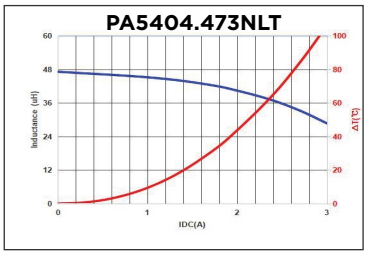

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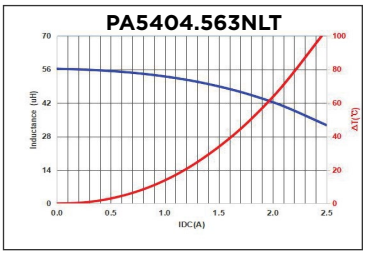

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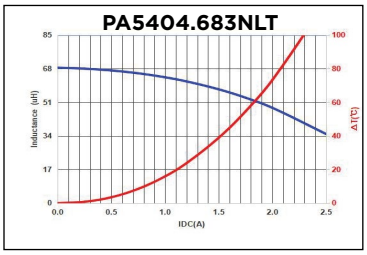

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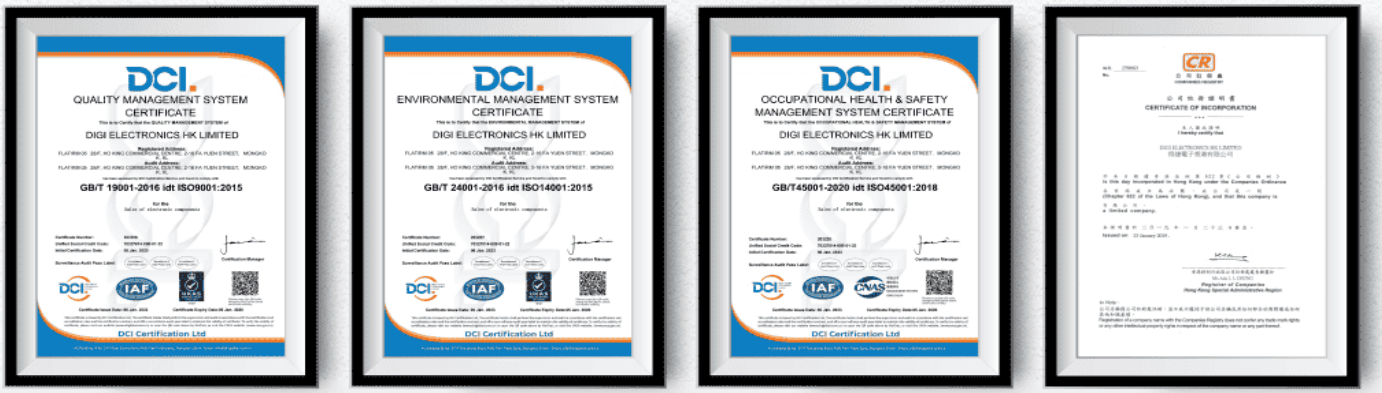

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