

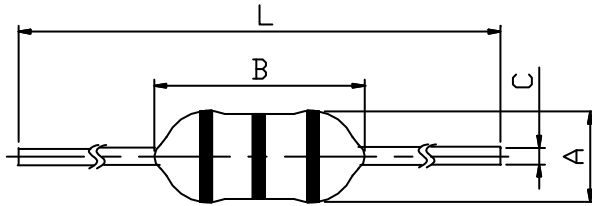
FIXED INDUCTORS

TYPE

CECS

SPECIFICATION

1. DIMENSION (UNIT: mm)



COLOR RING 1 2 3

A	MAX. $\phi 2.5$
B	MAX. 4.0
C	$\phi 0.48 \pm 0.05$
L	63 ± 3

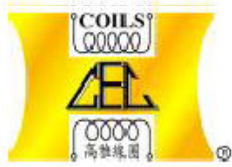
* THE LENGTH OF THE TERMINAL PINS DOES NOT INCLUDE SOLDER TIP.

2. CIRCUIT



3. MARKING

COLOR	FIRST FIGURE 1	SECOND FIGURE 2	MULTIPLIER 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

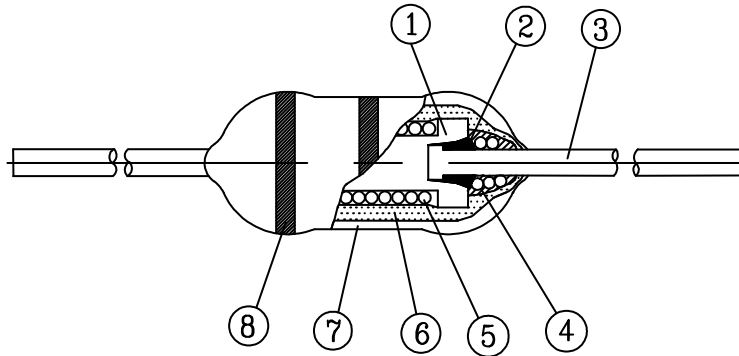


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4. CONSTRUCTION



No.	NAME	MATERIAL
1	CORE	FERRITE CORE CM11, CM8B OR EQUIVALENT
2	ADHESIVE	EPOXY RESIN
3	LEAD WIRE	SOLDER PLATED COPPER WIRE
4	SOLDER	H60A
5	WIRE	POLYURETHANE ENAMELLED COPPER WIRE
6	UNDER-COATING RESIN	BUTADIENE RESIN
7	OVER-COATING RESIN	EPOXY RESIN
8	COLOR CODE	MELAMINE RESIN

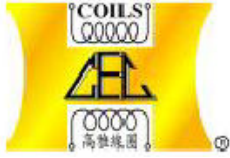


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CECS

5. ELECTRICAL CHARACTERISTICS

No.	PART NO.	L (μ H)	L TOLERANCE	Q Min.	D.C.R. (Ω) Max.	RATED CURRENT Max. (A)		S.R.F. (MHz) Min.	MEASURING FREQUENCY (MHz)	MATERIAL
						Idc1	Idc2			
01	CECS-R10□	0.10	M, K	40	0.11	2.15	0.95	380	25.2	CM11
02	CECS-R12□	0.12			0.12	2.05	0.90	380		
03	CECS-R15□	0.15			0.13	1.95	0.82	380		
04	CECS-R18□	0.18			0.14	1.90	0.69	320		
05	CECS-R22□	0.22			0.16	1.85	0.65	290		
06	CECS-R27□	0.27			0.17	1.80	0.61	280		
07	CECS-R33□	0.33			0.18	1.75	0.60	270		
08	CECS-R39□	0.39			0.19	1.70	0.56	250		
09	CECS-R47□	0.47			0.20	1.60	0.52	230		
10	CECS-R56□	0.56			0.22	1.50	0.50	190		
11	CECS-R68□	0.68			0.25	1.44	0.47	170		
12	CECS-R82□	0.82			0.28	1.40	0.45	160		
13	CECS-1R0□	1.0	M, K, J	40	0.29	1.38	0.43	150	7.96	CM8B
14	CECS-1R2□	1.2			0.30	1.24	0.42	140		
15	CECS-1R5□	1.5			0.33	1.20	0.39	130		
16	CECS-1R8□	1.8			0.35	0.99	0.35	100		
17	CECS-2R2□	2.2			0.39	0.95	0.34	75		
18	CECS-2R7□	2.7			0.45	0.90	0.32	55		

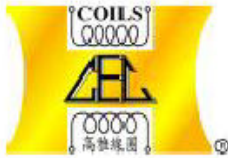


FIXED INDUCTORS

TYPE
CECS

ELECTRICAL CHARACTERISTICS

No.	PART NO.	L (μ H)	L TOLERANCE	Q Min.	D.C.R. (Ω) Max.	RATED CURRENT Max. (A)		S.R.F. (MHz) Min.	MEASURING FREQUENCY (MHz)	MATERIAL	
						Idc1	Idc2				
19	CECS-3R3□	3.3	M, K, J	40	0.64	0.89	0.28	48	7.96	CM8B	
20	CECS-3R9□	3.9			0.65	0.83	0.26	38			
21	CECS-4R7□	4.7			45	0.94	0.68	0.22			38
22	CECS-5R6□	5.6		1.02		0.67	0.21	32			
23	CECS-6R8□	6.8		1.19		0.59	0.19	26			
24	CECS-8R2□	8.2		1.72		0.50	0.18	25			
25	CECS-100□	10		1.88		0.49	0.17	22			
26	CECS-120□	12		50		1.96	0.46	0.17			20
27	CECS-150□	15			2.13	0.37	0.16	17			
28	CECS-180□	18			2.46	0.36	0.15	16			
29	CECS-220□	22			2.97	0.34	0.13	15			
30	CECS-270□	27			3.38	0.33	0.12	14			
31	CECS-330□	33			3.66	0.30	0.11	12			
32	CECS-390□	39			4.02	0.26	0.10	11			
33	CECS-470□	47			40	6.16	0.25	90m	9.0		
34	CECS-560□	56		7.04		0.23	85m	8.5			
35	CECS-680□	68		7.69		0.22	80m	8.0			



FIXED INDUCTORS

TYPE
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ELECTRICAL CHARACTERISTICS

No.	Part NO.	L (μ H)	Q Min.	D.C.R. (Ω) Max.	RATED CURRENT Max. (A)	S.R.F (MHz) Min.	MEASURING FREQUENCY (MHz)
36	CECS-820□	82	40	8.68	70m	7.0	2.52
37	CECS-101□	100	40	15.44	50m	6.0	2.52
38	CECS-121□	120	35	17.63	50m	6.0	0.796
39	CECS-151□	150	35	19.90	50m	5.0	0.796
40	CECS-181□	180	35	20.89	45m	4.5	0.796
41	CECS-221□	220	35	23.19	40m	4.5	0.796
42	CECS-271□	270	35	26.88	40m	4.0	0.796
43	CECS-331□	330	35	32.13	40m	4.0	0.796

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

* TESTING INSTRUMENT

INDUCTANCE & Q: HP 4285A OR EQUIVALENT.

D.C.R.: KEITHLEY 580 MICRO OHM METER OR EQUIVALENT.

RATED CURRENT: HP 4284A, HP 42841A, HP E3632A, HP 34401A OR EQUIVALENT.

S.R.F.: HP 4395A, HP 4285A OR EQUIVALENT.

* Idc1: THE CURRENT WHEN THE INDUCTANCE DECREASES TO 90% OF INITIAL VALUE ($T_a = 25^\circ\text{C}$).

* Idc2: THE CURRENT WHEN THE TEMPERATURE OF COIL IS INCREASED BY 20°C ($T_a = 25^\circ\text{C}$).



FIXED INDUCTORS

6. 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.

TYPE

CECS

No.	ITEMS		TEST CONDITIONS	SPECIFICATION					
1	OPERATION TEMPERATURE			-25 ~ +85°C					
	STORAGE TEMPERATURE			(INCLUDING COIL TEMPERATURE RISE) -40 ~ +85°C					
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 UP TO THE PCB INTO A SOLDERING BATH OF 260 ± 5°C FOR 5 ± 1 SECONDS.	NO MECHANICAL BREAKAGE. DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ± 3.0% Q: WITHIN ± 20%					
7	SOLDER ABILITY TEST		IMMERSE THE TERMINAL IN FLUX FOR 5 SECONDS. THEN DIP THE TERMINAL INTO A SOLDERING BATH OF 235 ± 5°C 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% Q: 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% Q: WITHIN ± 20%					
10	HUMIDITY TEST		TEMPERATURE: 40°C ± 2°C HUMIDITY: 90% ~ 95%RH DURATION: 500 ± 12 HOURS.	DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ± 10% Q: WITHIN ± 20%					
11	DRY HEAT TEST		TEMPERATURE: 85°C ± 2°C DURATION: 500 ± 12 HOURS.						
12	COLD TEST		TEMPERATURE: -25°C ± 3°C DURATION: 500 ± 12 HOURS.						
13	DRY HEAT WITH LOAD		TEMPERATURE: 85°C ± 2°C LOAD CONDITION: RATED CURRENT DURATION: 500 ± 12 HOURS.						
14	DAMP HEAT WITH LOAD		TEMPERATURE: 40°C ± 2°C HUMIDITY: 90% ~ 95%RH LOAD CONDITION: RATED CURRENT DURATION: 500 ± 12 HOURS.						
15	THERMAL SHOCK		5 CONTINUOUS CYCLES SHOWN AS BELOW						
			<table border="1"> <thead> <tr> <th>TEMPERATURE</th> <th>DURATION</th> </tr> </thead> <tbody> <tr> <td>-25°C ± 3°C</td> <td>30 MINUTES</td> </tr> <tr> <td>85°C ± 3°C</td> <td>30 MINUTES</td> </tr> </tbody> </table>	TEMPERATURE	DURATION	-25°C ± 3°C	30 MINUTES	85°C ± 3°C	30 MINUTES
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