



# Coilmaster



RoHS Compliant

## SPECIFICATION APPROVAL

CUSTOMER : Ozdisan

PRODUCT : SQH4018S-2R2N-LF

Pb-free

CODE NO. : C03040028

CUS. CODE :

SPEC.NO. : C-3040-028(01)

DATE : 22-Nov-12

CUSTOMER APPROVAL

### **Coilmaster Electronics Co., Ltd.**

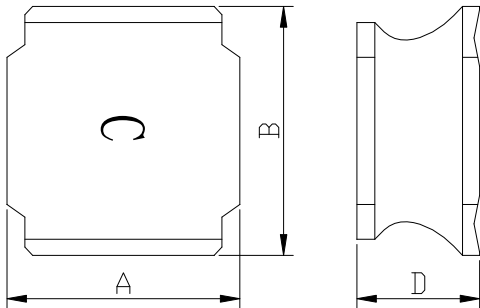
3F ,NO.211 HUAN BEI ROAD, CHUNG-LI DISTRICT  
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PREPARED BY	APPROVED BY	AUTHORIZED BY
JEAN	TONY	MASCOT

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**EXTERNAL DIMENSIONS :**

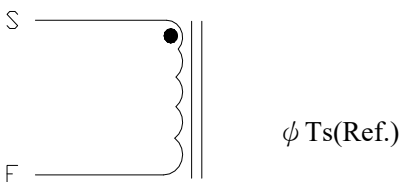


A : 4.2 Max. m/m  
 B : 4.2 Max. m/m  
 D : 1.8 Max. m/m

**ELECTRICAL CHARACTERISTIC :**

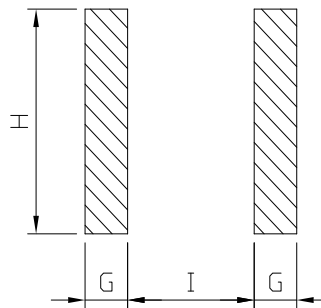
L(μH) : 2.2±30% 100KHz 1V  
 DCR(Ω) : 0.072 Max.  
 Isat(A) : 2.70 Max. ( L2.7A MAX ≥ 0Ax70% )  
 INDUCTANCE DROP : 30% Typ. @ IDC 2.7 A  
 Irms(A) : 1.44 Max.  
 Operating Temperature Range : -40°C ~ +105°C

**SCHEMATIC DRAWING :**



"●" START FOR STAND

**PCB PATTERN :**



G : 1.2 m/m  
 H : 3.7 m/m  
 I : 1.6 m/m

**MATERIAL LIST :**

NO	ITEM	MATERIAL	SUPPLIER OF THE MATERIAL
1			
2			
3			
4			

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**TEST DATA**

ELECTRICAL CHARACTERISTICS							
MEAS. ITEM	L(μH)	DCR(Ω)	Isat(A)				
TEST FREQ.	100KHz 1V	Max.	Max.				
YOUR			L(2.7A)				
SPEC.	2.2±30%	0.072	≥ 0Ax70%				
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
X	#DIV/0!	#DIV/0!	#DIV/0!				
R	0.00	0.00	0.00				

DIMENSION							
MEAS. ITEM	A	B	C	D			
TEST FREQ.	m/m	m/m	m/m	m/m			
YOUR							
SPEC.	4.2 Max.	4.2 Max.		1.8 Max.			
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
X	#DIV/0!	#DIV/0!		#DIV/0!			
R	0.00	0.00		0.00			

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TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS
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**ELECTRICAL PERFORMANCE TEST**

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 30% TO INITIAL VALUE AND TEMPERATURE RISE SHOULD NOT BE MORE THAN 40°C..
TEMPERATURE RISE TEST	40°C MAX ( $\Delta t$ )	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.

**MECHANICAL PERFORMANCE TEST**

SOLDER HEAT RESISTANCE	1. INDUCTORS SHOULD HAVE NO EVIDENCE OF ELECTRICAL AND MECHANICAL DAMAGE 2. INDUCTANCE SHOULD NOT CHANGE MORE THAN $\pm 10\%$ 3. SOLDER MATERIAL WILL BE LEAD FREE.	PREHEAT: 150°C 60SECS  SOLDER TEMPERATURE: 255 $\pm$ 5°C FLUX: ROXIN.. DIP TIME: 10 $\pm$ 0.5SECS
VIBRATION TEST (LOW FREQUENCY)		
SHOCK TEST		1. AMPLITUDE: 1.5 mm 2. FREQUENCY: 10-55-10HZ / 1 MIN 3. DIRECTION: X, Y, Z 4. DURATION: 2 HRS/X, Y, Z  INDUCTORS SHOULD BE DROPPED 10 TIMES FROM A HEIGHT OF 1m ONTO 3cm WOODEN BOARD.

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**MECHANICAL PERFORMANCE TEST**

SOLDERABILITY TEST	MORE THAN 90% OF TERMINAL ELECTRODE SHOULD BE COVERED WITH SOLDER.	<p>AFTER FLUXING, INDUCTOR SHALL BE DIPPED IN A MELTED SOLDER BATH AT 255±5°C FOR 5 SECONDS</p>
COMPONENT ADHESION ( PUSH TEST )	1.5Kg Min	<p>THE DEVICE SHOULD BE REFLOW SOLDERED ( 255±5°C FOR 10 SECONDS ) TO A TINNED COPPER SUBSTRATE. A DYNAMOMETER 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 . ATTACHED TO COMPONENT.</p>
COMPONENT ADHESION ( PULL TEST )	1.5Kg Min	<p>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</p>
FLEXTURE STRENGTH	THE FORCES APPLIED SHOULD NOT DAMAGE THE DIELECTRIC.	<p>SOLDER A CHIP ON A TEST SUBSTRATE, BEND THE SUBSTRATE BY 2mm AND RETURN.</p>
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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**CLIMATIC TEST**

TEMPERATURE CHARACTERISTIC	1.APEARANCE:NO DAMAGE  2.INDUCTANCE:WITHIN±10% OF INITIAL VALUE.	- 40°C ~ +105°C	
HUMIDITY TEST		60°C±2°C / 96±2 HOURS	
LOW TEMPERATURE STORAGE		1.TEMPERATURE:- 25°C±2°C 2.TIME: 96±2 HOURS	
THERMAL SHOCK TEST		1.-25±5°C FOR 30 MINUTES. +80±5°C FOR 30 MINUTE 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.

**LIFE TEST**

HIGH TEMPERATURE LOAD LIFE TEST	INDUCTORS SHOULD BE NO EVIDENCE OF SHORT OR OPEN CIRCUIT	1. TEMPERATURE: 80±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

**COILMASTER ELECTRONICS CO., LTD.**

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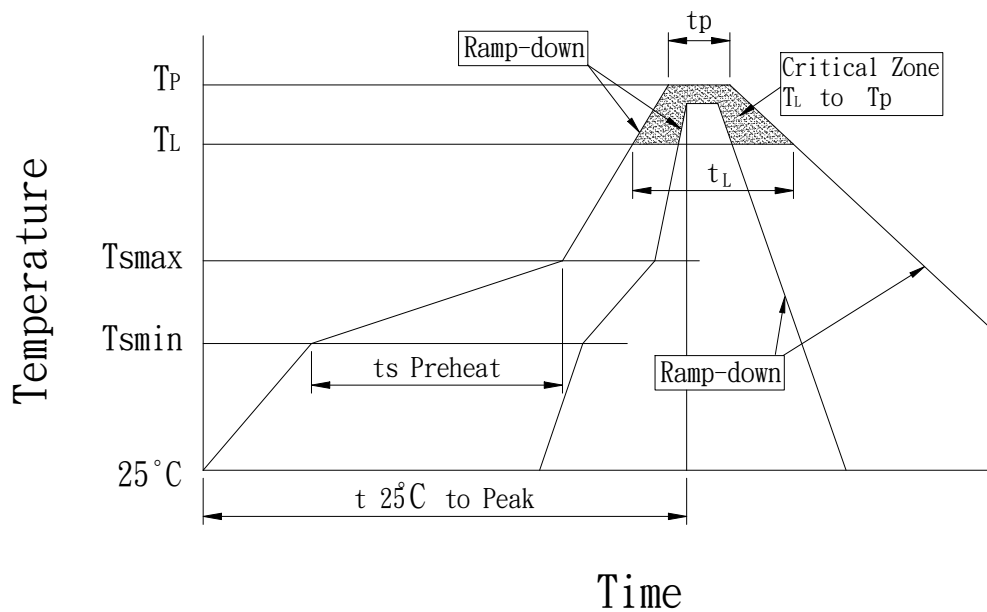
**RECOMMENDED SOLDERING CONDITIONS :**

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 ( $T_{s_{min}}$ )	100°C		150°C	
-Temperature Min ( $T_{s_{max}}$ )	150°C		200°C	
-Time (min to max) (ts)	60-120 seconds		60-180 seconds	
$T_{s_{max}}$ 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.	

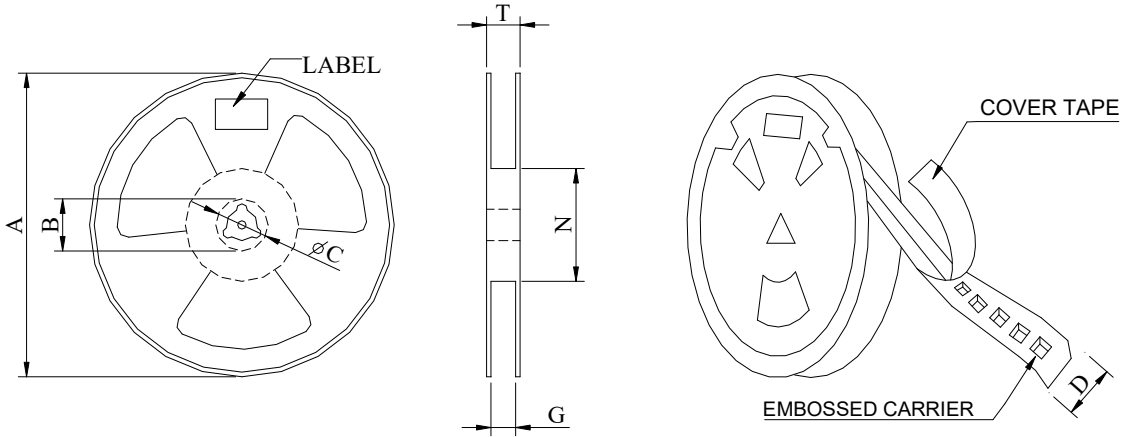
Note : All temperatures refer to topside of the package. Measured on the package body surface.

REFLOW SOLDERINGS

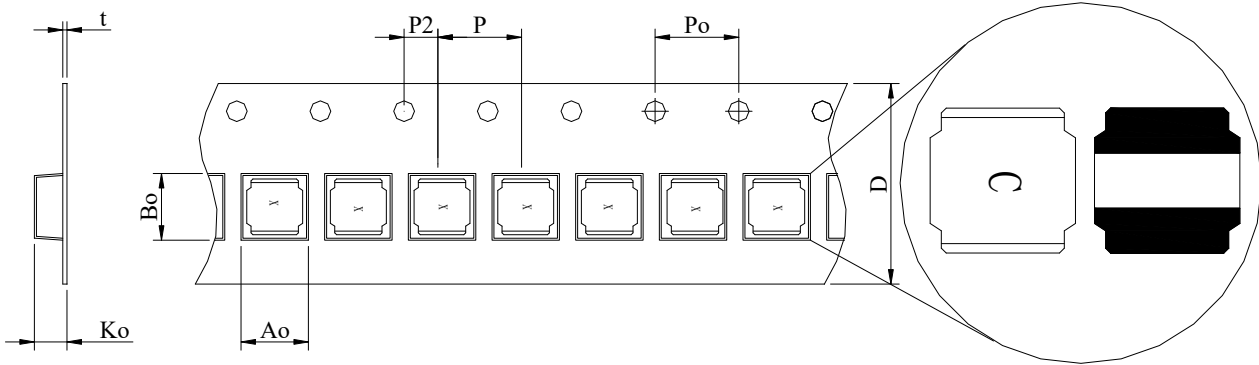


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**PACKAGE :**



\*CARRIER TAPE WIDTH : D



STYLE	DIMENSIONS (m/m)														
	Q'TY (PCS)	A	B	C	D	G	N	T	Ao	Bo	Ko	t	P	Po	P2
330	3500	330	—	2.0 ±0.5	12 ±0.3	13.5 ±1.0	80 ±2.0	—	4.3 ±0.1	4.3 ±0.1	2.1 ±0.1	0.3 ±0.1	8.0 ±0.1	—	—



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**TABLE :**

