Coilmaster

RoHs Compliant

SPECIFICATION APPROVAL

CUSTOMER	:	IBS Technology
PRODUCT	:	SEP0402E-6R8M-LF
		Pb-free
CODE NO.	:	C01104026
CUS. CODE	:	
SPEC.NO.	:	C-1104-026(00)
DATE	:	12-May-15

CUSTOMER APPROVAL

Coilmaster Electronics Co., Ltd.
3F ,NO.211 HUAN BEI ROAD, CHUNG-LI DISTRICT
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PREPARED BY	APPROVED BY	AUTHORIZED BY
JEAN	TONY	MASCOT

PRODUCT	SEP0402E-6R8M-LF	COIL SPECIFICATION	DATE	2015/5/12
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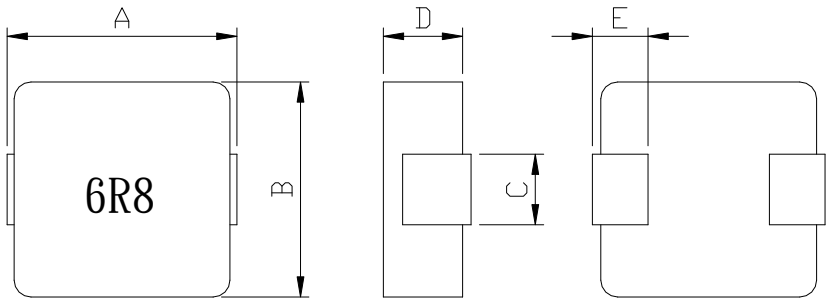
EXTERNAL DIMENSIONS：

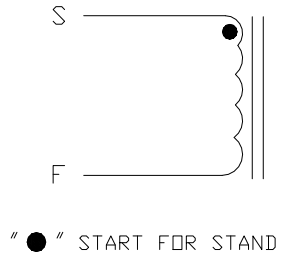


A ： 5.0 Max. m/m
B ： 4.4 Max. m/m
C ： 1.5±0.3 m/m
D ： 2.1 Max. m/m
E ： 1.1±0.3 m/m

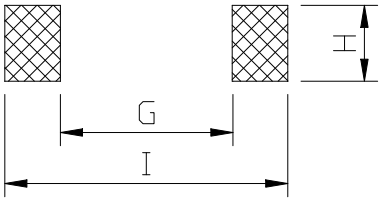
ELECTRICAL CHARACTERISTIC：

L(μH) ：	6.8±20%	100KHz 1.0V
DCR(mΩ)：	172	Max.
Isat(A)：	3.5	Typ. (L3.5A MAX ≧0Ax70%)
INDUCTANCE DROP :	30% Typ. @ IDC	3.5 A
Irms(A)：	1.75	Typ. 40℃ MAX (△t)

SCHEMATIC DRAWING ：



PCB PATTERN :



G : 2.20 m/m
H : 2.50 m/m
I : 5.20 m/m

MATERIAL LIST：

NO	ITEM	MATERIAL	SUPPLIER OF THE MATERIAL
1	CORE		
2	WIRE		
3	ADHESIVE		

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TEST DATA

ELECTRICAL CHARACTERISTICS								
MEAS. ITEM	L(μH)	DCR(mΩ)	Isat(A)	A	B	C	D	E
TEST FREQ.	100KHz 1.0V	Max.	Typ.	m/m	m/m	m/m	m/m	m/m
YOUR								
SPEC.	6.8±20%	172	3.5	5.0 Max.	4.4 Max.	1.5±0.3	2.1 Max.	1.1±0.3
1	7.01	163.10	5.61	4.69	4.24	1.51	1.84	1.02
2	6.87	163.20	5.49	4.71	4.23	1.52	1.74	1.03
3	6.94	163.10	5.56	4.68	4.25	1.51	1.69	1.04
4	7.03	163.50	5.62	4.68	4.22	1.50	1.69	1.03
5	6.98	163.40	5.58	4.71	4.25	1.51	1.74	0.99
6	6.84	163.20	5.47	4.72	4.21	1.52	1.75	1.02
7	6.79	163.50	5.43	4.73	4.23	1.51	1.82	1.03
8	7.01	163.40	5.62	4.69	4.25	1.50	1.73	1.04
9	6.85	163.70	5.48	4.69	4.24	1.51	1.76	1.05
10	7.12	163.20	5.69	4.68	4.23	1.52	1.84	1.02
X	**6.944**	**163.330**	**5.555**	**4.698**	**4.235**	**1.511**	**1.760**	**1.027**
R	**0.330**	**0.600**	**0.260**	**0.050**	**0.040**	**0.020**	**0.150**	**0.060**

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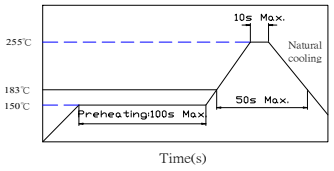
TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS
ELECTRICAL PERFORMANCE TEST		
L	REFER TO STANDARD ELEC-TRICAL CHARACTERISTIC LIST.	CH-1061 OR EQUIV.
DCR		CH-502A OR EQUIV
RATED CURRENT		APPLIED THE CURRENT TO COILS THE IDUCTANCE CHANGE SHOULD BE LESS THAN 30% TO INITIAL VALUE AND TEMPERATURE RISE SHOULD NOT BE 40℃ TYPICAL
TEMPERATURERISE TEST	40℃ MAX (△t)	1. APPLIED THE ALLOWED DC CURRENT FOR 4 HOURS. 2. TEMPERATURE MEASURE BY DIGTAL SURFACE THERMOMETER.
OVER LOAD TEST	NO EVIDENCE OF ELECTRICAL DAMAGE	APPLIED 1.5 TIMES OF RATED ALLOWED DC CURRENT TO INDUCTORS FOR A PERIOD OF 5 MINUTES.
MECHANICAL PERFORMANCE TEST		
SOLDER HEAT RESISTANCE	1. INDUCTORS SHOULD HAVE NO EVIDENCE OF ELEC- TRICAL AND MICHANICAL DAMAGE 2. INDUCTANCE SHOULD NOT HANGE MORE THAN±10%	PREHEAT:150℃ 100s Max. SOLDER TEMPERATURE: 255±5℃ DIP TIME:10s Max. 
VIBRATION TEST (LOW FREQUENCY)		1.AMPLITUDE: 1.5 mm 2.FREQUENCY: 10-55-10HZ / 1 MIN 3.DIRECTION: X, Y, Z 4.DURATION: 2 HRS/X, Y, Z
SHOCK TEST		INDUCTORS SHOULD BE DROPPED 10 TIMES FROM A HEIGHT OF 1m ONTO 3cm WOODEN BOARD.

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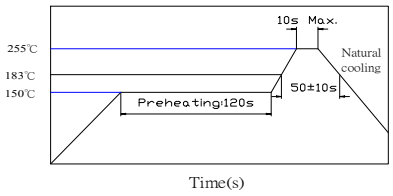
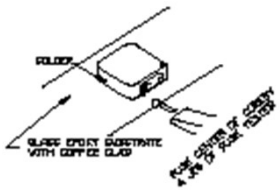
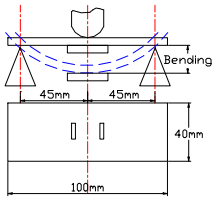
TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS
MECHANICAL PERFORMANCE TEST		
SOLDERABILITY TEST	MORE THAN 90% OF TERMINAL ELECTRODE SHOULD BE COVERED WITH SOLDER.	PREHEAT:150℃ 120x SOLDER BATH AT 255±5℃ DIP TIME:10s Max. 
COMPONENT ADHESION (PUSH TEST)	1.5Kg Min	THE DEVICE SHOULD BE REFLOW SOLDERED (255±5℃ FOR 10 SECONDS) TO A TINNED COPPER SUBSTRATE. A DYNOMETER FORCE GAUGE SHOULD BE APPLIED TO THE SIDE OF THE COMPONENT. THE DEVICE MUST WITH- STAND A MINIMUM FORCE OF 1.5Kg WITHOUT AILURE OF THE TERMINATION . 
COMPONENT ADHESION (PULL TEST)	1.5Kg Min	1.INSERT 10cm WIRE INTO THE REMAINING OPEN EYE BEND THE ENDS OF EVEN WIRE LENGTHS UPWARD AND WIND TOGETHER 2. TERMINAL SHALL NOT BEREMARKABLY DAMAGED 
FLEXTURE STRENGTH	THE FORCES APPLIED SHOULD NOT DAMAGE THE DIELECTRIC.	SOLDER A CHIP ON A TEST SUBSTRATE, BEND THE SUBSTRATE BY 2mm AND RETURN. 
RESISTANCE TO SOLVENT TEST	THERE SHOULD BE NO CASEDEFORMATION, CHANGE IN APPEARANCE OR BITERATION OF MARKING	INDUCTERS SHALL WITHSTAND 6 MINTES OF ALCOHOL

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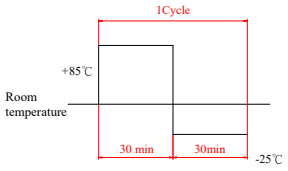
TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS
CLIMATIC TEST		
TEMPERATURE CHARACTERISTIC	1.APPEARANCE:NO DAMAGE 2.INDUCTANCE:WITHIN±10% OF INITIAL VALUE.	- 55℃ ~ +125℃
HUMIDITY TEST		60℃±2℃ / 96±2 HOURS R.H:90-95%RH
LOW TEMPERATURE STORAGE		1.TEMPERATURE:- 25℃±2℃ 2.TIME: 96±2 HOURS
THERMAL SHOCK TEST		1.-25±5℃ FOR 30 MINUTES. +125±5℃ FOR 30 MINUTES. 2.TOTAL: 10 CYCLES 
HIGH TEMPERATURE STORAGE		1.APPLIED CURRENT: MAX RATED CURRENT 2.TEMPERATURE:80℃±2℃
NOTE：INDUCTORS ARE TO BE TESTED AFTER 2 HOUR AT ROOM TEMPERATURE.		
LIFE TEST		
HIGH TEMPERATURE LOAD LIFE TEST	INDUCTORS SHOULD BE NO EVIDENCE OF SHORT OR OPEN CIRCUIT	1. TEMPERATURE: 125±2℃ 2. TIME: 500±12 HOURS 3. LOAD: ALLOWED DC CURREN
HUMIDITY LOAD LIFE TEST		1. TEMPERATURE: 60±2℃ 2. R.H.: 90-95% 3. TIME: 500±12 HOURS 4. LOAD: ALLOWED DC CURREN

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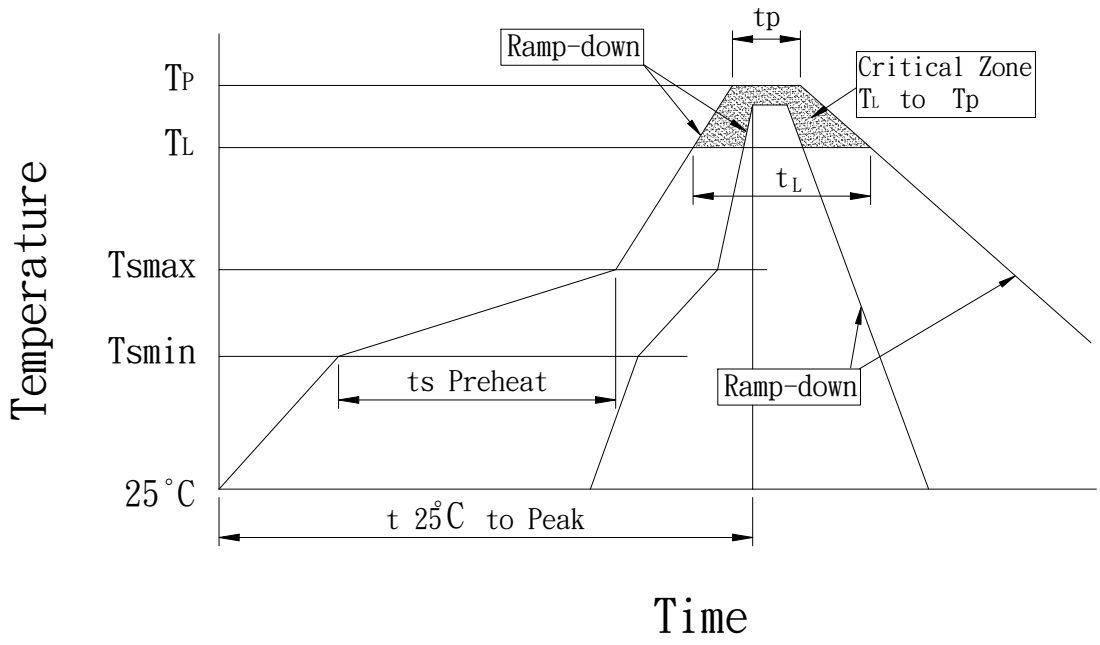
RECOMMENDED SOLDERING CONDITIONS：

CLASSIFICATION REFLOW PROFILES

Profile Feature	Sn-Pb Eutectic Assembly		Pb-Free Assembly	
	Large Body	Small Body	Large Body	Small Body
Average ramp-up rate (T_L to T_P)	3℃/second max.		3℃/second max.	
Preheat -Temperature Min (Ts_{min}) -Temperature Min (Ts_{max}) -Time (min to max) (ts)	100℃ 150℃ 60-120 seconds		150℃ 200℃ 60-180 seconds	
Tsmax to T_L -Ramp-up Rate			3℃/second max.	
Time maintained above: -Temperature (T_L) -Time (t_L)	183℃ 60-150 seconds		217℃ 60-150 seconds	
Peak Temperature (Tp)	225 +0/-5℃	240 +0/-5℃	245 +0/-5℃	255 +5/-5℃
Time within 5℃ of actual Peak Temperature (tp)	10-30 seconds	10-30 seconds	10-30 seconds	20-40 seconds
Ramp-down Rate	6℃/second max.		6℃/second max.	
Time 25℃ to Peak Temperature	6 minutes max.		8 minutes max.	

Note : All temperatures refer t topside of the package. Measured on the package body surface.

REFLOW SLODERINGS



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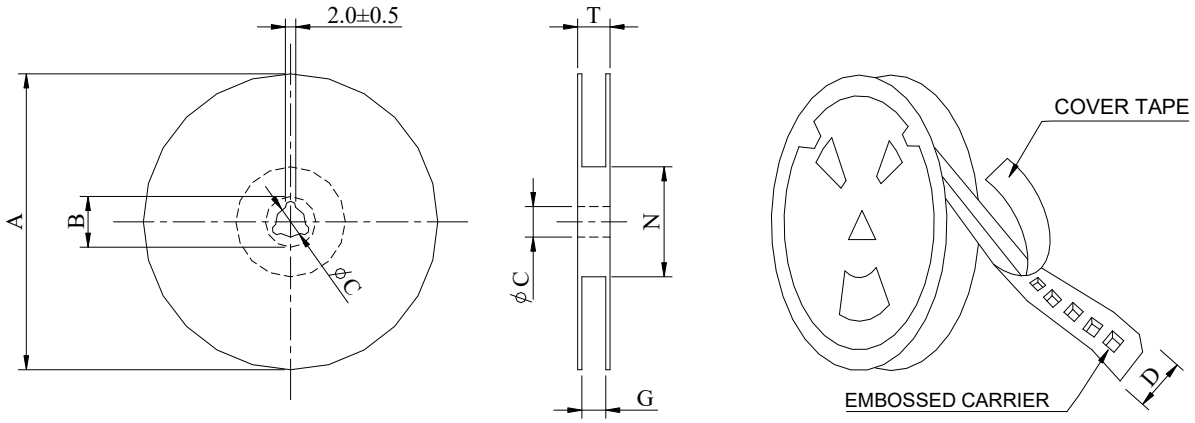
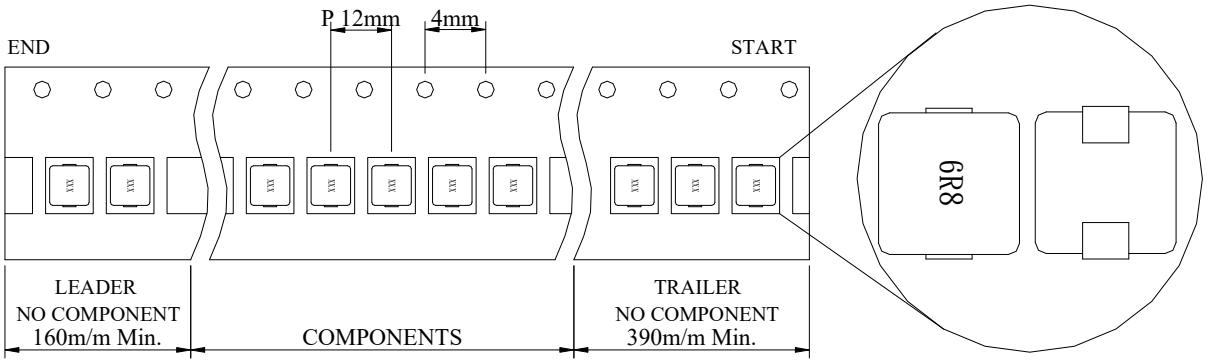
PACKAGE：



*CARRIER TAPE WIDTH：D



USER DIRECTION OF FEED

STYLE	DIMENSIONS (m/m)							
	Q'TY (PCS)	A	B± 0.8	C± 0.5	D	G+0	N-0	T
13	3,000	330	21	13	12	12	50	16

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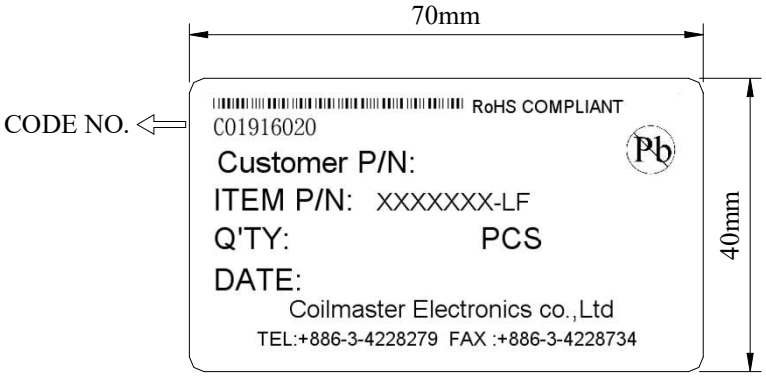
LABLE：



INNER BOX LABEL

OUT BOX LABEL