

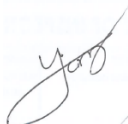


SPECIFICATIONS

ITEM	SMD POWDER INDUCTOR					
DESCRIPTION	270uH±20% 975mΩMax 0.65A 8.0×8.0×3.9mm					
MAKER PART No.	CMI-DP8040NH-271M-B					
CODE_No.	2703-005421					
APPLIED TO	ALL					
REFERENCE	INITIAL-Approval					
Weight	Part	0.89g	Net	887g	Gross	3,550g

Green Procurement


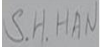

Vendor Code : BJQB
 Registration Date :

DRAWING	CHECK	AGREEMENT	APPROVAL
	S.H. HAN		

Indemnification

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NO	DATA		Issued	Description	작성	검토	승인
0	2015.08.27		0	Initial Spec Release			
NO	변경일자	PAGE	변경 항목	변경 내용	작성	검토	승인



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1. GENERAL SPECIFICATION

1) SCOPE

This specificaiton applies to part number CMI-DP8040NH-271M-B for use in electronic appliances with is supplied for SAMSUNG ELECTRONICS CO., LTD.

2. MECHANICAL CHARACTERISTIC

to the part drawing attached here to.

- 1) MARKING : SMD INDUCTOR shall be permanently and legibly marked with the part number on the specification position.
- 2) TERMINAL STRENGTH : Terminal shall withstand for 10 seconds without breakdown on losing when a static load of 1.05 Kg is applied in the drawing direction to the terminal at the point whre the external load.

3. ENVIRONMENTAL & LIFE CHARACTERISTIC

- 1) TEMPERATURE RISE : Temperature rise of the each winding and core shall be less then ambient + 65°C, when the SMD INDUCTOR continuously operated at full load(test lead) until constant temperature is attained.
- 2) HEAT-RESISTANCE : After 96 hours, 85°C the insulation resistance should more than 100MΩ when be measured after 1~2hours in the standard condition.
- 3) MOISTURE RESISTANCE : After 96 hours, 40±2°C and 90~95% relative humidity the insulation resistance should more than 10MΩ when be measured after 1~2hours in the standard condition and wipped a drop of water.
- 4) SAFETY CONSIDERATION : SMD INDUCTOR shall meet the all requirements subject to IEC-950 standards for safety of information technology equipment including electrical business equipment.

4. TEMPERATURE & CHARACTERISTICS

- 1) STORAGE CONDITION : -40°C ~ +125°C, 40% ~ 80% RH
- 2) OPERATING CONDITION (including self temperature) : -40°C ~ +125°C, 40% ~ 80% RH

5. REGULATION OF PART NUMBER



- ① - CM : CoilMaster's initial ④ - 8040 : Core size (unit: mm) ⑦ - 271 : Typical inductance value
- ② - I : Inductor ⑤ - N : Material ⑧ - M : Inductance tolerance : 20%
- ③ - DP : Series Name ⑥ - H : Lead Free, Halogen Free ⑨ - B : Revision



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6. DIMENSION (UNIT: mm)

TOP

※ Marking

1. ██████ : CoilMaster Vender Mark
2. 271 : Inductance Value
3. h

2015 YEAR	2016 YEAR
a : JANUARY b : FEBRUARY ~ m : DECEMBER	n : JANUARY p : FEBRUARY ~ z : DECEMBER

Move in a cycle circulate periodically
 an odd number : a,b,c~~ m
 an even numbe : n,p,q~~z
 (o, i must exclude)

FRONT

SIDE

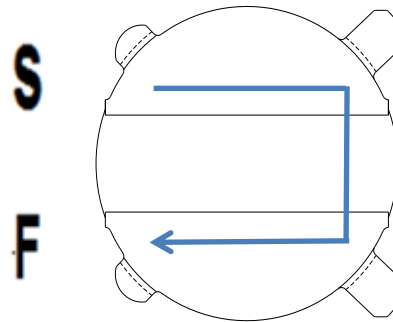
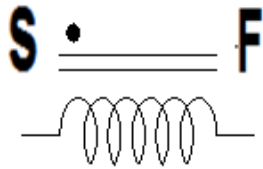
BOTTOM

A	B	C	D	E
8.0±0.3	8.0±0.3	3.9±0.1	2.5±0.1	2.8±0.1



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7. SCHEMATIC DIAGRAM



WINDING

BOTTOM VIEW

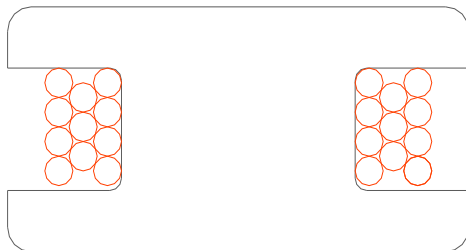
CCW

8. Winding Specification

TERMINEL (S - F)	TYPE OF WIRE	TURNS	WINDING METHOD
#S - #F	1 E180 / 1 EIW Φ0.19	80.75ts±1	SOLENOID WINDING

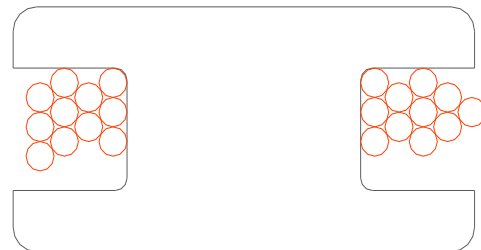
※ Wire that has been winding is covered with EPOXY so it can be protected from outside.

Good Winding



(O)

No Good Winding

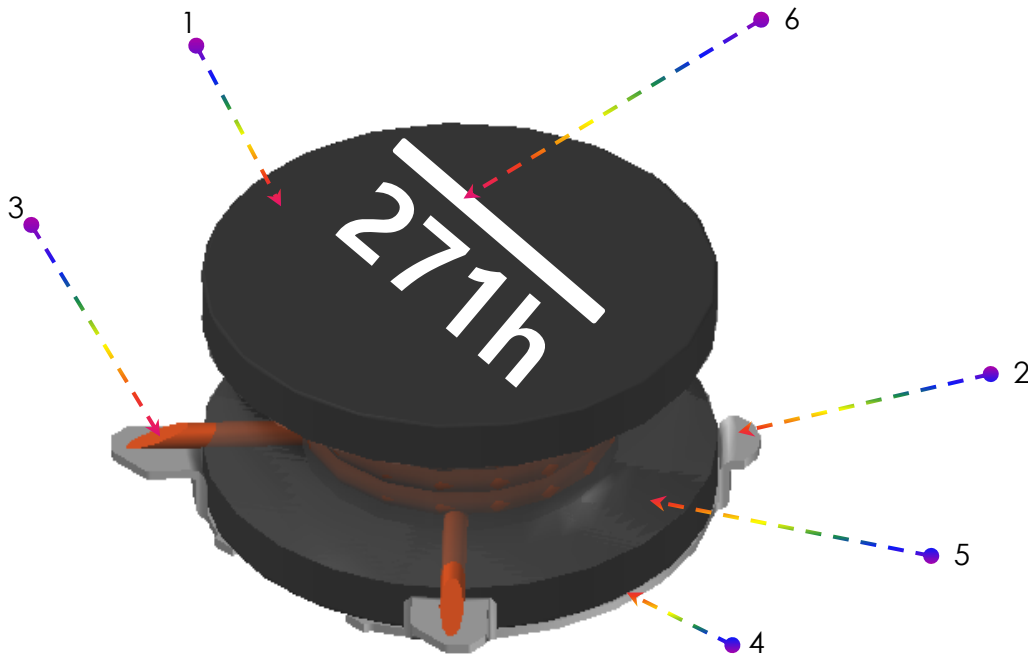


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9. Internal Construction



NO	ITEM	MATERIAL	DIMENISON	MANUFACTURER	SAFETY
1	DR CORE	L4A	8.0*3.73 B3.2 F2.18	SINCORE	
2	PIN	C-DP8L40R-3		LIANCHENG METALS(CHINA) SEGWANG(KOREA)	
3	WIRE	1 E180 1 EIW	Φ0.19	ELEKTRISOLA YANTAI HWAIL	E258243 E225155
4	PIN EPOXY	EP2221-09D		POWER BOND	
5	SIDE EPOXY	E-500AH		ASIA SEAL	
6	MARK	WHITE		BON MARK	



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10. Electrical Characteristics

ITEM	MESURE	ELECTRICAL CHARACTERISTICS	TOLERANCE	CON DITION	REMARKS
INDUCTANCE	S - F	275 μ H	$\pm 20\%$	1kHz	E4980A [Agilent] 1Vrms
		270 μ H	$\pm 20\%$	100kHz	
		265 μ H	$\pm 15\%$	1MHz	
DC RESISTANCE	S - F	975 m Ω	MAX		3540A [HIOKI]
RATED CURRENT	S - F	0.65 A	-	100kHz	
REFERANCE CURRENT (IDC1)	S - F	0.60 A	warranty spec Drop rate $\leq 10\%$	100kHz	42841A [Agilent]
SATURATION RATED CURRENT(IDC1)	S - F	0.74 A	warranty spec Drop rate $\leq 20\%$	100kHz	42841A [Agilent]
TEMPERATURE RISE CURRENT (IDC2)	S - F	0.65 A	warranty spec $\Delta T 40^{\circ}C$	100kHz	
SELF-RESONANT FREQUENCY	S - F	4 MHz	Min		4194A [HP]
Q SPEC	S - F	25	Min	100kHz	E4980A [Agilent]

IDC1 : Depends on inductance saturation. (20% reduction from initial L value) Inductance reduction from initial value shall be under 20%

IDC2 : The temperature rise current value(IDC2) is the DC current value having temperature increase up to 40°C (at 20°C)



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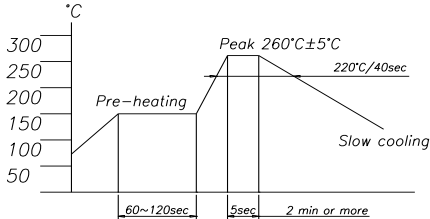
11. RELIABILITY AND SPECIFICATION

11-1. ENVIRONMENT & ELECTRICAL TESTS

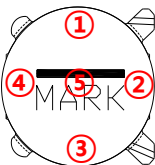
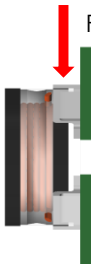
No.	TEST ITEM	SPECIFICATION	TEST METHOD												
1	High Temperature Storage	$\Delta L/Lo \leq \pm 10\%$ There shall be no mechanical damage	The sample shall be left for 500±12 hours in an atmosphere with a temperature of 125±2°C and normal humidity. Upon completion of the test the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.												
2	Low Temperature Storage	$\Delta L/Lo \leq \pm 10\%$ There shall be no mechanical damage	The sample shall be left for 500±12 hours in an atmosphere with a temperature of -40±3°C. Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.												
3	Terminal Shock	$\Delta L/Lo \leq \pm 10\%$ There shall be no mechanical damage	The sample shall be subject to 5 continuous cycles such as shown in table 2 below Then it shall be subjected to standard atmospheric conditions for 1 hour after which measurement shall be made. Table 2												
<table border="1"> <thead> <tr> <th>No.</th> <th>Temperature</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40°C±3°C</td> <td>30 min × 500 cycle</td> </tr> <tr> <td colspan="3" style="text-align: center;">↕</td> </tr> <tr> <td>2</td> <td>85°C±2°C</td> <td>30 min × 500 cycle</td> </tr> </tbody> </table>				No.	Temperature	Duration	1	-40°C±3°C	30 min × 500 cycle	↕			2	85°C±2°C	30 min × 500 cycle
No.	Temperature	Duration													
1	-40°C±3°C	30 min × 500 cycle													
↕															
2	85°C±2°C	30 min × 500 cycle													
4	Damp heat test (Static humidity)	$\Delta L/Lo \leq \pm 10\%$ There shall be no mechanical damage	The sample shall be left 500±4 hours in a temperature of +60±2°C and a humidity (RH) of 90 ~ 95%. Upon completion of the test, the measurement shall be made of left in a normal temperature and normal humidity more than 1 hour. (NO Bias)												
5	Humidity load resistance	$\Delta L/Lo \leq \pm 10\%$	85°C ±3°C, 85%Rh, 240Hrs, Rated current												
6	High Temperature resistance	$\Delta L/Lo \leq \pm 10\%$	105°C ±3°C, 240Hrs, Rated current												
7	PCT (High-pressure heating)	$\Delta L/Lo \leq \pm 5\%$	(121°C & 2kgf/cm ²)×24Hrs												



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No.	TEST ITEM	SPECIFICATION	TEST METHOD
8	Solderability	At least 75% Area should be covered with new solder	The sample shall be immersed for 5 to 10 seconds in flux. Then immersed in molten solder at 240±5°C for 3+1/-0 seconds
9	Resistance to soldering heat (Reflow soldering)	There shall be no damage	Then remain the following condition 3 times. Measure the test items after leaving them in normal temperature and humidity for more than 1 hour. 
	(Manual soldering)	$\Delta L/Lo \leq \pm 10\%$ There shall be no mechanical damage	Using soldering iron Max. tip temperature : 350±10°C Max. exposure time : 3±1 sec Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity for hour.

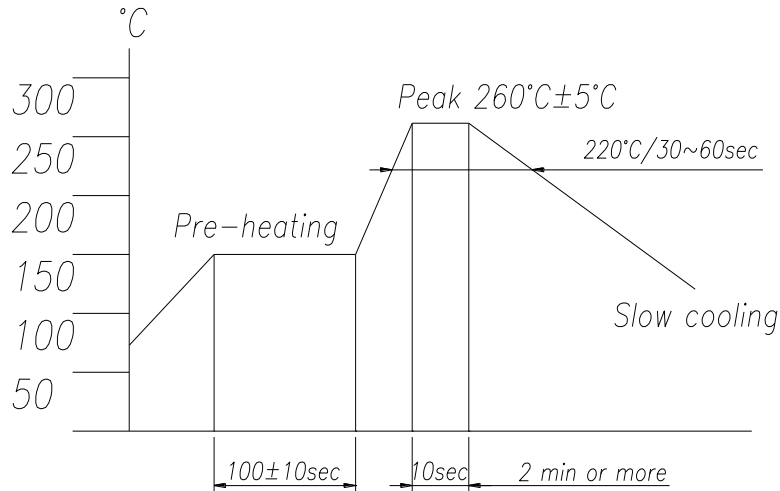
11-2. MECHANICAL TESTS

No.	TEST ITEM	SPECIFICATION	TEST Condition
10	Core Strength test	Check point : 5 point (center and outer in 1mm check)	 standard-30N(9.8N=1kgf)
11	PCB Bond strength	After applying soldering in PCB, and measure product strength by pushing product side	 Force(3.5kgf) standard-3.5kgf
12	Vibration Test	$\Delta L/Lo \leq \pm 5\%$ There shall be no mechanical damage	'The sample is soldered onto the printed circuit board. It is then a vibration test as follows : Vibration Amplitude = 1.5mm Frequency varies from 10Hz to 55Hz and back over a 1 minute period The test is carried out in the 3 directions (X, Y, Z) for 2 hours each (A total of 6 hours)



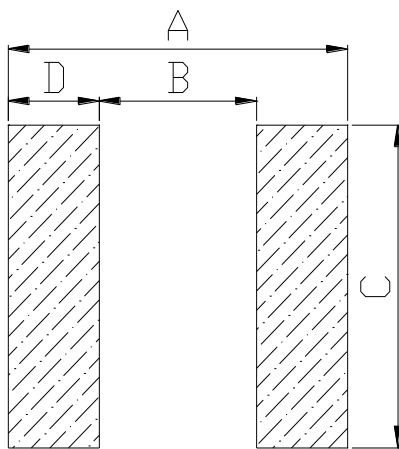
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12.RECOMMENDATION REFLOW CONDITION



(Min peak temperature : 255°C, Max peak temperature : 265°C)

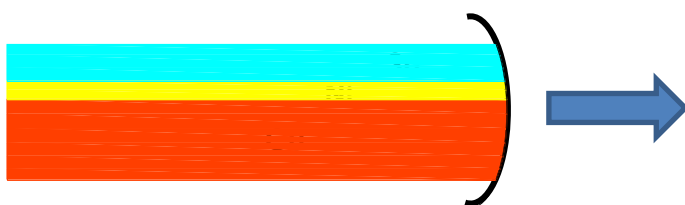
13. RECOMMENDATION LAND PATTERN



(Unit : mm)

A	B	C	D
8.20	3.80	7.50	2.20

14. Plating Spec



*Plating SPEC	Element	Thickness
Plating a grade	Cu(μm)	
	Ni(μm)	0.5~2.0
	Sn(μm)	3.0~5.0
	The surface	Not Gloss
The main Component	Sn 100%	



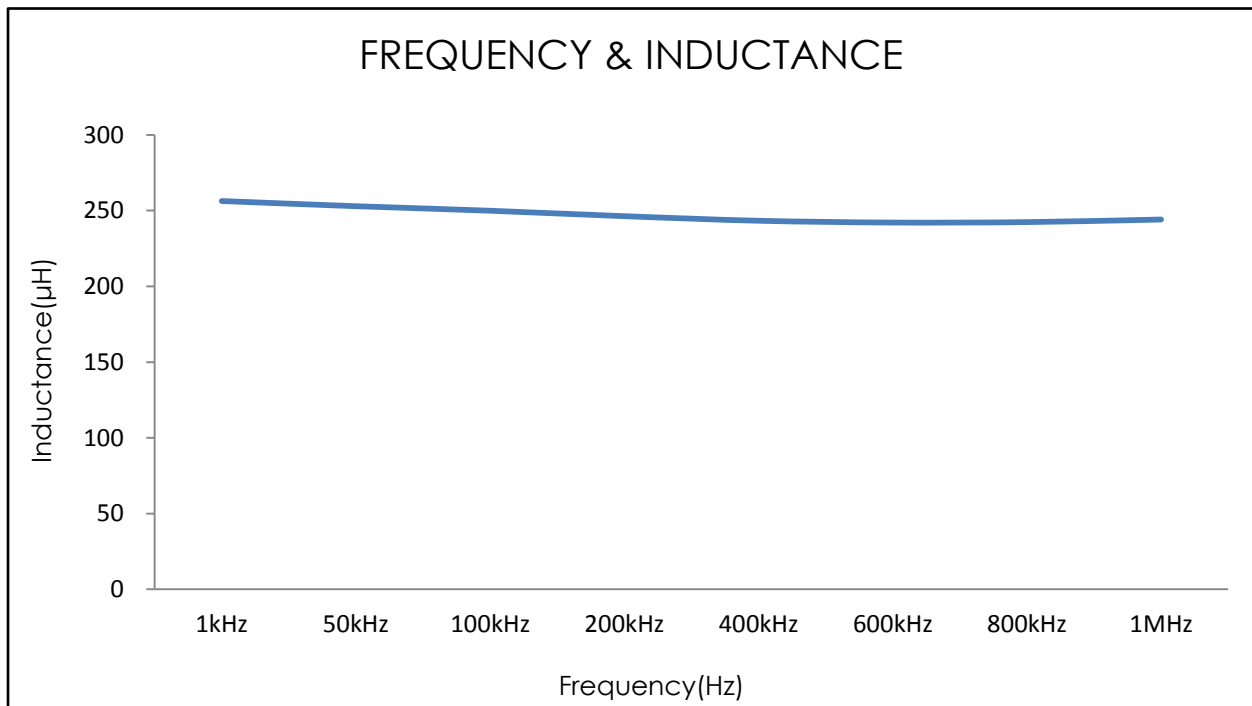
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15. Dynamic characteristic

15-1. FREQUENCY vs INDUCTANCE CHARACTERISTIC (25°C)

(Unit : uH)

	1kHz	50kHz	100kHz	200kHz	400kHz	600kHz	800kHz	1MHz
1	255.9	251.9	248.6	244.6	241.4	240.0	240.2	241.7
2	258.0	254.8	251.9	248.1	245.0	243.7	244.1	245.9
3	254.6	251.0	247.9	244.4	241.6	240.4	240.7	242.3
\bar{X}	256.3	252.9	249.9	246.3	243.3	242.1	242.4	244.1

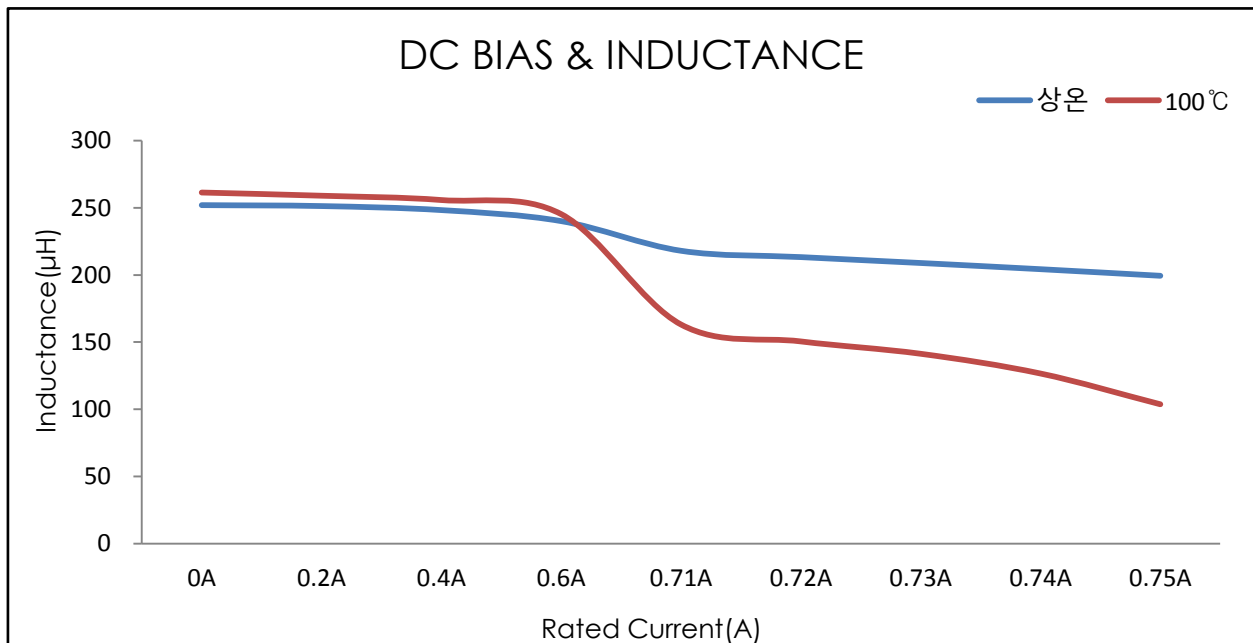


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15-2. DC BIAS vs INDUCTANCE CHARACTERISTIC

(Unit : uH)

No	0A	0.2A	0.4A	0.6A	0.71A	0.72A	0.73A	0.74A	0.75A	
1	253.4	251.8	249.2	241.1	219.3	214.9	210.8	206.1	200.9	상온
2	253.1	251.5	248.9	240.4	218.4	213.6	209.5	204.7	199.6	
3	249.6	250.5	247.3	238.7	216.4	211.3	206.4	202.1	197.8	
\bar{X}	252.0	251.3	248.5	240.1	218.0	213.3	208.9	204.3	199.4	
DROP	0.0%	0.3%	1.4%	4.7%	13.5%	15.4%	17.1%	18.9%	20.9%	
1	261.3	259.6	256.7	246.7	165.4	151.2	143.2	128.1	101.1	100℃
2	259.8	258.1	256.3	245.9	162.3	150.6	138.7	127.4	104.6	
3	263.2	259.4	254.3	243.2	161.7	149.8	142.1	124.3	105.3	
\bar{X}	261.4	259.0	255.8	245.3	163.1	150.5	141.3	126.6	103.7	
DROP	0.0%	0.9%	2.2%	6.2%	37.6%	42.4%	45.9%	51.6%	60.3%	

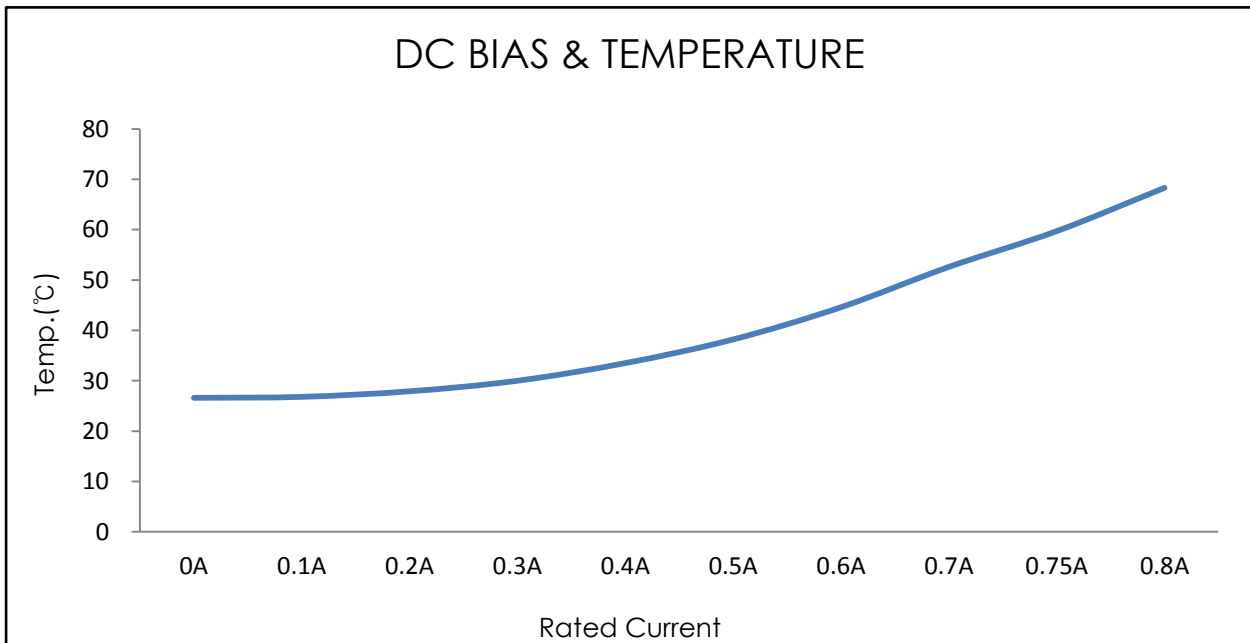


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15-3. DC BIAS vs TEMPERATURE CHARACTERISTIC

(Unit : °C)

No	0A	0.1A	0.2A	0.3A	0.4A	0.5A	0.6A	0.7A	0.75A	0.8A
1	26.7	26.9	27.9	30.0	33.5	38.1	44.8	52.8	59.8	68.7
2	26.4	26.7	27.8	29.9	33.4	38.3	44.4	52.4	59.6	68.3
X	26.6	26.8	27.9	30.0	33.5	38.2	44.6	52.6	59.7	68.5
ΔT	0.0	0.3	1.3	3.4	6.9	11.7	18.1	26.1	33.2	42.0

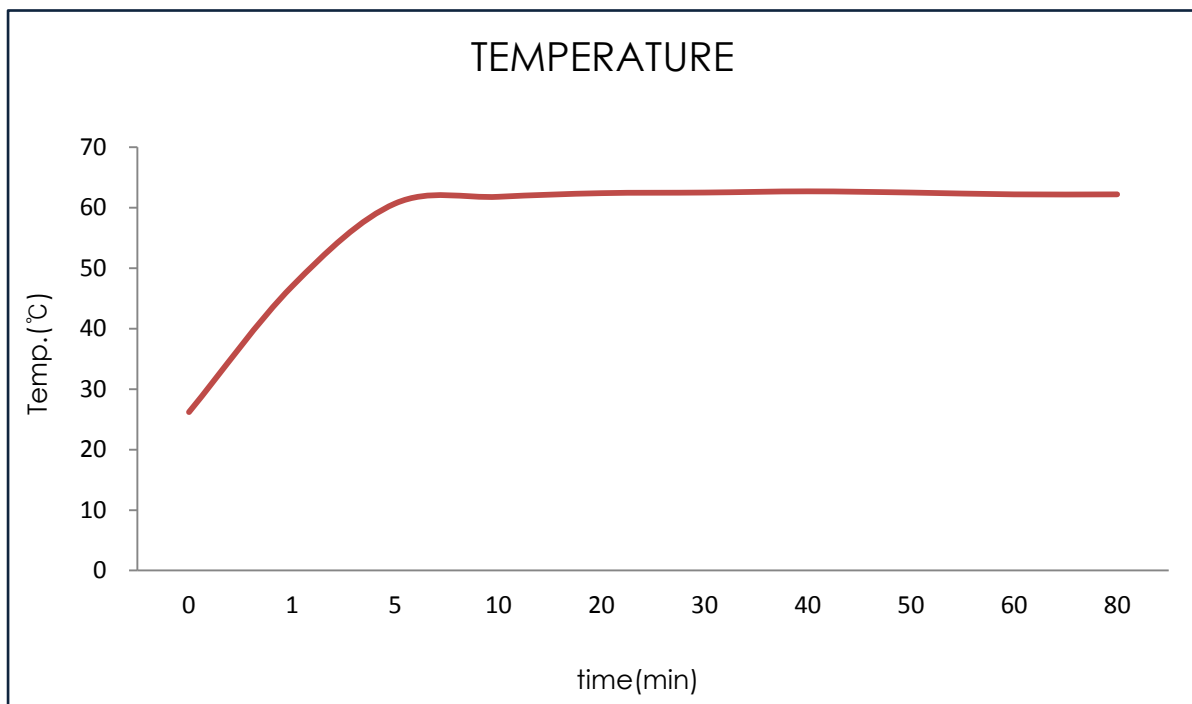


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15-3. TEMPERATURE CHARACTERISTIC

→ At 0.65A Rating current condition

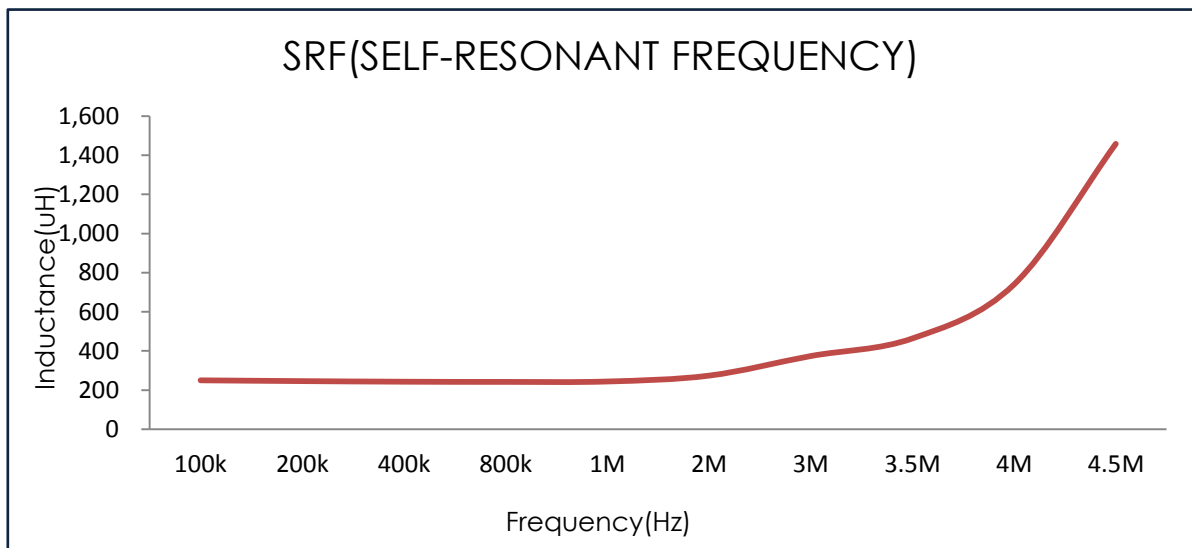
No	0	1	5	10	20	30	40	50	60	80
1	26.5	47.8	60.2	61.6	62.6	63.0	63.3	62.7	61.7	61.7
2	25.9	46.3	60.8	62.2	62.4	62.4	63.0	63.0	63.0	63.0
3	26.2	46.9	61.2	61.5	62.2	62.0	61.8	61.8	61.8	61.8
\bar{X}	26.2	47.0	60.7	61.8	62.4	62.5	62.7	62.5	62.2	62.2
ΔT	0.0	20.8	34.5	35.6	36.2	36.3	36.5	36.3	36.0	36.0



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15-4. SRF(SELF-RESONANT FREQUENCY)

No	100k	200k	400k	800k	1M	2M	3M	3.5M	4M	4.5M
1	249	245	242	241	243	272	366	448	716	1266
2	252	248	245	244	246	278	385	482	732	1642
3	248	244	242	241	242	273	373	463	773	1466
\bar{X}	250	246	243	242	244	274	374	464	740	1458



15-5. Q SPEC

→ At 100KHz condition

No	1	2	3	4	5	6	7	8	9	10	\bar{X}
Q	36.5	35.7	37.3	36.6	35.9	37.8	38.1	35.6	36.3	36.7	36.7



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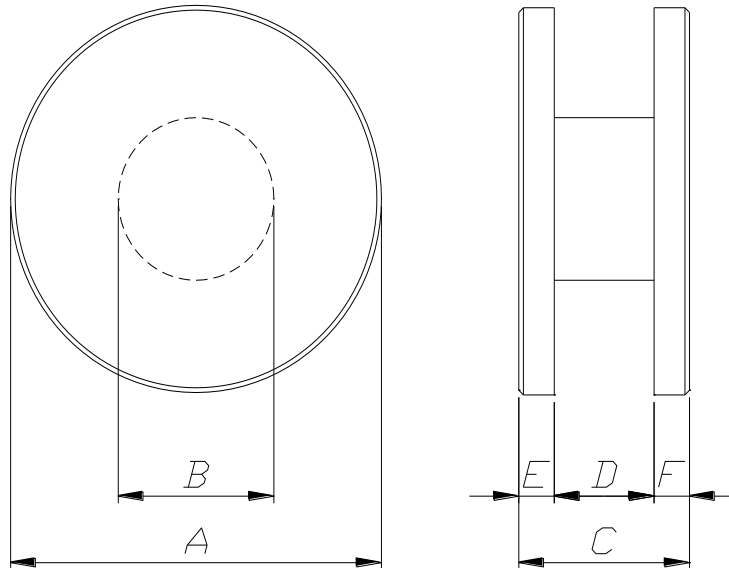
16. MATERIAL LIST

NO	ITEM	MATERIAL	DIMENISON	MANUFACTURER	SAFETY
1	DR CORE	L4A	8.0*3.73 B3.2 F2.18	SINCORE	
2	PIN	C-DP8L40R-3		LIANCHENG METALS(CHINA) SEGWANG(KOREA)	
3	WIRE	1 E180 1 EIW	Φ0.19	ELEKTRISOLA YANTAI HWAIL	E258243 E225155
4	PIN EPOXY	EP2221-09D		POWER BOND	
5	SIDE EPOXY	E-500AH		ASIA SEAL	
6	MARK	WHITE		TSAUI MINING	



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PART No.	2703-005421	COILMASTER P/N	CMI-DP8040NH-271M-B

16-1. CORE DIMENSIONS



A	B	C	D	E	F
8.00±0.1	3.20±0.1	3.73±0.1	2.18±0.1	0.775±0.1	0.775±0.1

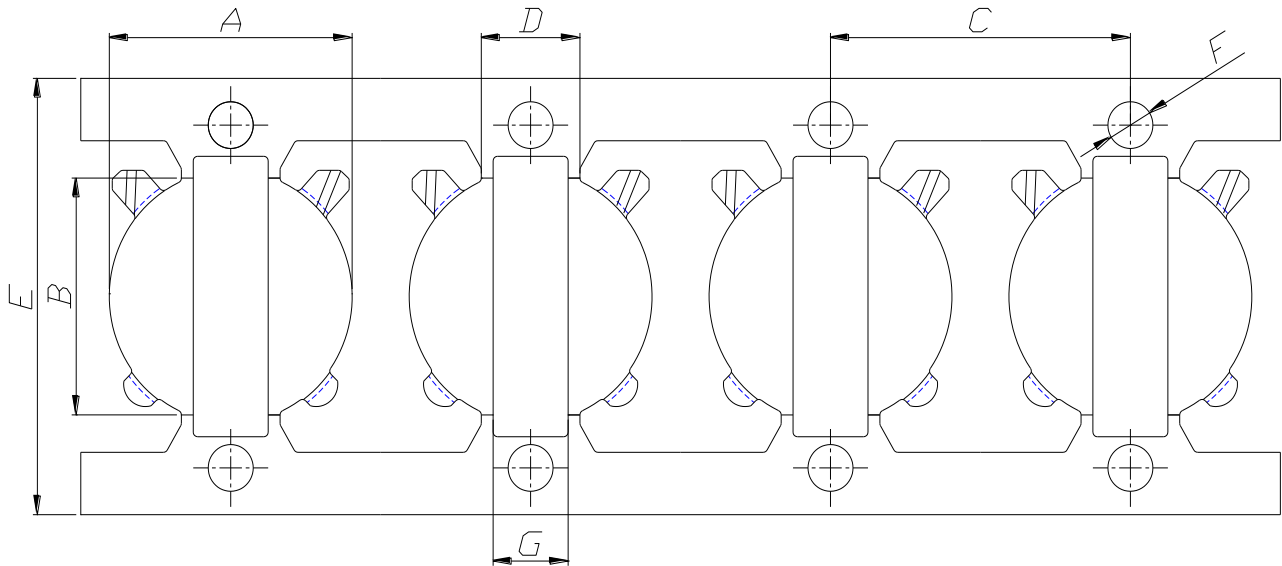
16-1-1. CORE MATERIAL

L4A	
Practical Frequency [MHz]	0.05 ~ 1.0
Initial Permeability [μ iac] ±25%	400
Curie Temperature [°C]	> 240
saturation flux density [gauss]	4500
specific gravity [g/cm ³]	5.1
Relative Temperature Coefficient [$\times 10^{-6}/^{\circ}\text{C}$, 20°C~70°C]	10 ~ 20



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16-2. PIN



A	B	C	D	E	F	G
8.1±0.1	8.05±0.1	10.0±0.03	3.3±0.1	14.0±0.1	1.5±0.03	2.5±0.1

16-2-1. PIN MATERIAL

(1) CHEMICAL COMPOSITION (unit:%)

Cu	Sn	Ni	Zn	P	Fe	Pb
93.7	5.97	0.0465	0.0541	0.1721	0.0057	0.0025

(2) PHYSICAL PROPERTY

Tensile Strength [MPa]	Elongation [%]	Hardness [Hv]	Surface roughness [μm]
596.2	26.4	194.4	/



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16-3. WIRE UL SAFETY

ELEKTRISOLA HANGZHOU CO LTD

E258243

Xiao Ling Tou
Pingyao
Yuhang
Hangzhou, Zhejiang 311115 CHINA

Material Designation	Mark Dsg	Base Coat	Top Coat	ANSI Type	Temp Class
Amidester 200	A200	Polyester-imide	-	MW 74-C	200
Amidester AI210	AI210	Polyester-imide	Polyamide-imide	MW 35-C	200
		Polyester-imide	Polyamide-imide	MW 73-C	200
Estersol 180	E180	Solderable Polyester-imide	-	MW 77-C	180
Polysol 155	P155, G155	Polyurethane	-	MW 79-C	155
		Polyurethane	-	MW 75-C	130[#]
Polysol 155g	Pg155	Polyurethane	-	MW 75-C	130[#]
Polysol 155p	Pp155, Gp155	Polyurethane	-	MW 79-C	155[#]
Polysol 170	P170, G170	Polyurethane	-	MW 79-C	155
Polysol 180	P180, G180, Pv180	Polyurethane	-	MW 82-C	180
		Polyurethane	-	MW 79-C	155[#]
Polysol N155	PN155	Polyurethane	Polyamide	MW 80-C	155
		Polyurethane	Polyamide	MW 28-C	130[#]
Polysol N180	PN180	Polyurethane	Polyamide	MW 83-C	180
Polysol P155p	P155p, G155p	Polyurethane	-	MW 79-C	155

YANTAI HWAIL ELECTRONICS CO LTD

E225155

768# BEIGUAN STREET
MUPING DIST
YANTAI, SHANDONG 264100 CHINA

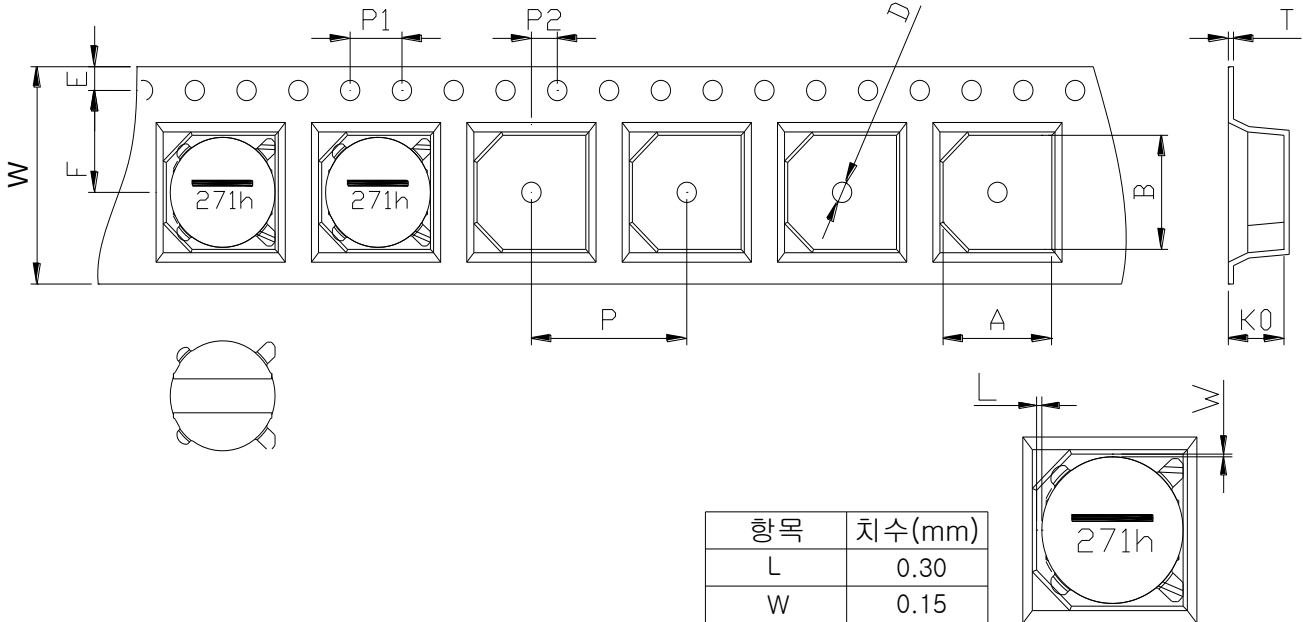
Material Designation	Mark Dsg	Base Coat	Top Coat	ANSI Type	Temp Class
AI-EIW	AI-EIW	Polyester-imide	Polyamide-imide	MW 35-C	200
HUW	HUW	Polyurethane	-	MW 79-C	155
NPW	NPW	Polyester	Polyamide	MW 76-C	180
		Polyester	Polyamide	MW 24-C	155[#]
NUW	NUW	Polyurethane	Polyamide	MW 80-C	155
		Polyurethane	Polyamide	MW 28-C	130[#]
RNW	RNW	Modified Polyester	Polyamide-imide	MW 73-C	200



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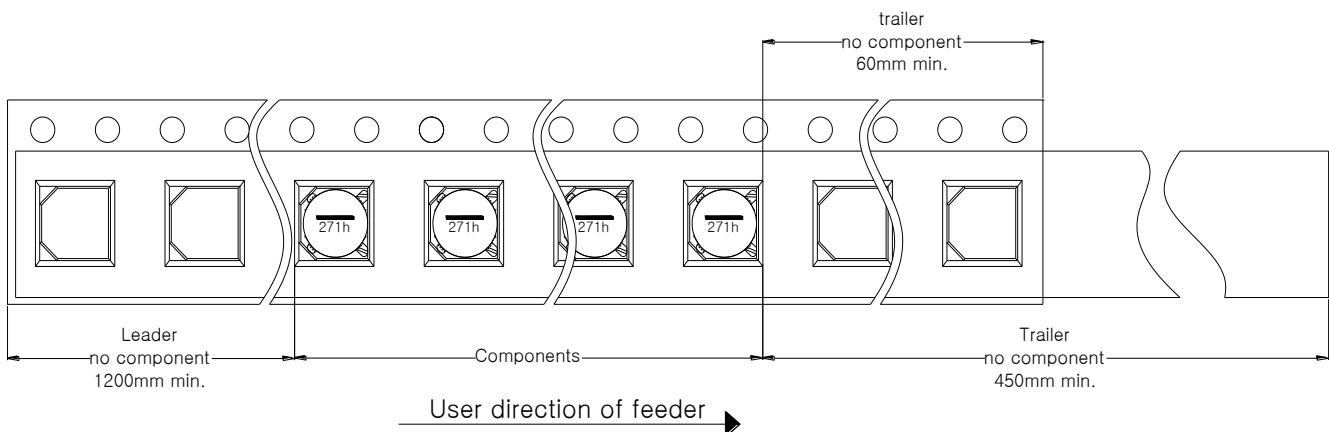
17. PACKING SPECIFICATIONS

17-1. CARRIER TAPE DIMENSIONS



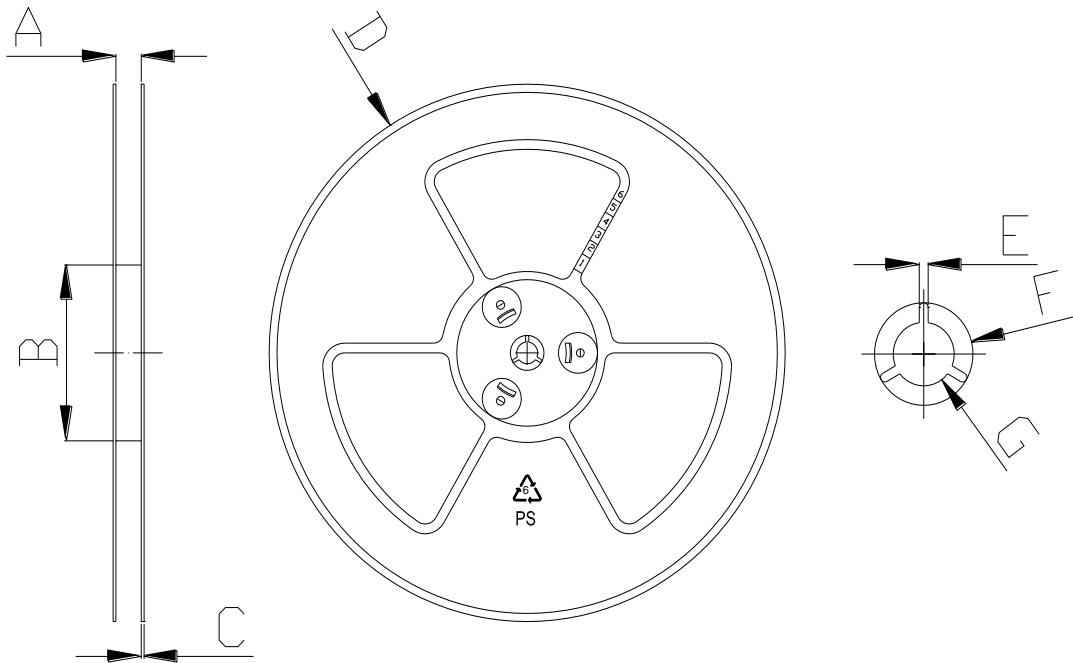
W	A	B	D	E	F	P	P1	P2	K0	T
16.00	8.40	8.40	1.50	1.75	7.50	12.00	4.00	2.00	4.30	0.40
+0.30	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.05
-0.10	-0.10	-0.10	-0.00	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.05

17-2. DIRECTION OF ROLLING



<h1>SPECIFICATION</h1>		REVISION	0
		PAGE	22/23
PART No.	2703-005421	COILMASTER P/N	CMI-DP8040NH-271M-B

17-3. REEL DIMENSIONS



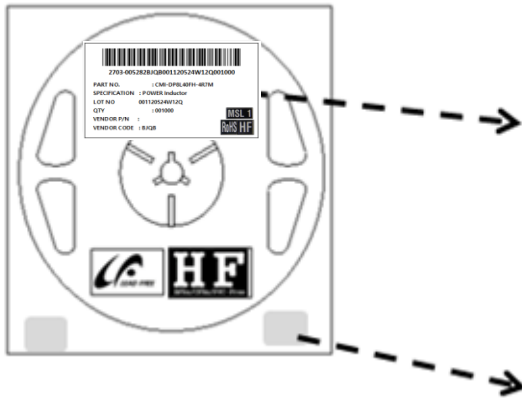
A	B	C	D	E	F	G
16.00	100.0	2.00	330.0	1.90	21.00	13.00
+1.00	+1.50	+0.10	+1.00	+0.40	+0.40	+0.40
-1.00	-1.50	-0.10	-1.00	-0.40	-0.40	-0.40




<h1>SPECIFICATION</h1>	REVISION	0
	PAGE	23/23
PART No.	2703-005421	COILMASTER P/N
		CMI-DP8040NH-271M-B

17-4. REEL PACKING


※ 1,000 pcs / reel





2703-005421BJQB150101Z001001000

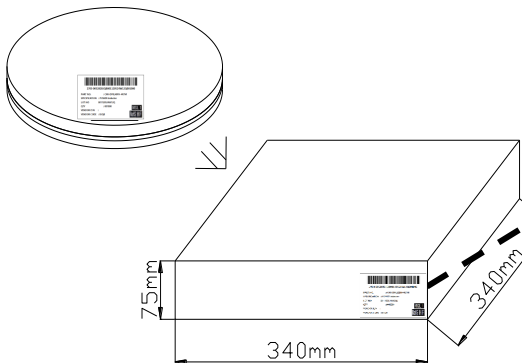
PART NO.	: 2703-005421
SPECIFICATION	: 8040 10uH
LOT NO	: 150101Z
QTY	: 001000
VENDOR P/N	: CMI-DP8040NH-271M-B
VENDOR CODE	: BJQB




SILICA GEL : 2pcs

17-5. Middle box


※ 2Reel / box (2,000 pcs)





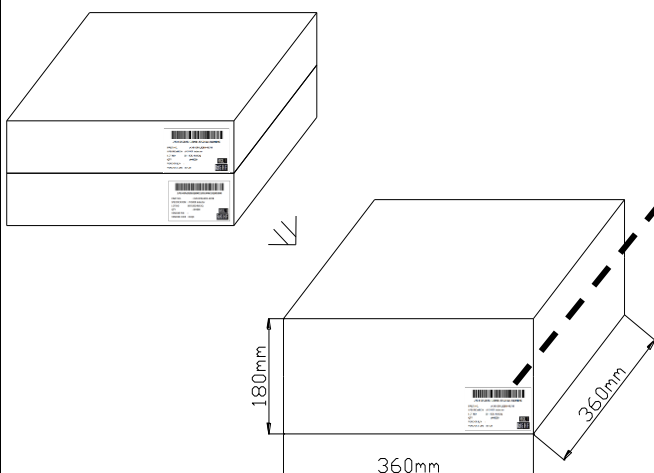
2703-005421BJQB150101Z001002000


PART NO.	: 2703-005421
SPECIFICATION	: 8040 10uH
LOT NO	: 150101Z
QTY	: 002000
VENDOR P/N	: CMI-DP8040NH-271M-B
VENDOR CODE	: BJQB



17-6. Large box


※ 2 Middle boxes, 4 Reels (4,000 pcs)





2703-005421BJQB150101Z001004000

PART NO.	: 2703-005421
SPECIFICATION	: 8040 10uH
LOT NO	: 150101Z
QTY	: 004000
VENDOR P/N	: CMI-DP8040NH-271M-B
VENDOR CODE	: BJQB



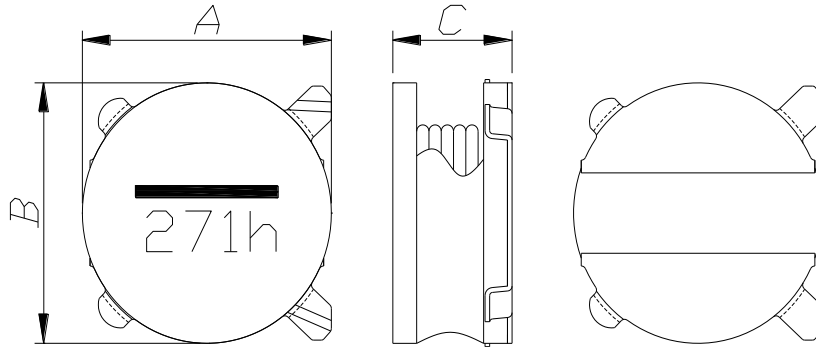
※ when load large box in pallet, load limit should be lower than 6 level



RESULT OF INSPECTION

ORIGINATED	CHECKED	APPROVED
	S.H. HAN	

CUSTOMER : S/S VD COMMODITY : SMD POWER INDUCTOR	QUANTITY: 10Pcs PART NO.: CMI-DP8040NH-271M-B	ISSUE : DATE: 2015.08.28 TEMP: °C HUMI: %
--	---	--



ITEM	INDUCTANCE	DCR	RATED CURRENT		DIMENSION		
			L value(uH)	L Drop(%)	A	B	C
STANDARD	270uH ±20%	975mΩ Max	0.65A		A	B	C
	216uH~324uH		L value(uH)	L Drop(%)	8.0±0.3	8.0±0.3	3.9±0.1
1	252	798	231	8.3%	8.10	8.04	3.89
2	249	801	230	7.6%	8.30	8.00	3.93
3	249	799	229	8.0%	8.10	8.10	3.89
4	255	798	233	8.6%	8.26	8.10	3.90
5	253	799	234	7.5%	8.30	8.11	3.90
6	253	799	232	8.3%	8.23	8.02	3.94
7	254	801	236	7.1%	8.30	8.11	3.91
8	255	811	235	7.8%	8.13	8.02	3.93
9	252	812	232	7.9%	8.23	8.01	3.90
10	254	793	232	8.7%	8.18	8.11	3.94
X	253	801	232	0.07996	8.21	8.06	3.91
R	6.00	19.00	7.000	0.016	0.20	0.11	0.05
σ	2.171	5.612	2.059	0.005	0.081	0.048	0.020
CP	0.1444						
CPK	-37.9266						

◆TESTING INSTRUMENT : 1) LCR METER (E4980A) 2) DC BIAS CURRENT SOURCE(42841A)	◆TEST CONDITION INDUCTANCE at 100kHz, 1V
◆INDUCTANCE DROP ≤20%typ. at Rated Current	QRA JUDGMENT

19. Reliability Test Report

(1) High temperature test

Test condition	Temp. : 125°C±3°C		Run time : 500hrs		Standard : 10%				RESULT : PASS	
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	257.7	259.3	260.2	260.0	260.7	261.6	259.6	259.5	259.1	256.8
Final Value	258.6	259.7	261.1	261.3	261.5	262.6	260.8	260.7	260.2	258.0
Deviation (%)	-0.35%	-0.15%	-0.35%	-0.50%	-0.31%	-0.38%	-0.46%	-0.46%	-0.42%	-0.47%

(2) Low Temperature test

Test condition	Temp. : -40°C±3°C		Run time : 500hrs		Standard : 10%				RESULT : PASS	
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	253.0	252.0	254.0	254.0	254.0	252.0	252.0	254.0	255.0	255.0
Final Value	253.0	252.0	254.0	255.0	255.0	253.0	252.0	257.0	264.0	257.0
Deviation (%)	0.00%	0.00%	0.00%	-0.39%	-0.39%	-0.40%	0.00%	-1.18%	-3.53%	-0.78%

(3) Terminal Shock test

Test condition	Low temp. : -40°C±3°C		High temp. : 125°C±2°C		Run time : 30 min×10 cycle		Standard : 10%		RESULT : PASS	
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	262.4	263.8	265.8	263.4	264.1	262.2	265.9	258.5	260.8	255.7
Final Value	263.8	267.8	268.6	267.7	267.3	265.6	273.6	261.6	268.4	259.6
Deviation (%)	-0.53%	-1.52%	-1.05%	-1.63%	-1.21%	-1.30%	-2.90%	-1.20%	-2.91%	-1.53%

(4) Damp heat test (Static humidity)

Test condition	Temp. : 60°C±2°C		R. Humidity 90%~95%		Run time : 500hrs		Standard : 10%		RESULT : PASS	
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	262.6	263.9	263.6	264.8	261.7	261.6	258.8	262.6	260.4	253.6
Final Value	262.7	268.1	266.6	279.0	266.1	272.7	263.4	266.7	263.5	256.4
Deviation (%)	-0.04%	-1.59%	-1.14%	-5.36%	-1.68%	-4.24%	-1.78%	-1.56%	-1.19%	-1.10%

(5) Humidity load resistance

Test condition	Temp. : 85°C±3°C		R. Humidity 85%		Run time : 240hrs		Standard : 10%		RESULT : PASS	
	Rated Current : 0.65A									
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	251.3	252.2	249.9	252.8	252.8	251.7	252.8	252.0	248.8	251.7
Final Value	249.7	250.7	247.6	250.7	251.5	250.4	251.4	250.7	247.6	250.4
Deviation (%)	0.64%	0.59%	0.92%	0.83%	0.51%	0.52%	0.55%	0.52%	0.48%	0.52%

(6) high Temperature resistance

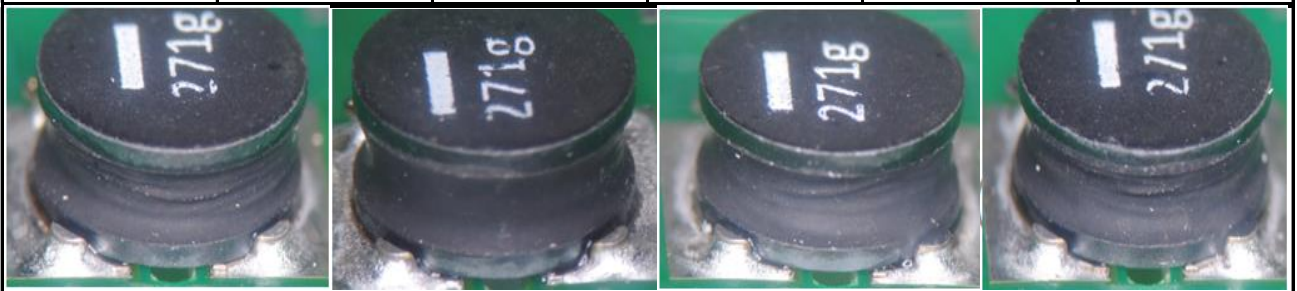
Test condition	Temp. : 105°C±3°C		Rated Current : 0.65A		Run time : 240hrs		Standard : 10%		RESULT : PASS	
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	248.6	252.2	252.4	251.6	251.0	249.5	252.0	253.4	250.8	248.8
Final Value	248.3	252.0	251.8	251.3	250.7	248.9	251.5	251.4	248.6	247.0
Deviation (%)	0.12%	0.08%	0.24%	0.12%	0.12%	0.24%	0.20%	0.79%	0.88%	0.72%

(7) PCT

Test condition	Temp. /Run time : 121°C/24hrs		R. Humidity 100%		Air pressure : 2.0kg/cm ²		Standard : 5%		RESULT : PASS	
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	260.6	258.7	259.8	261.7	262.6	266.2	259.3	260.8	265.6	257.6
Final Value	265.3	262.8	265.4	266.2	267.4	272.4	264.2	265.4	270.2	263.1
Deviation (%)	-1.80%	-1.58%	-2.16%	-1.72%	-1.83%	-2.33%	-1.89%	-1.76%	-1.73%	-2.14%

(8) Solderability

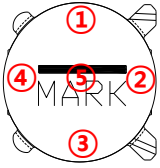
Test condition	Temp. : 240°C±5°C	Frequencies : 1 times	Run time : 6 min	Cover : 75% ↑	RESULT : PASS
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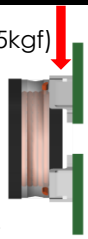
(9) Resistance to soldering heat

Test condition	Temp. : 260°C±5°C		Frequencies : 3 times		Run time : 6 min		Standard : 10%		RESULT : PASS	
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	251.7	253.0	253.2	249.5	248.4	251.5	252.5	249.6	249.5	253.1
Final Value	250.4	252.5	251.4	248.5	247.8	249.5	250.6	248.6	248.9	251.5
Deviation (%)	0.52%	0.20%	0.71%	0.40%	0.24%	0.80%	0.75%	0.40%	0.24%	0.63%

(10) Core Strength test

Test condition	Standard : 3.06kgf ↑						RESULT : PASS	
Check point : 5 point (center and outer in 1mm check)		No.	1	2	3	4	5	
		1	8.64	8.55	6.96	6.84	37.53	
		2	8.55	9.04	8.05	7.94	35.63	
		3	8.56	7.47	7.45	5.74	27.95	
		4	9.46	8.57	8.75	7.94	34.64	
		AVE	8.80	8.41	7.80	7.12	33.94	

(11) PCB Bond strength test

Test condition	Standard : 3.5kgf ↑					RESULT : PASS	
After applying soldering in PCB, and measure product strength by pushing produt side		No.	Value	No.	Value	No.	Value
		1	17.91	5	22.04	9	17.19
		2	21.19	6	21.30	10	21.42
		3	18.03	7	14.42	Ave	19.43
		4	22.19	8	18.63		

(12) Vibration Test

Test condition	Amplitude : 1.5mm		Frequencies : 10~55~10/min		Run time : x,y,z/2hrs		Standard : 5%		RESULT : PASS	
No.	1	2	3	4	5	6	7	8	9	10
Initial Value	250.1	251.3	249.4	247.0	247.2	249.2	247.9	250.2	249.2	248.6
Final Value	249.4	250.7	248.3	246.4	246.8	248.3	247.8	248.8	248.7	248.0
Deviation (%)	0.28%	0.24%	0.44%	0.24%	0.16%	0.36%	0.04%	0.56%	0.20%	0.24%

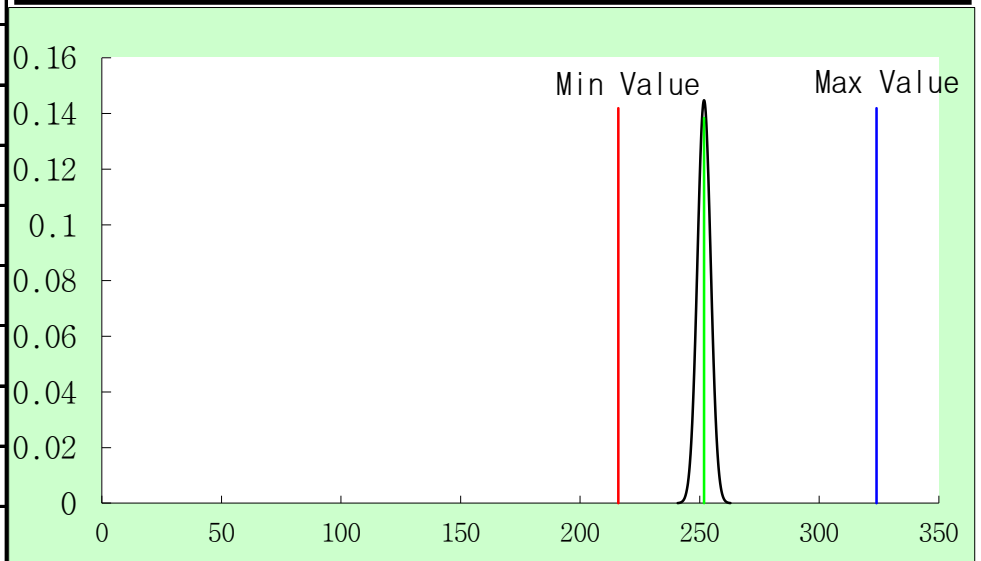
산포관리(CP&CPK) DATA

100kHz

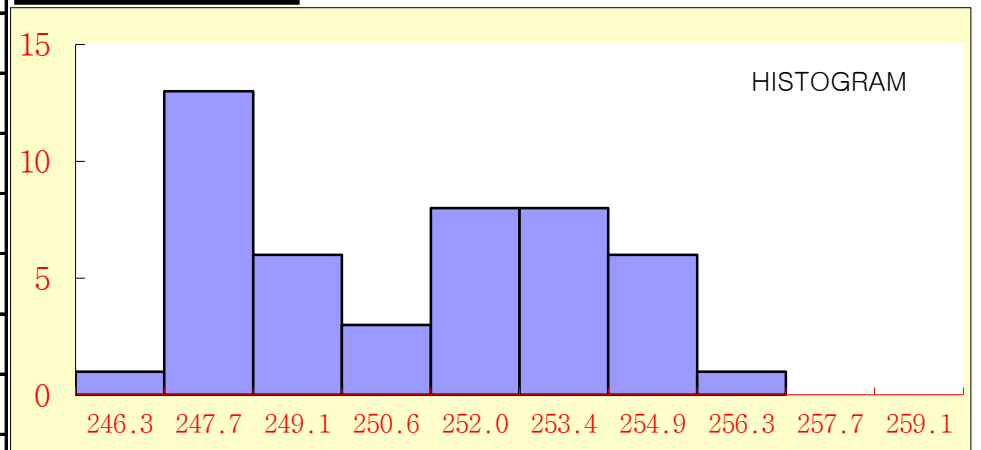
CODE NO	2703-005421	ITEM	SMD INDUCTOR	SPEC	CMI-DP8040NH-271M-B
MANUFACTURE	COILMASTER	QUAN	50	DATE	2015.09.07
Measure Item	L(μH)	STD.DECL	2.76	Minimum fail ratio(PPM)	0
MAX Value	324	C P	6.533	Maximum fail ratio(PPM)	0
MIN Value	216	CPK	4.34	RESULT	VERY GOOD

NO	DATA	NO	DATA
1	252	26	249
2	249	27	250
3	249	28	248
4	255	29	254
5	253	30	256
6	253	31	254
7	254	32	253
8	255	33	253
9	252	34	254
10	254	35	254
11	256	36	254
12	250	37	252
13	255	38	255
14	253	39	250
15	249	40	249
16	254	41	254
17	257	42	256
18	253	43	248
19	250	44	253
20	254	45	248
21	250	46	248
22	251	47	248
23	250	48	249
24	253	49	247
25	248	50	248

REGULAR DISTRIBUTION CURVE



HISTOGRAM



COMMENT

\bar{x} : 251.86

6σ: 16.532417

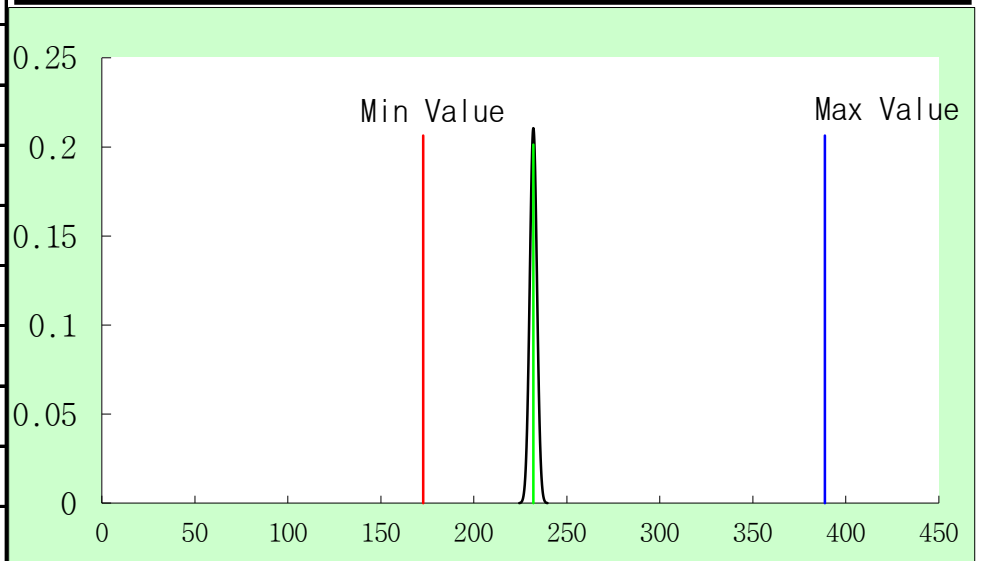
산포관리(CP&CPK) DATA

0.65A

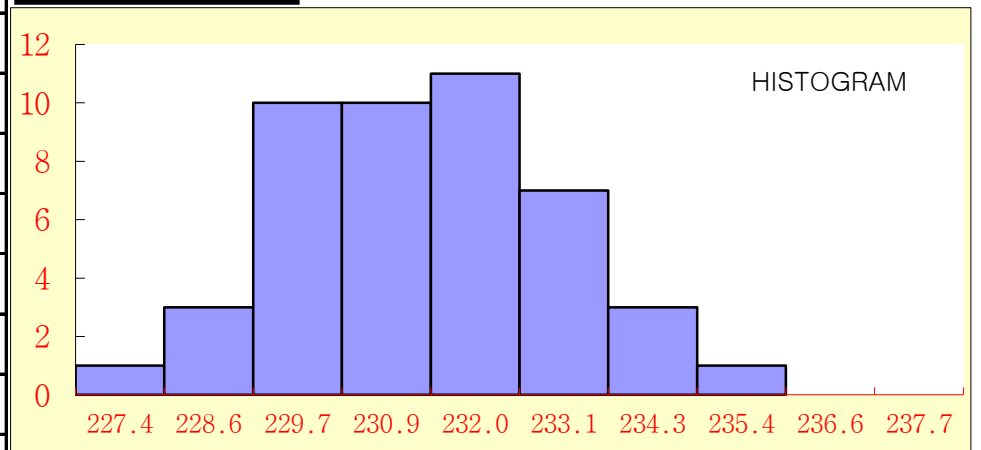
CODE NO	2703-005421	ITEM	SMD INDUCTOR	SPEC	CMI-DP8040NH-271M-B
MANUFACTURE	COILMASTER	QUAN	50	DATE	2015.09.07
Measure Item	L(μH)	STD.DECL	1.89	Minimum fail ratio(PPM)	0
MAX Value	388.8	C P	19.000	Maximum fail ratio(PPM)	0
MIN Value	172.8	CPK	10.42	RESULT	VERY GOOD

NO	DATA	NO	DATA
1	231	26	229
2	230	27	232
3	229	28	230
4	233	29	232
5	234	30	234
6	232	31	235
7	236	32	233
8	235	33	233
9	232	34	233
10	232	35	233
11	232	36	234
12	231	37	233
13	233	38	234
14	233	39	231
15	230	40	230
16	234	41	233
17	235	42	234
18	234	43	230
19	231	44	233
20	233	45	229
21	230	46	230
22	233	47	230
23	231	48	231
24	234	49	230
25	228	50	230

REGULAR DISTRIBUTION CURVE



HISTOGRAM



COMMENT

\bar{X} : 232.04

6σ: 11.3687

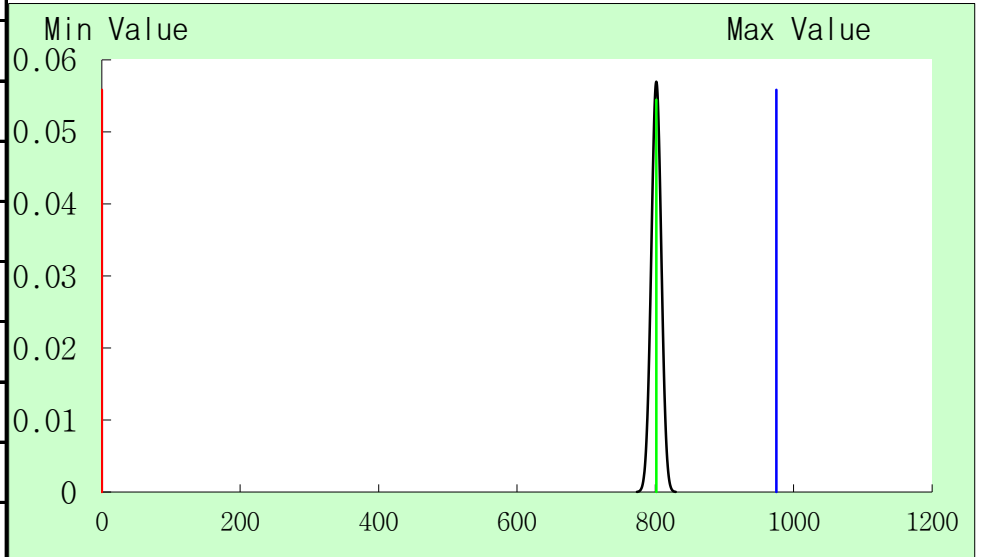
산포관리(CP&CPK) DATA

DCR

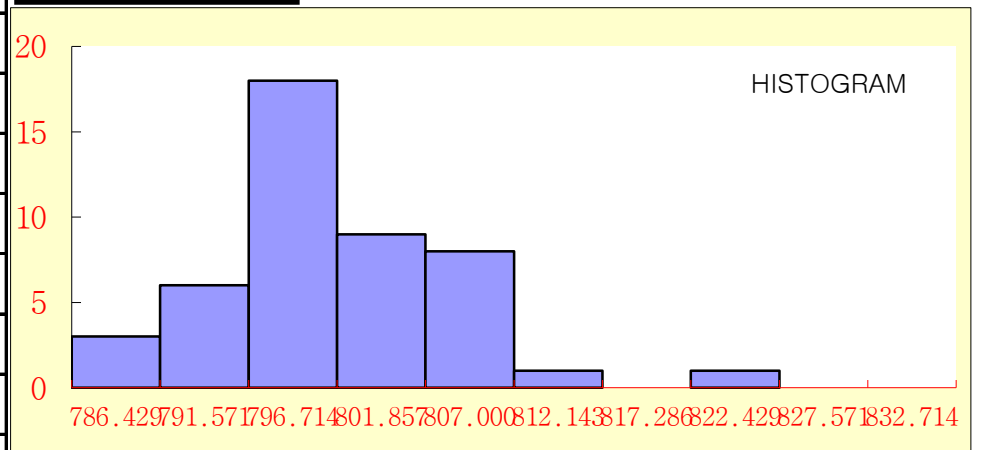
CODE NO	2703-005421	ITEM	SMD INDUCTOR	SPEC	CMI-DP8040NH-271M-B
MANUFACTURE	COILMASTER	QUAN	50	DATE	2015.09.07
Measure Item	DCR(mΩ)	STD.DECL	7.00	Minimum fail ratio(PPM)	0
MAX Value	975	C P	23.20	Maximum fail ratio(PPM)	0
MIN Value		CPK	8.26	RESULT	VERY GOOD

NO	DATA	NO	DATA
1	798	26	798
2	801	27	796
3	799	28	808
4	798	29	797
5	799	30	791
6	799	31	794
7	801	32	798
8	811	33	791
9	812	34	793
10	793	35	794
11	801	36	793
12	808	37	810
13	798	38	793
14	813	39	804
15	808	40	806
16	800	41	789
17	807	42	795
18	800	43	809
19	802	44	797
20	804	45	802
21	798	46	807
22	801	47	807
23	825	48	808
24	799	49	810
25	801	50	807

REGULAR DISTRIBUTION CURVE



HISTOGRAM



COMMENT

\bar{X} : 801.46

6σ: 42.029902

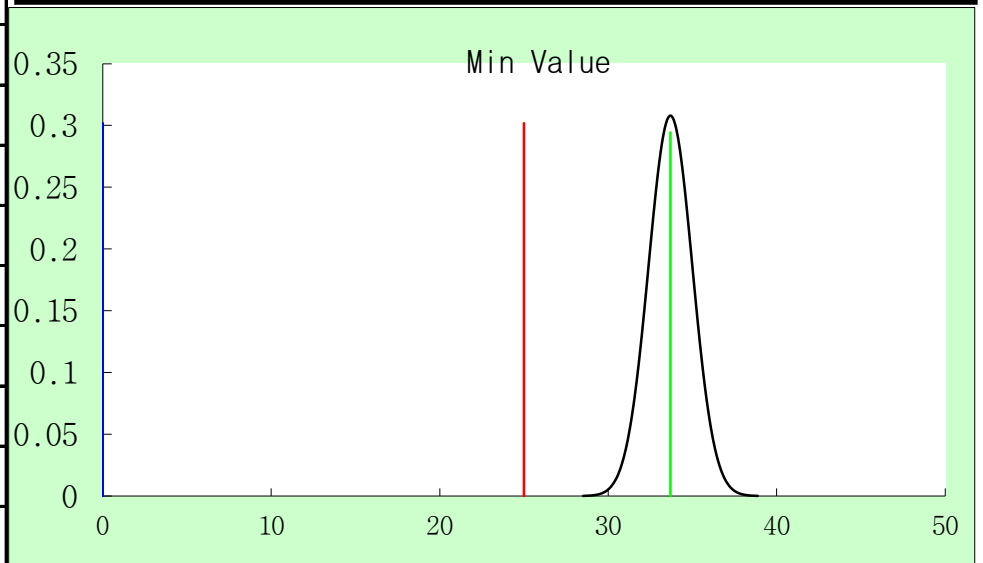
산포관리(CP&CPK) DATA

Q

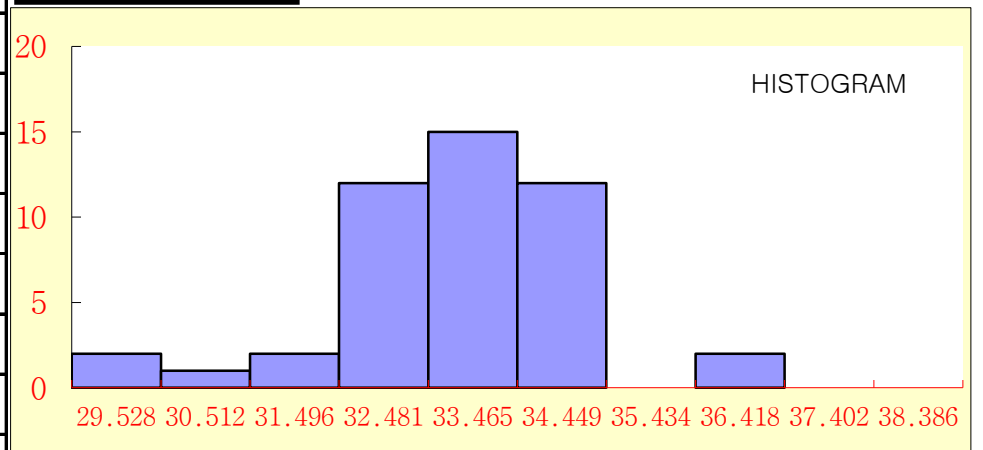
CODE NO	2703-005421	ITEM	SMD INDUCTOR	SPEC	CMI-DP8040NH-271M-B
MANUFACTURE	COILMASTER	QUAN	50	DATE	2015.09.07
Measure Item	Q	STD.DECL	1.30	Minimum fail ratio(PPM)	0
MAX Value		C P	3.22	Maximum fail ratio(PPM)	0
MIN Value	25	CPK	2.2367	RESULT	VERY GOOD

NO	DATA	NO	DATA
1	34.10	26	33.87
2	32.94	27	32.81
3	34.85	28	30.49
4	33.10	29	33.25
5	31.91	30	35.13
6	30.02	31	33.73
7	34.45	32	33.51
8	32.71	33	33.93
9	34.13	34	33.62
10	31.17	35	33.10
11	33.75	36	31.76
12	36.50	37	33.87
13	34.65	38	33.07
14	33.50	39	32.64
15	34.60	40	35.26
16	34.50	41	32.90
17	34.52	42	32.58
18	33.08	43	34.15
19	33.94	44	33.15
20	33.74	45	34.10
21	34.91	46	34.12
22	36.91	47	33.90
23	35.31	48	34.54
24	34.37	49	34.96
25	32.33	50	34.21

REGULAR DISTRIBUTION CURVE



HISTOGRAM



COMMENT

\bar{X} : 33.6928

6 σ : 7.7728259

3 σ : 3.8864129

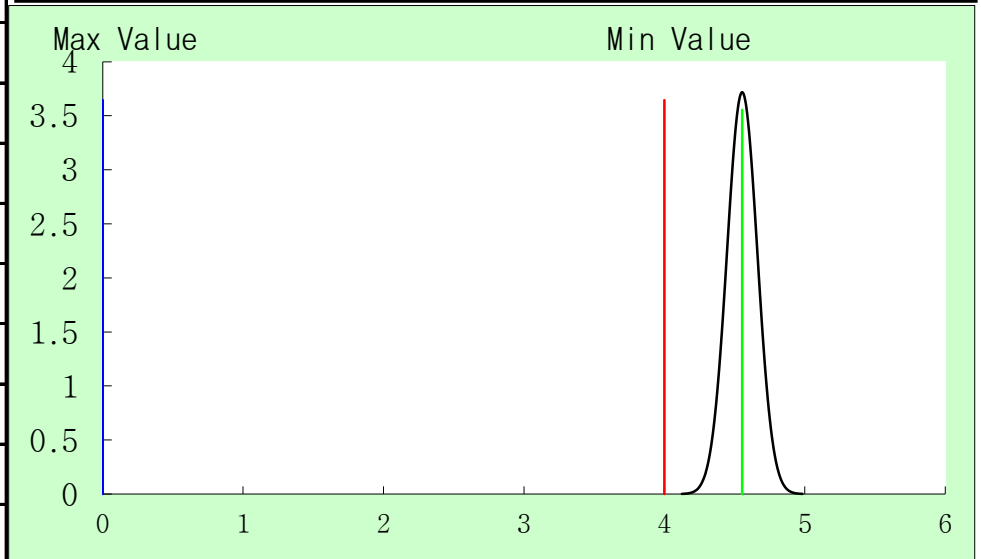
산포관리(CP&CPK) DATA

SRF

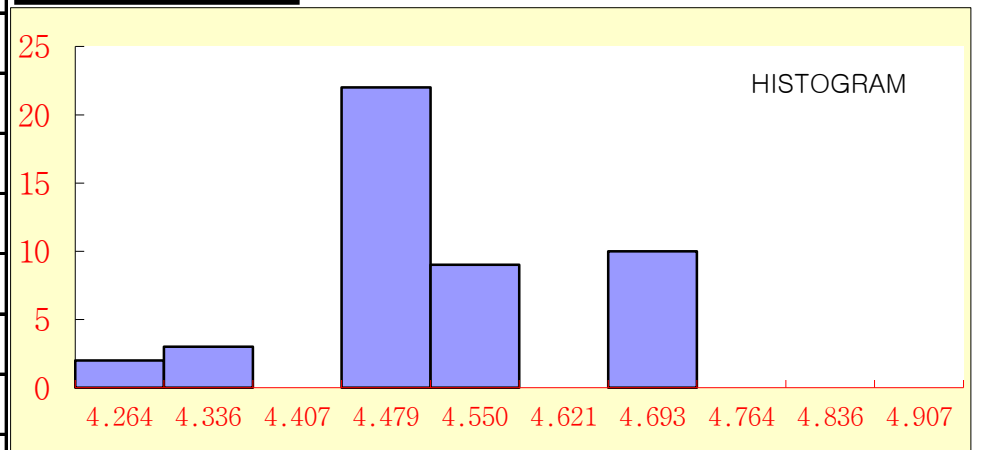
CODE NO	2703-005421	ITEM	SMD INDUCTOR	SPEC	CMI-DP8040NH-271M-B
MANUFACTURE	COILMASTER	QUAN	50	DATE	2015.09.07
Measure Item	SRF(MHz)	STD.DECL	0.11	Minimum fail ratio(PPM)	0
MAX Value		C P	6.21	Maximum fail ratio(PPM)	0
MIN Value	4	CPK	1.72	RESULT	VERY GOOD

NO	DATA	NO	DATA
1	4.7	26	4.5
2	4.7	27	4.5
3	4.7	28	4.6
4	4.5	29	4.5
5	4.5	30	4.5
6	4.7	31	4.5
7	4.3	32	4.5
8	4.5	33	4.5
9	4.5	34	4.6
10	4.7	35	4.6
11	4.8	36	4.6
12	4.7	37	4.5
13	4.7	38	4.5
14	4.7	39	4.5
15	4.5	40	4.6
16	4.5	41	4.6
17	4.5	42	4.6
18	4.6	43	4.4
19	4.6	44	4.5
20	4.6	45	4.5
21	4.5	46	4.6
22	4.5	47	4.4
23	4.5	48	4.5
24	4.7	49	4.3
25	4.7	50	4.4

REGULAR DISTRIBUTION CURVE



HISTOGRAM
























COMMENT

\bar{X} : 4.554

6 σ : 0.6438278

3 σ : 0.3219139

Product	CMI-DP/DCP/DOP series	<h1>QC Flow Chart</h1>	Approval
Rev.	1		
Date	2015.08.01		

No	Flow Chart	Process	Equipment	Control Item	Measurement & methods	Document
0		IQC	Microscope Calipers LCR Meter XRF	1)Appearance 2)Size 3)Characteristic 4)Noxious substance	1)Core, Pin size 2)Core, Pin visual Inspection 3)Core Inductance 4)RoHs/HF	Inspection guidelines
1		Pin Adhesion (CTQ)	Thermometer Electronic scale Push/Pull gague	1)Epoxy Standard 2)Epoxy storage temperature 3)Epoxy paint condition 4)Epoxy spread volume 5)Dry time/temperature 6)Bonding Strength	1)Checking Label 2)Checking refrigerator temp. 3)Checking visual 4)Weight of epoxy 5)Profile & setting condition 6)Tensile strength	Process instructions
2		Winding	Tension gague	1)Wire Standard 2)Wire Turn number 3)Wire tension 4)Wire condition	1)Checking Label 2)Sample testing/setting 3)Tension 4)Checking wire scratch	Process instructions
3		Welding	Welding M/C	1)Welding condition 2)Welding tip life time	1)Current/Voltage/Time 2)Welding tip changing cycle	Process instructions
4		Wire cutting	cutting M/C	1)Cutter life time	1)Cutter changing cycle	Process instructions
5		Epoxy painting		1)Epoxy Standard 2)Epoxy storage condition 3)Epoxy paint condition	1)Checking Label 2)Checking storage temp. 3)Checking visual	Process instructions
6		Dry	Dry oven	1)Dry time/temperature	1)Profile & setting condition	Process instructions
7		Laser (CTQ)	Laser Cutting M/C	1)Laser condition	1)Checking laser energy	Process instructions
8		Laser Inspection		1)Wire & Pin tensile strength	1)Visual connect wire & pin	Process instructions
9		Marking	Marking M/C	1)INK Standard 2)Marking condition	1)Visual Label 2)Check of product	Process instructions
10		Dry	Dry oven	1)Dry time/temperature 2)Dry condition	1)Timer/Thermometer 2)Sample testing	Process instructions
11		PIN cutting	Cutting Jig	1)Cutting condition 2)Pin bent	1)Pin gap 2)Visual	Process instructions
12		Visual sorting		1)Appearance	1)Crack, Damage, Pin foreign body, etc	Process instructions
13		Characteristic sorting(CTQ)	Characteristic sorting M/C	1)Electronical characteristic	1)Inductance, DCR	Process instructions
14		Characteristic Inspection	LCR METER DCR METER DC Bias	1)Electronical characteristic 2)Rated current	1)Inductance, DCR 2)Idc1, Idc2	Process instructions
15		Visual sorting		1)State of appearance	1)Crack, Damage, Pin foreign body, etc	Process instructions
16		Visual Inspection		1)Appearance	1)Crack, Damage, Pin foreign body, etc	Process instructions
17		OQC 1	LCR METER DCR METER DC Bias Calipers	1)Electronical characteristic 2)Rated current 3)Aging test 4)Dimension	1)Inductance, DCR 2)Idc1, Idc2 3)Reflow 4times/PCB tensile strength 4)L/W/T	Inspection guidelines
18		REEL Packing	Strength measuring gauge	1)Packing setting condition 2)Packing Quantity 3)Sealing condition	1)Tip setting temperature 2)Display setting Q'ty 3)Adhesive Strength	Process instructions
19		Packing Inspection	LCR Meter	1)Visual Inspection 2)Characteristic Inspection 3)Label	1)Carrier tape open 2)Inductance 3)Checking product.	Inspection guidelines
20		OQC 2		1)Packing condition 2)Label condition	1)Box damage 2)Out label scan	Inspection guidelines

Process Quality Control Plan												
Vendor Name		CollMaster Co., Ltd.			Manufacturer Site			China				
Item		SMD POWER INDUCTOR			Drafter			Park Young Ho				
SPEC		CMI-DP8040NH-271M-B			Date(Orig.)			2015-04-22				
CODE-NO		2703-005421			Date(Rev.)			2015-08-27				
Pro. No	Process Name	Failure				Method					결과	
		Failure Mode	SEV (심각도)	Control Item	Occur (발생도)	Spec. / Tolerance	Evaluation Measurement Technique	SPL Size	SPL Freq.	Deles (결손도)	RPN	note
1	PIN Adhesion	Pin & Core Separation	6	Epoxy standard	1	EP2221-09D	Operating standard	Full check	LOT	1	6	
			4	Epoxy storage temperature	1	0-5°C	Operating standard	2	everyday	1	4	
			7	Epoxy point condition	1	The epoxy painting uniform	Operating standard	2	everyday	1	7	
			7	Epoxy spread volume	1	1.3±0.3mg	Operating standard	5	3 times / day	5	35	CTQ
			7	Dry time/temperature	1	150±10°C/50±5 min	Operating standard	1	everyday	1	7	
			8	Bonding strength	2	2.0 Kg/f MIN	Operating standard	5	3 times / day	3	48	CTQ
2	Winding	Electrical characteristics NG	7	Wire standard	1	1E180/IEW 00.19	Operating standard	Full check	LOT	1	7	
			7	Wire turn number	1	80.75±1 Turns	Operating standard	2	LOT	1	7	
			5	Wire tension	1	65±10gf	Operating standard	2	LOT	1	5	
3	Welding	Open	8	Wire Condition	1	Don't have the wire damage	Operating standard	2	LOT	2	16	
			6	Current/Voltage/Time	1	410±100A/220±5V/280±20ms	Operating standard	2	LOT	1	6	
4	Wire cutting	Open	6	Welding tip changing cycle	1	20000 times	Operating standard	2	LOT	1	6	
			2	Cutter changing cycle	1	1440,000 times	Operating standard	1	everyday	1	2	
5	Eoxy painting	Epoxy deformation	4	Epoxy standard	1	E-500AH	Operating standard	Full check	LOT	1	4	
			4	Epoxy storage condition	1	5-25°C	Operating standard	2	everyday	1	4	
		6	Wire exposure	2	The epoxy painting uniform	Operating standard	2	everyday	1	8		
6	Dry	Epoxy no drying	4	Drying time/temperature	1	50±5min/135±10°C	Operating standard	1	everyday	1	4	
7	Laser	Open	9	Laser condition	2	1.9±0.3 KW	Operating standard	2	LOT	2	36	CTQ
8	Laser Inspection	Open	9	Wire & Pin tensile strength	2	100gf / MIN	SPEC	5	LOT	2	36	CTF
9	Marking	Marking NG	2	INK standard	1	WHITE	Operating standard	2	everyday	2	4	
			2	Marking condition	1	Marking clearing and according to the Spec	Operating standard	2	LOT	2	4	
10	Drying	INK no drying	2	Drying time/temperature	1	160±10°C/200±20S	Operating standard	1	everyday	1	2	
			2	Drying condition	1	No the Epoxy on the PIN and the epoxy Less	Operating standard	2	everyday	1	2	
11	Pin cutting	Pin bent	2	Cutting condition	1	No PIN open	Operating standard	2	LOT	2	4	
			7	Pin bent("Y" cut)	2	ok	Operating standard	2	LOT	2	8	
12	Visual sorting	Appearance NG	7	State of appearance	2	welding,CORE,PIN, Marking Condition	Limit Sample	Full check	LOT	1	14	
13	Electical Characteristic sorting	Electical characteristics NG	9	Inductance	3	270±20% uH	SPEC	Full check	LOT	1	27	CTF
			9	DCR	3	X+3a/-4a	SPEC	Full check	LOT	1	27	CTF
14	Electical Characteristic Inspection	Electical characteristics NG	9	Inductance	1	270±20% uH	SPEC	30	LOT	1	9	
			9	DCR	1	975Max mQ	SPEC	30	LOT	1	9	
			9	IDC1	1	0.74 Drop20%	SPEC	3	LOT	2	18	
			9	IDC2	1	0.65A ΔT 40°C (at 20°C)	SPEC	3	LOT	2	18	
15	Visual sorting	Appearance NG	7	State of appearance	2	welding,CORE,PIN, Marking Condition	Limit Sample	Full check	LOT	1	14	
16	Visual Inspection	Marking NG	2	Marking condition	1	Printing must be clearly visible.	Limit Sample	2	LOT	1	2	
		Core crack/damage	6	Core condition	2	No CORE crack	Limit Sample	2	LOT	1	12	
		Pin pollution/bent	7	Pin condition	2	No PIN open PIN deformation	Limit Sample	2	LOT	1	14	
17	OQC1	Electical characteristics NG	9	Inductance/DCR	1	270±20% uH/975Max mQ	SPEC	30	LOT	1	9	
			9	DC bias	1	0.74 Drop20%	SPEC	30	LOT	1	9	
			9	Reflow test 4차	1	No CORE crack	Limit Sample/SPEC	50	LOT	1	9	
			9	Crack/open/short	1	3.5 Kg/f MIN	SPEC	15	LOT	1	9	
18	Reel Packing	Sealing NG	9	L/W/T	1	A:8.0±0.3/B:8.0±0.3/H:3.9±0.1	Limit Sample/SPEC	10	LOT	1	9	
			7	Packing to temperature	1	150±20°C	Operating standard	1	everyday	1	7	
			7	Adhesive strength	1	20-60g	Operating standard	2	everyday	2	14	
			7	Product count error	1	1000	Operating standard	2	LOT	1	7	
19	Packing Inspection	Appearance NG /Mixed	9	Label	1	Record production LOT and according to the Spec	Operating standard	Full check	LOT	1	9	
			7	Visual Inspection	1	No printing, fuzzy PIN dirty etc	SPEC	Full check	LOT	1	7	
			9	Characteristic inspection	1	Values were in the range reference	SPEC	Full check	LOT	1	9	
20	OQC2	Packing condition NG	9	Label	1	The number of LOT, right	SPEC	Full check	LOT	1	9	
			5	Packing condition	1	1000/Reel.2Ree/1In box 2In box/1 outer box	SPEC	Full check	LOT	1	5	
			5	Label condition	1	Record production LOT and according to the Spec	SPEC	Full check	LOT	1	5	

PQCP Results																			
Pro. No	Process Name	Failure		Method			Inspection Data										Cpk	Result	
		Failure Mode	Control Item	Spec./Tolerance	SPL Size	SPL Freq.	1	2	3	4	5	6	7	8	9	10			
1	PIN Adhesion	Pin & Core Separation	Epoxy standard	EP2221-09D	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
			Epoxy storage temperature	0-5°C	2	everyday	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
			Epoxy paint condition	The epoxy painting uniform	2	everyday	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
			Epoxy spread volume	1.3±0.3mg	5	3 times / day	1.26	1.32	1.27	1.31	1.29	1.28	1.29	1.3	1.31	1.29	5.1944	OK	
			Dry time/temperature	150±10°C/50±5 min	1	everyday	1.51	1.51	1.50	1.50	1.50	1.50	1.50	1.50	1.51	1.50	6.6936	OK	
2	Winding	Electrical characteristics NG	Bonding Strength	2.0 Kg/f MIN	5	3 times / day	2.78	2.78	3.15	2.98	2.68	2.78	3.24	2.69	2.78	3.21	1.3828	OK	
			Wire standard	1E180/1EW Ø0.19	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
			Wire turn number	80,955±1Turns	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
			Wire tension	65±10gf	2	LOT	61	62	61	62	61	61	62	61	62	61	4.1312	OK	
3	Welding	Open	Wire Condition	Don't have the wire damage	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Current/Voltage/Time	410±100A/220±5V/280±20ms	2	LOT	426	416	413	424	425	423	420	416	426	425	6.1374	OK	
4	Wire cutting	Open	Welding lip changing cycle	20000 times	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Cutter changing cycle	1440,000 times	1	everyday	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
5	Eoxy painting	Epoxy deformation	Epoxy standard	E-500AH	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Epoxy storage condition	5-25°C	2	everyday	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
6	Dry	Epoxy no drying	Epoxy paint condition	The epoxy painting uniform	2	everyday	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
7	Laser	Open	Drying time/temperature	135±10°C/50±5min	1	everyday	136	135	135	136	136	135	134	135	136	134	4.1413	OK	
8	Laser Inspection	Open	Laser condition	1.9±0.3 KW	2	everyday	1.89	1.89	1.91	1.93	1.89	2.1	1.99	1.91	1.97	1.9	1.3107	OK	
			Wire & Pin tensile strength	100g/f MIN	5	3 times / day	232	212	232	252	212	232	211	210	232	222	3.0315	OK	
9	Marking	Marking NG	INK standard	WHITE	2	everyday	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Marking conditon	Marking clearing and according to the Spec	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
10	Drying	INK no drying	Drying time/temperature	160±10°C/200±20S	2	everyday	161	161	162	160	161	163	161	160	162	163	2.6667	OK	
			Drying condition	No the Epoxy on the PIN and the epoxy Less	2	everyday	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
11	Pin cutting	Pin bent	Cutting condition	No PIN open	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Pin bent("v" cut)	ok	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK			
12	Visual sorting	Appearance NG	State of appearance	welding,CORE,PIN, Marking Condition	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
13	Electrical Characteristic sorting	Electrical characteristics NG	Inductance	270±20% uH	Full check	LOT	252	252	253	256	253	252	251	253	252	252	9.0377	OK	
			DCR	X+3σ/-4σ	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
14	Electrical Characteristic Inspection	Electrical characteristics NG	Inductance	270±20% uH	30	LOT	253	252	254	253	255	256	254	252	253	257	7.5952	OK	
			DCR	975Max mQ	30	LOT	782	779	798	782	800	801	796	784	789	785	7.3842	OK	
			IDC1	0.74A Drop20%	3	LOT	18.25%	17.87%	18.91%								7.3836	OK	
			IDC2	0.65A ΔT 40°C (at 20°C)	3	LOT	55	56	54								1.6667	OK	
15	Visual sorting	Appearance NG	State of appearance	welding,CORE,PIN, Marking Condition	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Marking NG	Marking conditon	Printing must be clearly visible.	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Core crack/damage	Core condition	No CORE crack	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
16	Visual Inspection	Pin pollution/bent	Pin condition	No PIN open PIN deformation	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Inductance	270±20% uH	30	LOT	253	254	253	256	254	258	255	254	259	255	6.4367	OK	
			DCR	975Max mQ	30	LOT	795	798	783	795	786	800	794	787	782	8.8456	OK		
			DC bias	0.74 Drop20%	30	LOT	18.13%	17.35%	18.87%	18.98%	19.34%	17.26%	19.11%	18.82%	18.34%	18.64%	5.3769	OK	
			Reflow test 4次	No CORE crack	50	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			PCB tensile strength	3.5 Kg/f MIN	15	LOT	10.24	10.25	10.11	10.13	10.47	10.46	10.52	11.1	10.68	10.27	1.5831	OK	
17	OQC1	Electrical characteristics NG	Dimension	L/W/T	10	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Packing to temperature	150±20°C	1	everyday	152	153	152	153	151	152	153	159	152	151	2.493	OK	
			Adhesive strength	20-60g	2	everyday	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Packing quantity	1000	2	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
18	Reel Packing	Mixed	Label	Record production LOT and according to the Spec	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Visual Inspection	No printing, fuzzy PIN dirty etc	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Characteristic inspection	Values were in the range reference	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
19	Packing Inspection	Appearance NG/Mixed	Label	The number of LOT, right	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Packing condition	1000/Reel,2Ree/1In box 2In box/1 outer box	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
20	OQC2	Packing condition NG	Label condition	Record production LOT and according to the Spec	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		
			Visual Inspection	No printing, fuzzy PIN dirty etc	Full check	LOT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		

신규부품 수율평가 결과

노란색 부위만 입력

■ 부품정보

부품명	코드명	협력사명	평가일자
CMI-DP8040NH-271M-B	2703-005421	코일마스터	6.18

■ 평가결과

구분	Main Process	Sub Process	
	성형	PIN 조립	특성
투입수	500	485	480
이탈수	15	5	15
불량율(%)	3.0%	1.0%	3.1%
초기수율(FTY)	97.0%	99.0%	96.9%
PPM	300	103	313
시그마수준(Zst)	3.38	3.81	3.36
누적수율(RTY)	93.0%		
전체공정 시그마수준	2.98		

■ Main Process 이탈 이력

성형	투입수:	500
불량내용	수량	비고
파손	8	Body파손
동선노출	7	
Total	15	

■ Sub Process 이탈 이력

Pin조립	투입수:	485
불량내용	수량	비고
Pin미절곡	3	에폭시 넘침
Pin변형	2	
Total	5	

특성	투입수:	480
불량내용	수량	비고
외관불량	9	핀 이물
L값	6	L값하한
Total	15	

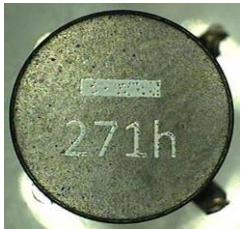
Environment Management Substances

구성 부품명 (조립부품/단부품)	구성 부품 Spec	원재료명 (균질재질)	성적서 번호	분석기관	시험일자 (YYYY-MM-DD)	분석결과(ppm=mg/kg)													
						Type	Cd	Pb	Hg	Cr6+	PBB	PBDE	T-Br	T-Cl	Br+Cl	Sb	Be		
						유기물	5	100	100	100	100	100	900	900	1500	TV: 1000 IT/Mobile: 700			
SMD Power inductor	CMI-DP8040NH-271M-B	CORE	CANEC1512218406 CANEC1500295512 CANEC1504628801	SGS	2015-07-30 2015-01-16 2015-04-03	무기물	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	
		PIN (Cu)	CANEC1419732905 CANML1420664001 SHAEC1501309415	SGS	2014-12-03 2014-12-12 2015-01-28	무기물	N.D.	13	N.D.	Negative	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N/A	N.D.	N.D.
		PIN (Ni)	CANEC1419051801 CANEC1505011701	SGS	2014-11-24 2015-04-10	무기물	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		PIN (Sn)	CANEC1419051802 CANEC1505011702	SGS	2014-11-24 2015-04-10	무기물	N.D.	39	N.D.	Negative	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	120	N.D.	N.D.
		WIRE (Cu)	CE/2015/44585	SGS	2015-04-27	무기물	N.D.	N.D.	N.D.	Negative							N/A	N.D.	N.D.
		WIRE (Coating)	CE/2015/44584	SGS	2015-04-27	유기물	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		EPOXY1	SCL01H011762001 SCL01H048306002E	CTI	2015-02-12 2015-06-15	유기물	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	463	463	N.D.	N/A	N/A
		EPOXY2	CANML1502754901	SGS	2015-03-06	유기물	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	264	264	N.D.	N/A	N/A
		INK	CE/2014/C6508 CE/2014/C0375A CE/2014/C0375B	SGS	2015-01-12 2014-12-09 2014-12-09	유기물	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	415	415	N.D.	N/A	N/A

SMD DATA (승인원용)

CMI-DP8040NH-271M-B

1. 고정으로 기재되는 부품 마킹 정보

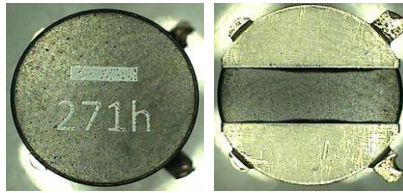


항 목	문자 or 숫자
고정 마킹 정보	271

4. Carrier / TRAY입고 방향 (부품 극성 방향 필수 포함)

항 목	기준 (100V)
Cover tape 내측	9~10Mohm
Carrier tape	9~10Mohm
Tray	
접합방식	열 압착방식

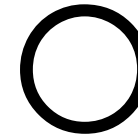
실물 사진 (부품 상, 하면 동일)



극성 관리 필요 유무



극성이 필요한 경우



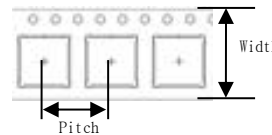
무극성

실물사진
(Reel 담긴 사진, 부품3ea이상)



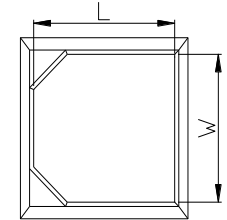
2. Carrier Width, Pitch

항 목	치수(mm)
Width	16.0
Pitch	12.0
Pocket재질	EMBOSS



3. 포켓 흡착면 사이즈

항목	치수(mm)
L	8.4
W	8.4



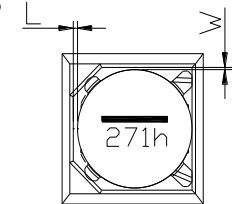
3. Carrier / TRAY Height

항 목	치수(mm)
Nozzle 흡착깊이	0.40
부품T값 (typ)	3.90
Carrier Height	4.30
Tray Height	-

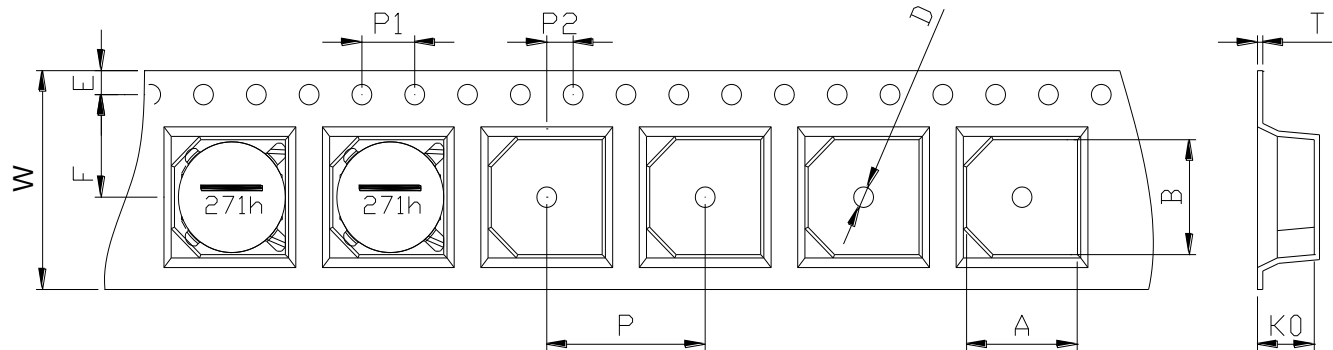
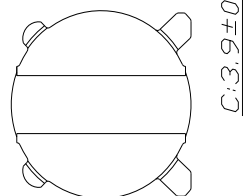
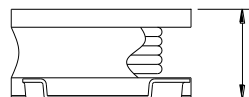
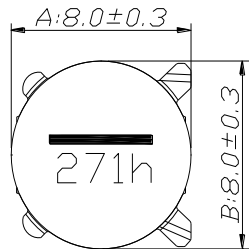


5. Carrier 내부와 부품간의 GAP

항목	치수(mm)
L	0.30
W	0.15



※ 첨부 도면 (부품 / TAPE & REEL & TRAY)



W	A	B	D	E	F	P	P1	P2	K0	T
16.00	8.40	8.40	1.50	1.75	7.50	12.00	4.00	2.00	4.30	0.40
+0.30	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.10	+0.05
-0.10	-0.10	-0.10	-0.00	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.05

单击下面可查看定价，库存，交付和生命周期等信息

[>>coilmaster\(卡尔马斯特\)](#)