

TOKO alternative for: FDSD0630-H-1R0M=P3



SPECIFICATION APPROVAL

CUSTOMER : BEC

PRODUCT : SEP0603EB-1R0M-LF

Pb-free

CODE NO. : C01106167

CUS. CODE :

SPEC.NO. : C-1106-167(01)

DATE : 10-Jun-10

CUSTOMER APPROVAL

BEC Distribution Ltd.

www.bec.co.uk

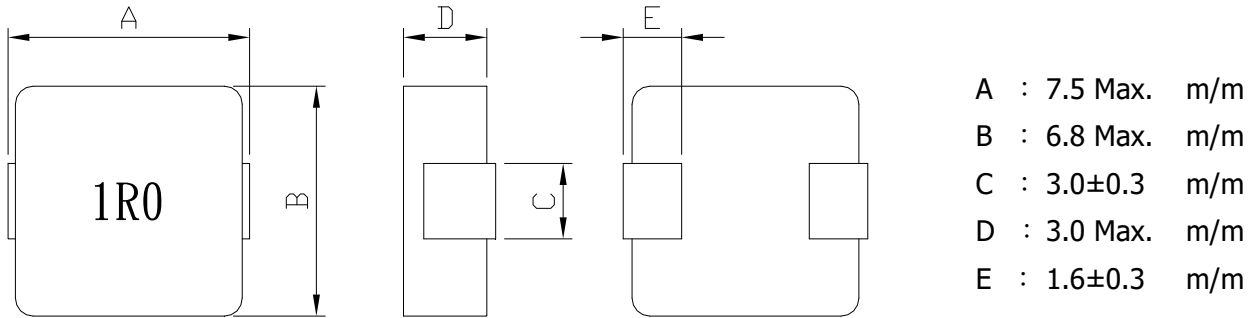
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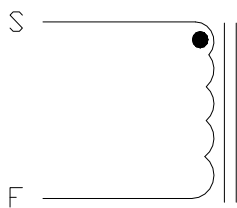
EXTERNAL DIMENSIONS :



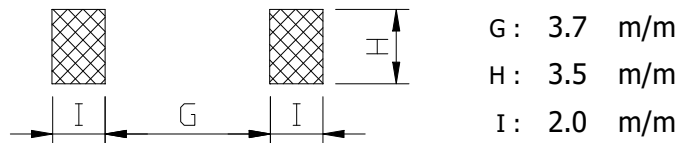
ELECTRICAL CHARACTERISTIC :

L(μ H) : 1.0±20% 100 kHz / 0.1V
 DCR(m Ω) : 10.0 Max. 9.0 Typ.
 Irms(A) : 11.0 Typ. (cause an approximately Δ T 40°C)
 Isat(A) : 22.0 Typ. (drop approximately 30% Typ.)
 Operating Temperature Range : - 55°C ~ +125°C

SCHEMATIC DRAWING :



PCB PATTERN :



"●" START FOR STAND

MATERIAL LIST :

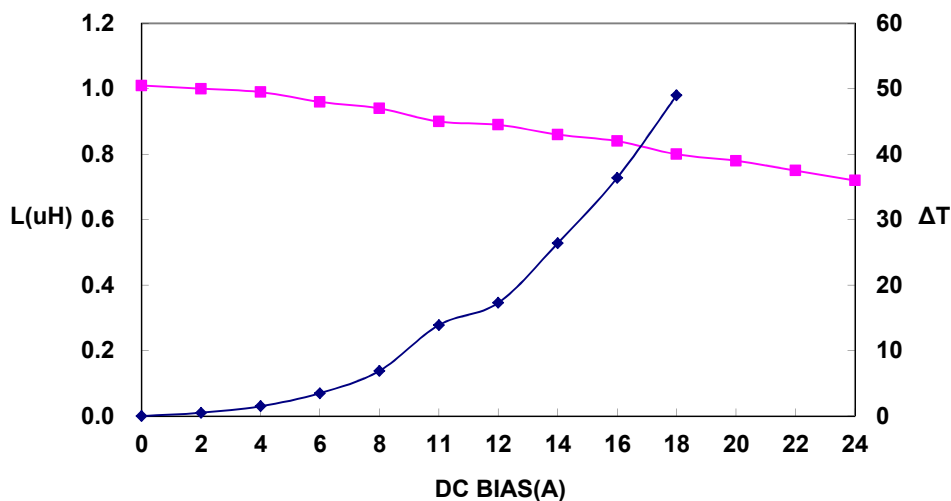
NO	ITEM	MATERIAL	SUPPLIER OF THE MATERIAL
1	CORE		
2	COPPER		
3	TERMINAL		

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TEST DATA

ELECTRICAL CHARACTERISTICS								
MEAS. ITEM	L(μ H)	DCR(m Ω)	Isat(A)	A	B	C	D	E
TEST FREQ.	100 kHz / 0.1V	Max.	Typ.	m/m	m/m	m/m	m/m	m/m
YOUR								
SPEC.	1.0 \pm 20%	10.00	11.0	7.5 Max.	6.8 Max.	3.0 \pm 0.3	3.0 Max.	1.6 \pm 0.3
1	1.020	9.48	0.770	7.19	6.62	2.91	2.76	1.59
2	0.990	9.51	0.770	7.31	6.62	2.94	2.83	1.52
3	1.000	9.47	0.750	7.24	6.62	2.92	2.83	1.54
4	0.990	9.53	0.750	7.24	6.61	2.94	2.69	1.57
5	1.020	9.71	0.770	7.22	6.63	2.93	2.82	1.60
6	1.030	9.64	0.770					
7	0.980	9.54	0.730					
8	1.020	9.68	0.770					
9	1.040	9.70	0.780					
10	1.050	9.62	0.790					
X	1.014	9.588	0.765	7.240	6.620	2.928	2.786	1.564
R	0.070	0.240	0.060	0.120	0.020	0.030	0.140	0.080

DC BIAS vs INDUCTANCE and TEMP. RISE (Δ T) :



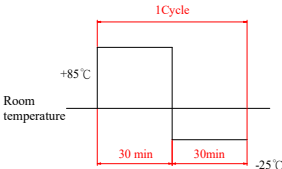


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TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS		
<u>ELECTRICAL PERFORMANCE TEST</u>				
L	REFER TO STANDARD ELECTRICAL CHARACTERISTIC LIST.	CH-1061 OR EQUIV.		
DCR		CH-502A OR EQUIV		
RATED CURRENT		APPLIED THE CURRENT TO COILS THE INDUCTANCE CHANGE SHOULD BE LESS THAN 20% TO INITIAL VALUE AND TEMPERATURE RISE SHOULD NOT BE 40°C TYPICAL		
TEMPERATURE RISE TEST		1. APPLIED THE ALLOWED DC CURRENT FOR 4 HOURS. 2. TEMPERATURE MEASURE BY DIGITAL 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.		
<u>MECHANICAL PERFORMANCE TEST</u>				
SOLDER HEAT RESISTANCE	1. INDUCTORS SHOULD HAVE NO EVIDENCE OF ELECTRICAL AND MECHANICAL DAMAGE 2. INDUCTANCE SHOULD NOT CHANGE MORE THAN ±10%	PREHEAT: 150°C 100s Max.		
VIBRATION TEST (LOW FREQUENCY)		SOLDER TEMPERATURE: 255±5°C		
		DIP TIME: 10s Max.		
SHOCK TEST	<p>1. AMPLITUDE: 1.5 mm 2. FREQUENCY: 10-55-10HZ / 1 MIN 3. DIRECTION: X, Y, Z 4. DURATION: 2 HRS/X, Y, Z</p>			
		INDUCTORS SHOULD BE DROPPED 10 TIMES FROM A HEIGHT OF 1m ONTO 3cm WOODEN BOARD.		



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<u>MECHANICAL PERFORMANCE TEST</u>				
SOLDERABILITY TEST	MORE THAN 90% OF TERMINAL ELECTRODE SHOULD BE COVERED WITH SOLDER.	PREHEAT:150°C 120x 255±5°C Max.	SOLDER BA 'DIP'	
COMPONENT ADHESION (PUSH TEST)	1.5Kg Min	THE DEVICE SHOULD BE REFLOW SOLDERED (255±5°C FOR 10 SECONDS) TO A TINNED COPPER SUBSTRATE. A DYNAMETER 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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<u>CLIMATIC TEST</u>				
TEMPERATURE CHARACTERISTIC	1.APEARANCE:NO DAMAGE 2.INDUCTANCE:WITHIN±10% OF INITIAL VALUE.	- 55°C ~ +125°C		
HUMIDITY TEST		60°C±2°C / 96±2 HOURS R.H:90-95%RH		
LOW TEMPERATURE STORAGE		1.TEMPERATURE:- 25°C±2°C 2.TIME: 96±2 HOURS		
THERMAL SHOCK TEST		1.-25±5°C FOR 30 MINUTES. +125±5°C FOR 30 MINUTES 2.TOTAL: 10 CYCLES 		
HIGH TEMPERATURE STORAGE		1.APPLIED CURRENT: MAX RATED CURRENT 2.TEMPERATURE:80°C±2°C		
NOTE : INDUCTORS ARE TO BE TESTED AFTER 2 HOUR AT ROOM TEMPERATURE.				
<u>LIFE TEST</u>				
HIGH TEMPERATURE LOAD LIFE TEST	INDUCTORS SHOULD BE NO EVIDENCE OF SHORT OR OPEN CIRCUIT	1. TEMPERATURE: 125±2°C 2. TIME: 500±12 HOURS 3. LOAD: ALLOWED DC CURREN		
HUMIDITY LOAD LIFE TEST		1. TEMPERATURE: 60±2°C 2. R.H.: 90-95% 3. TIME: 500±12 HOURS 4. LOAD: ALLOWED DC CURREN		



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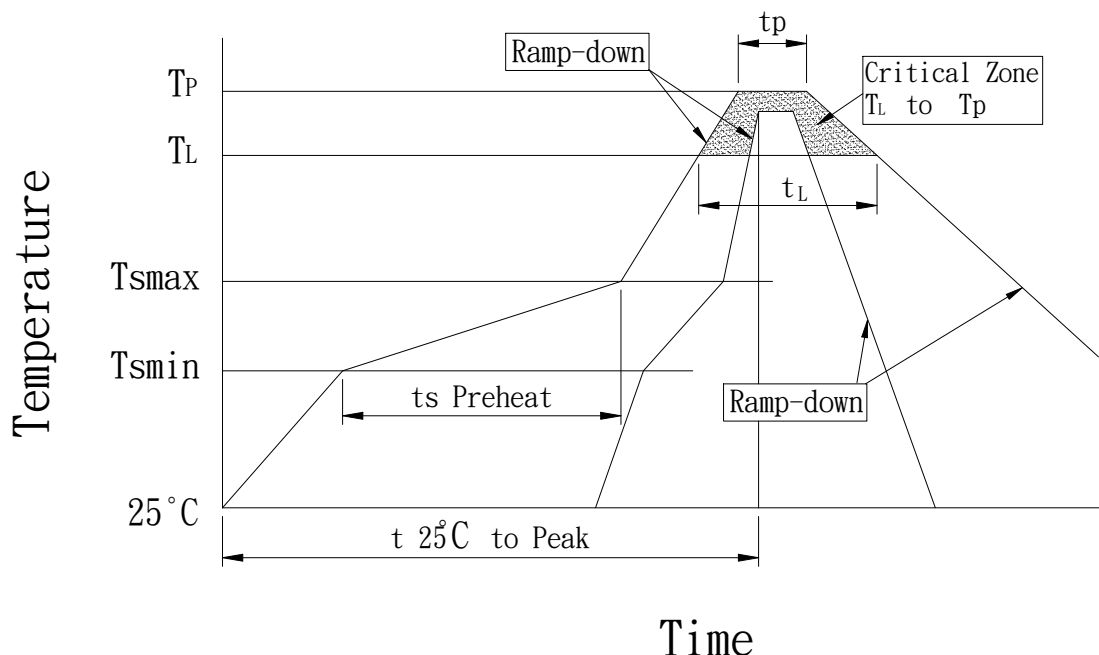
RECOMMENDED SOLDERING CONDITIONS :

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°C/second max.		3°C/second max.	
Preheat				
-Temperature Min (T _{smin})	100°C		150°C	
-Temperature Min (T _{smax})	150°C		200°C	
-Time (min to max) (ts)	60-120 seconds		60-180 seconds	
T _{smax} to T _L				
-Ramp-up Rate			3°C/second max.	
Time maintained above:				
-Temperature (T _L)	183°C		217°C	
-Time (t _L)	60-150 seconds		60-150 seconds	
Peak Temperature (T _p)	225 +0/-5°C	240 +0/-5°C	245 +0/-5°C	255 +5/-5°C
Time within 5°C of actual Peak Temperature (t _p)	10-30 seconds	10-30 seconds	10-30 seconds	20-40 seconds
Ramp-down Rate	6°C/second max.		6°C/second max.	
Time 25°C to Peak Temperature	6 minutes max.		8 minutes max.	

Note : All temperatures refer to top side of the package. Measured on the package body surface.

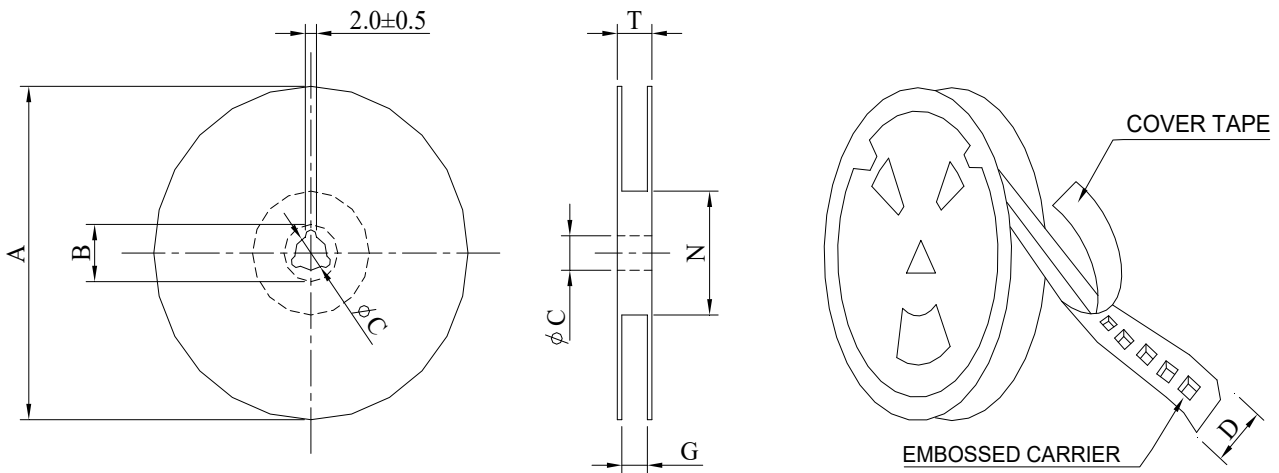
REFLOW SOLDERINGS



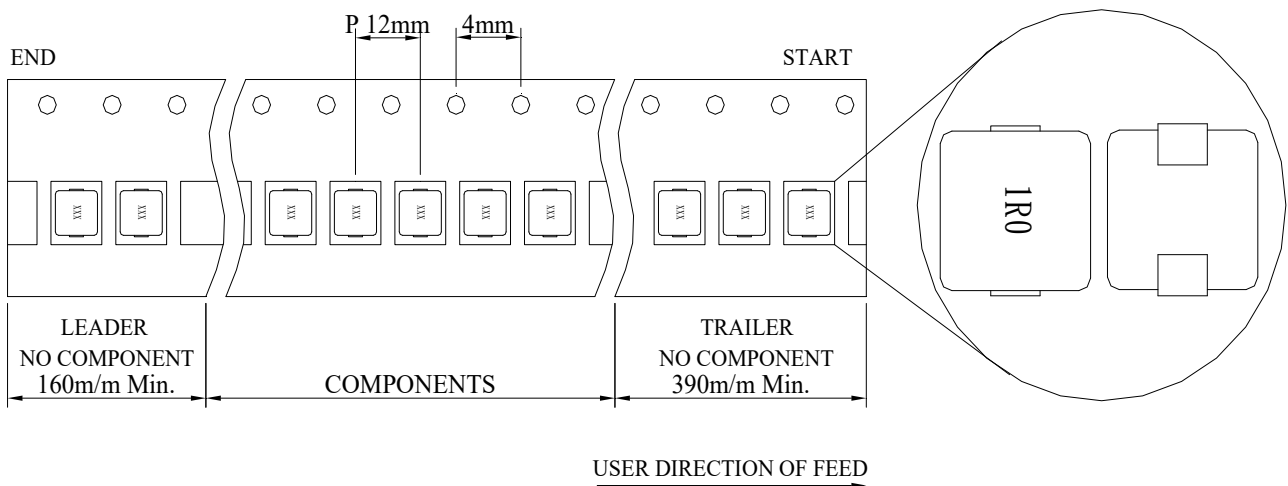


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PACKAGE :



*CARRIER TAPE WIDTH : D

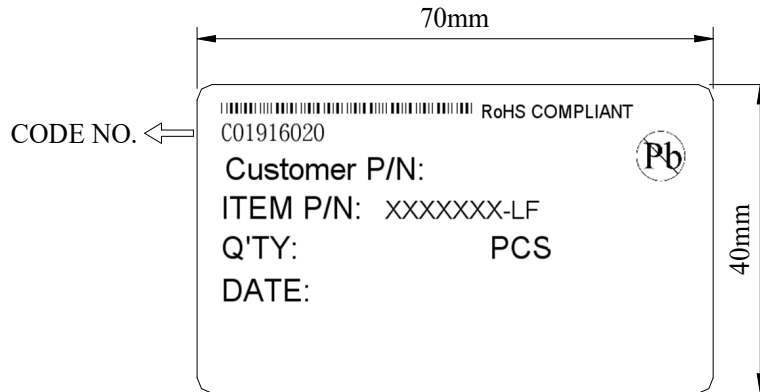


STYLE	DIMENSIONS (m/m)							
	Q'TY (PCS)	A	B±0.8	C±0.5	D	G+0	N-0	T
13	1,000	330	20	1.5	16	25	—	—

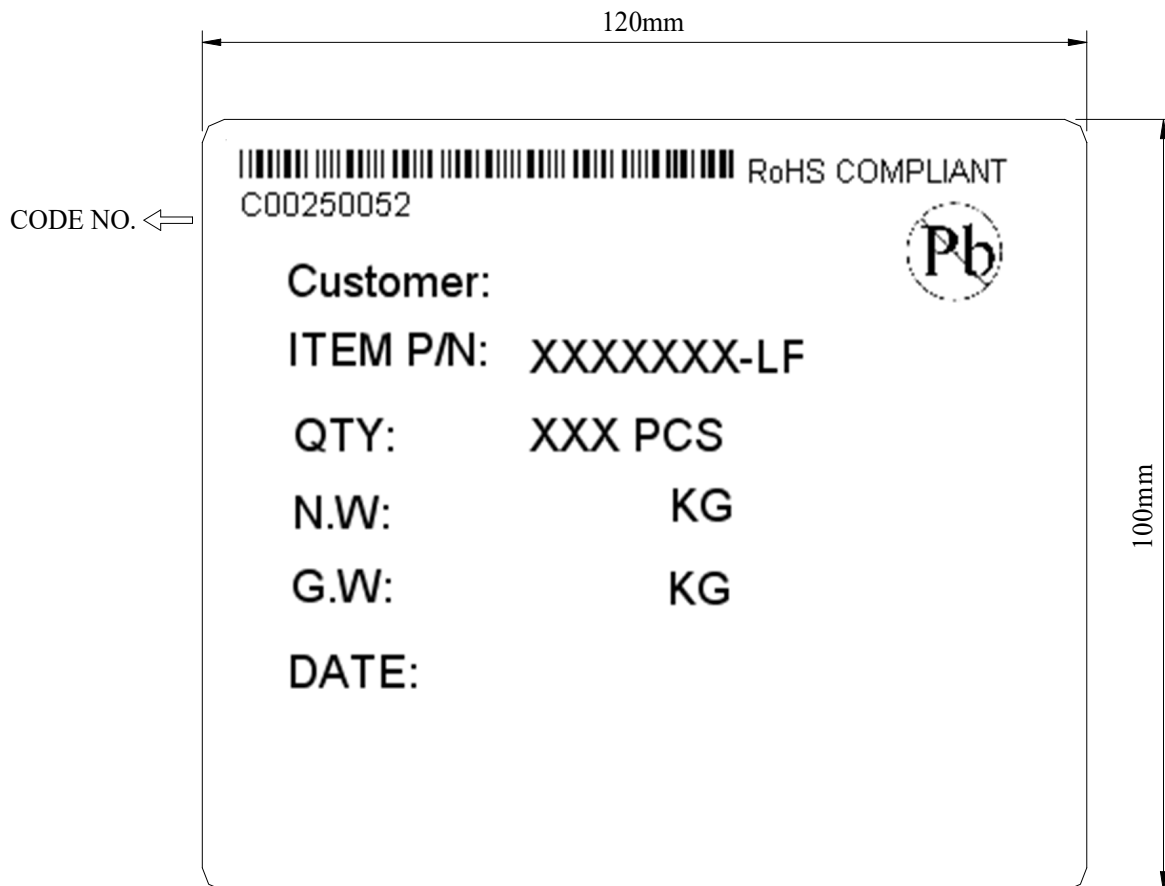


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TABLE :



INNER BOX LABEL



OUT BOX LABEL