

MESSRS:

安勤(香港)有限公司

SPEC NO.

H500-0191

RoHS Compliant
環保品

DATE: 2011/08/03

《NEW/AMENDED》

APPROVAL SPECIFICATION

DESCRIPTION: FIXED INDUCTOR

MODEL (PART NO.) CECSNP SERIES

CUSTOMER'S PART NO. _____

AMENDED _____

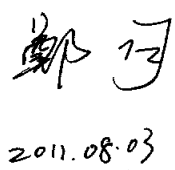
CUSTOMER'S PART NO. _____

【FOR APPROVAL】

DATE: _____

* THIS SPECIFICATION IS CONSTITUTED WITH _____ PAGES INCLUDING ATTACHMENTS.

COILS ELECTRONIC CO., LTD.

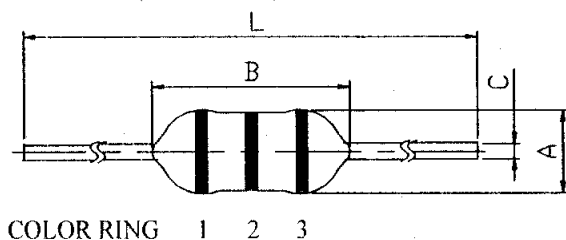
Approved by	Checked by	In charge
		

COILS ELECTRONIC CO., LTD.

SPECIFICATION

TYPE
CECSNP

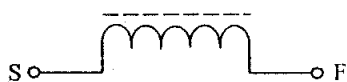
1. DIMENSION (UNIT: mm)



A	Ø2.5 Max.
B	4.0 Max.
C	Ø0.48±0.05
L	61.0±1.0

* THE LENGTH OF THE TERMINAL PINS DOES NOT INCLUDE SOLDER TIP.

2. CIRCUIT



3. MARKING

COLOR	FIRST FIGURE	SECOND FIGURE	MULTIPLIER
	1	2	3
BLACK	0	0	1
BROWN	1	1	10
RED	2	2	100
ORANGE	3	3	1000
YELLOW	4	4	-
GREEN	5	5	-
BLUE	6	6	-
VIOLET	7	7	-
GRAY	8	8	-
WHITE	9	9	-
GOLD	-	-	0.1
SILVER	-	-	0.01

11th, Oct., 2003			PART NO.	
APPROVAL	CHECK	DESIGN	Refer To P. 5/6, 6/6	
			REMARK	SPEC. No. 2/6
				H500-0191

DEL COILS ELECTRONIC CO., LTD.

TYPE
CECSNP

4. ELECTRICAL CHARACTERISTICS

No.	PART NO.	L (μ H)	L TOLERANCE	Qu Min.	D.C.R. (Ω) Max.	RATED CURRENT Max. (A)		S.R.F. (MHz) Min.	MEASURING FREQUENCY (MHz)	MATERIAL
						Idc1	Idc2			
01	CECSNP-R10□	0.10	M, K	40	0.11	2.15	0.95	380	25.2	EM11
02	CECSNP-R12□	0.12			0.12	2.05	0.90	380		
03	CECSNP-R15□	0.15			0.13	1.95	0.82	380		
04	CECSNP-R18□	0.18			0.14	1.90	0.69	320		
05	CECSNP-R22□	0.22			0.16	1.85	0.65	290		
06	CECSNP-R27□	0.27			0.17	1.80	0.61	280		
07	CECSNP-R33□	0.33			0.18	1.75	0.60	270		
08	CECSNP-R39□	0.39			0.19	1.70	0.56	250		
09	CECSNP-R47□	0.47			0.20	1.60	0.52	230		
10	CECSNP-R56□	0.56			0.22	1.50	0.50	190		
11	CECSNP-R68□	0.68			0.25	1.44	0.47	170		
12	CECSNP-R82□	0.82			0.28	1.40	0.45	160		
13	CECSNP-1R0□	1.0	M, K, J	45	0.29	1.38	0.43	150	7.96	EM8B
14	CECSNP-1R2□	1.2			0.30	1.24	0.42	140		
15	CECSNP-1R5□	1.5			0.33	1.20	0.39	130		
16	CECSNP-1R8□	1.8			0.35	0.99	0.35	100		
17	CECSNP-2R2□	2.2			0.39	0.95	0.34	75		
18	CECSNP-2R7□	2.7			0.45	0.90	0.32	55		
19	CECSNP-3R3□	3.3			0.64	0.89	0.28	48		
20	CECSNP-3R9□	3.9			0.65	0.83	0.26	38		
21	CECSNP-4R7□	4.7			0.94	0.68	0.22	38		
22	CECSNP-5R6□	5.6			1.02	0.67	0.21	32		
23	CECSNP-6R8□	6.8			1.19	0.59	0.19	26		
24	CECSNP-8R2□	8.2			1.72	0.50	0.18	25		
25	CECSNP-100□	10			1.88	0.49	0.17	22		
26	CECSNP-120□	12		50	1.96	0.46	0.17	20	2.52	
27	CECSNP-150□	15			2.13	0.37	0.16	17		
28	CECSNP-180□	18			2.46	0.36	0.15	16		
29	CECSNP-220□	22			2.97	0.34	0.13	15		
30	CECSNP-270□	27			3.38	0.33	0.12	14		

REMARK	SPEC. No. 3/6
	H500-0191

TYPE
CECSNP

ELECTRICAL CHARACTERISTICS

ELECTRICAL CHARACTERISTICS										
No.	PART NO.	L (μ H)	L TOLERANCE	Qu Min.	D.C.R. (Ω) Max.	RATED CURRENT Max. (A)		S.R.F. (MHz) Min	MEASURING FREQUENCY (MHz)	MATERIAL
						Idc1	Idc2			
31	CECSNP-330□	33	M、K、J	40	3.66	0.30	0.11	12	2.52	EM8B
32	CECSNP-390□	39			4.02	0.26	0.10	11		
33	CECSNP-470□	47			6.16	0.25	90m	9.0		
34	CECSNP-560□	56			7.04	0.23	85m	8.5		
35	CECSNP-680□	68			7.69	0.22	80m	8.0		
36	CECSNP-820□	82			8.68	0.21	70m	7.0		
37	CECSNP-101□	100			15.44	0.18	65m	6.0		
38	CECSNP-121□	120		35	17.63	0.17	60m	6.0	0.796	
39	CECSNP-151□	150			19.90	0.14	55m	5.0		
40	CECSNP-181□	180			20.89	0.13	50m	4.5		
41	CECSNP-221□	220			23.19	0.11	45m	4.5		
42	CECSNP-271□	270			26.88	0.10	40m	4.0		
43	CECSNP-331□	330			32.13	0.10	40m	4.0		

* □ : M: $\pm 20\%$, K: $\pm 10\%$, J: $\pm 5\%$

* TESTING INSTRUMENT

INDUCTANCE & Q: HP 4285A OR EQUIVALENT.

D.C.R.: HP 34420A OR EQUIVALENT.

RATED CURRENT: HP 4284A, HP42841A, HP E3632A, HP 34401A OR EQUIVALENT.

S.R.F. : HP 4395A HP4285A OR EQUIVALENT.

* Idc1: THE CURRENT WHEN THE INDUCTANCE DECREASES TO 90% OF INITIAL VALUE. (Ta=25°C)

* Idc2: THE CURRENT WHEN THE TEMPERATURE OF COIL IS INCREASED BY 20°C. (Ta=25°C)

REMARK	SPEC. No. 4/6
	H500-0191

AE COILS ELECTRONIC CO., LTD.

5. GENERAL CHARACTERISTICS

* STANDARD TESTING CONDITIONS:

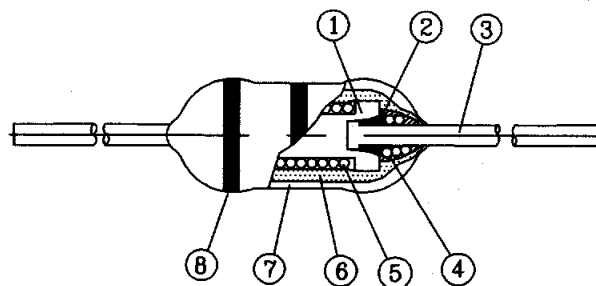
UNLESS OTHERWISE SPECIFIED, THE STANDARD RANGE OF ATMOSPHERIC CONDITIONS FOR MEASUREMENTS AND TESTS ARE AS FOLLOWS: AMBIENT TEMPERATURE: 15°C~35°C. RELATIVE HUMIDITY : 25%~85%. AIR PRESSURE : 86kPa~106kPa.

IF THERE IS ANY DOUBT ABOUT THE RESULTS, MEASUREMENT SHALL BE MADE WITHIN THE FOLLOWING LIMITS: AMBIENT TEMPERATURE: 20°C±1°C. RELATIVE HUMIDITY : 63%~67%. AIR PRESSURE : 86kPa~106kPa.

No.	ITEMS		TEST CONDITIONS	SPECIFICATION
1	OPERATION TEMPERATURE			-25 ~ +85℃
	STORAGE TEMPERATURE			(INCLUDING COIL TEMPERATURE RISE) -40 ~ +85℃
2	LEAD TERMINAL STRENGTH	PULLING	A STATIC PULLING FORCE OF 25N IN A DIRECTION PARALLEL TO THE LEAD TERMINALS FOR 5±1 SECONDS.	NO TERMINAL BREAKAGE OR LOOSENING
		BENDING	LOAD WITH 3.0N AND 90° BENDING AND STRAIGHTENING TWICE IN TWO DIRECTIONS (UPWARD & DOWNWARD)	
3	DIELECTRIC WITHSTAND VOLTAGE TEST		D.C.500V APPLIED BETWEEN WINDING-BODY FOR 1 MINUTE.	NO DIELECTRIC DAMAGE
4	INSULATION RESISTANCE TEST		D.C.500V APPLIED BETWEEN WINDING-BODY FOR 1 MINUTE.	OVER 100 MΩ
5	OVER CURRENT TEST		INPUT 2 TIMES OF RATED INTO THE SAMPLE FOR 5 MINUTES.	NO FIRE OR ANY ABNORMALITY
6	RESISTANCE TO SOLDERING HEAT TEST		FIX THE SAMPLES ON A 1.6mm THICKNESS PCB, THEN DIP THE SAMPLE LEADS INTO A SOLDERING BATH OF 260±5℃ UP TO THE PCB FOR 5±1 SECONDS.	NO MECHANICAL BREAKAGE. DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ±3.0% Qu: WITHIN ±20%
7	SOLDER ABILITY TEST		IMMERSE THE TERMINAL IN FLUX FOR 5 SECONDS. THEN DIP THE TERMINAL INTO A SOLDERING BATH OF 245±5℃ FOR 2±0.5 SECONDS.	OVER 90% OF THE SURFACE BEING IMMERSED SHALL BE COVERED WITH NEW SOLDER UNIFORMLY.
8	VIBRATION TEST		AMPLITUDE: 1.5mm P-P FREQUENCY:10～55～10Hz (1 MINUTE PER CYCLE) DURATION: 2 HOURS IN EACH OF X,Y,Z AXIS. (TOTAL 6 HOURS)	DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ±1.0% Qu: WITHIN ±20%
9	SHOCK TEST		PEAK ACCELERATION: 981m/s ² DURATION OF PULSE: 10ms SHOCK TIMES: 3 TIMES IN EACH OF X, Y, Z AXIS. (TOTAL 9 TIMES)	DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ±1.0% Qu: WITHIN ±20%
10	HUMIDITY TEST		TEMPERATURE: 40℃±2℃ HUMIDITY: 90%～95%RH DURATION: 500±12 HOURS.	DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ±10% Qu: WITHIN ±20%
11	DRY HEAT TEST		TEMPERATURE: 85℃±2℃ DURATION: 500±12 HOURS.	
12	COLD TEST		TEMPERATURE: -25℃±3℃ DURATION: 500±12 HOURS.	
13	DRY HEAT WITH LOAD		TEMPERATURE: 85℃±2℃ LOAD CONDITION: RATED CURRENT DURATION: 500±12 HOURS.	
14	DAMP HEAT WITH LOAD		TEMPERATURE: 40℃±2℃ HUMIDITY: 90%～95%RH LOAD CONDITION: RATED CURRENT DURATION: 500±12 HOURS.	
15	THERMAL SHOCK		5 CONTINUOUS CYCLES SHOWN AS BELOW	
			TEMPERATURE	DURATION
			-25℃±3℃	30 MINUTES
			85℃±2℃	30 MINUTES

REMARK	SPEC. No. 5/6
	H500-0191

6. CONSTRUCTION



No.	PARTS	MATERIAL	MANUFACTURER	COUNTRY OF ORIGIN	UL No.	TEMP CLASS
①	CORE	FERRITE CORE EM11,EM8B OR EQUIVALENT	TONICHI FERRITE PRODUCTS CO., LTD.	CHINA	NA	NA
②	ADHESIVE	EPOXY RESIN (6642-1) OR EQUIVALENT	GUANG ZHOU WELLS CHEMICAL CO., LTD.	CHINA	NA	NA
③	LEAD WIRE	SOLDER PLATED COPPER WIRE OR EQUIVALENT	WELL FORE SPECIAL WIRE CORPORATION	CHINA	NA	NA
④	SOLDER	Sn99.3-Cu0.7 OR EQUIVALENT	ALPHA METALS LTD.	CHINA HONG KONG	NA	NA
		Sn-Cu-Ni (SN100C4) OR EQUIVALENT	NIHON SUPERIOR., LTD.	JAPAN	NA	NA
⑤	WIRE	POLYURETHANE ENAMELLED COPPER WIRE OR EQUIVALENT	JUNG SHING WIRE CO., LTD.	CHINA	E174837	130℃
			SIAM PACIFIC ELECTRIC WIRE & CABLE CO; LTD.	THAILAND	E142108	130℃
			TA YA ELECTRIC WIRE FACTORY	CHINA	E197768	130℃
⑥	UNDER-COATING RESIN	BUTADIENE RESIN UV-321 OR EQUIVALENT	HOMETOWN INDUSTRIAL CO., LTD.	CHINA (TAIWAN)	NA	NA
⑦	OVER-COATING RESIN	EPOXY RESIN 13012-G OR EQUIVALENT	HOMETOWN INDUSTRIAL CO., LTD.	CHINA (TAIWAN)	NA	NA
⑧	COLOR CODE	MELAMINE RESIN OR EQUIVALENT	HOMETOWN INDUSTRIAL CO., LTD.	CHINA (TAIWAN)	NA	NA

7. PACKING

PACKAGE TO BE ACCORDING TO PACKAGE SPECIFICATION (TICK THE RELEVANT "✓").

- ☐ KB-PAT155 ☐ KB-PAT615 ☐ KB-PAT805 ☐ KB-OTH019
☐ KB-PAT156 ☐ KB-PAT616 ☒ KB-PAT806 ☐ KB-OTH020
☐ SPECIAL FOR CUSTOMER KB _____

8. REMARK

THE WARNING FOR LEAD WIRE FORMING TO BE ACCORDING TO STD-003.

REMARK	SPEC. No. 6/6
	H500-0191