SHIELDED SMD POWER INDUCTORS

SMC1409 SERIES

1. PART NO. EXPRESSION :

S M C 1 4 0 9 R 5 6 Y Z F

(a) (b) (c) (d)(e)(f)

(a) Series code

(b) Dimension code

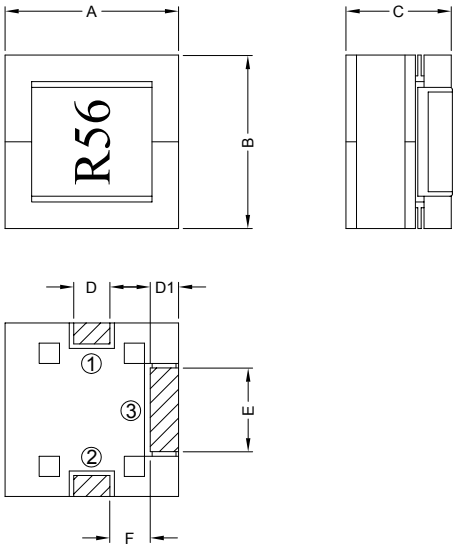
(c) Inductance code : R56 = 0.56uH

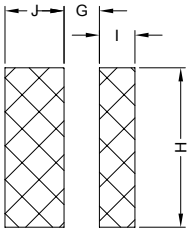
(d) Tolerance code : M = ±20%, Y = ±30%

(e) X, Y, Z : Standard part

(f) F : Lead Free

2. CONFIGURATION & DIMENSIONS :



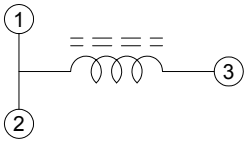


PCB Pattern

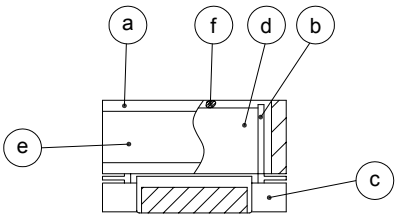
Unit:m/m

A	B	C	D	D1	E	F	G	H	I	J
14.70±0.30	15.00±0.30	9.50±0.30	4.00±0.30	2.00±0.30	8.00±0.30	4.00±1.00	3.00 Ref.	13.50 Ref.	3.00 Ref.	5.00 Ref.

3. SCHEMATIC :



4. MATERIALS :



(a) Core : EPC Ferrite Core

(b) Bobbin : Phenolic

(c) Base : Phenolic

(d) Wire : Copper Foil

(e) Tape : Mylar Tape

(f) Adhesive : Epoxy

(g) Varnish : 8562/C

Pb

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NOTE : Specifications subject to change without notice. Please check our website for latest information.

09.06.2008

SUPERWORLD ELECTRONICS (S) PTE LTD

5. GENERAL SPECIFICATION :

a) Temp. rise : 40°C Max. at rated current

b) Rated Current : Base on temp. rise & ΔL/L0A = 25% Max.

c) Storage temp. : -40°C to +125°C

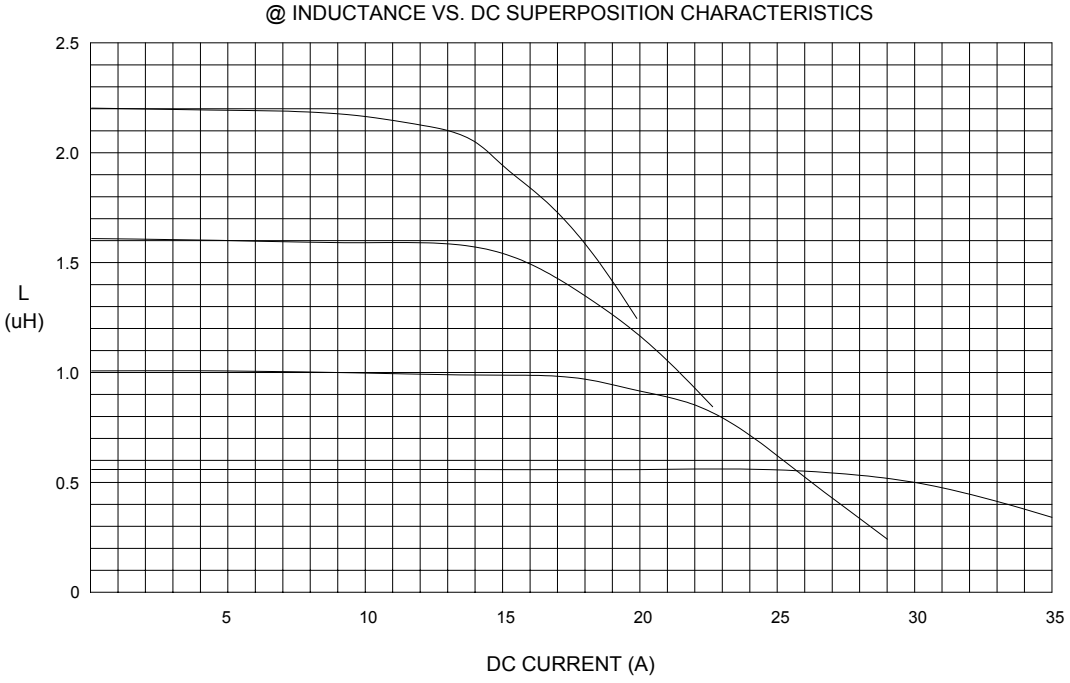
d) Operating temp. : -40°C to +85°C

e) Resistance to solder heat : 260°C.10 secs

6. ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (μH)	Test Frequency (Hz)	RDC (mΩ) Max.	IDC (A)
SMC1409R56YZF	0.56±30%	1V/100K	1.00	30
SMC14091R0MZF	1.00±20%	1V/100K	1.35	22
SMC14091R6MZF	1.60±20%	1V/100K	1.70	18
SMC14092R2MZF	2.20±20%	1V/100K	2.35	15

7. CHARACTERISTICS CURVES :



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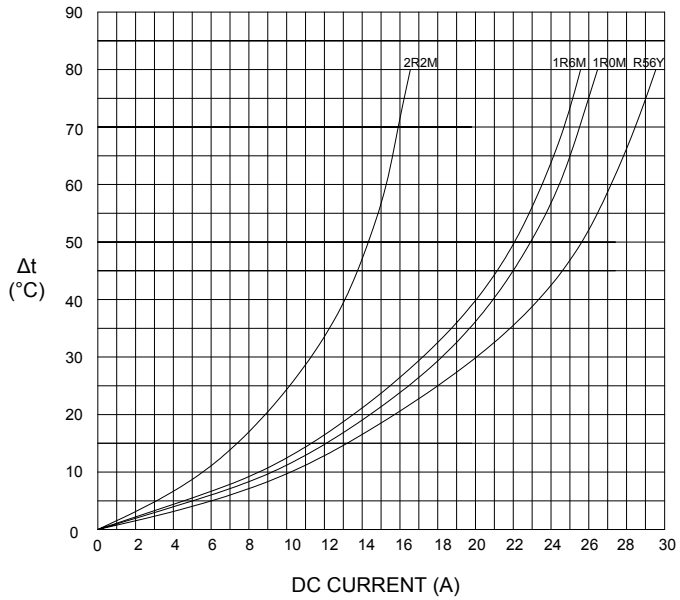
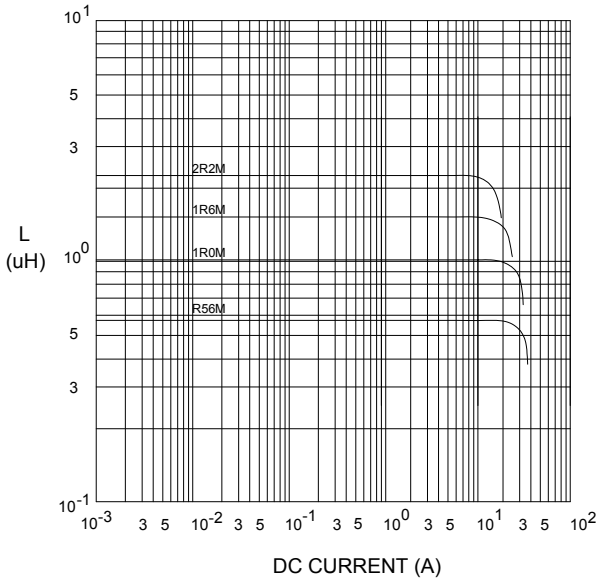
7. CHARACTERISTICS CURVES :

@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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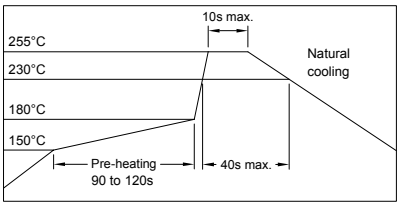
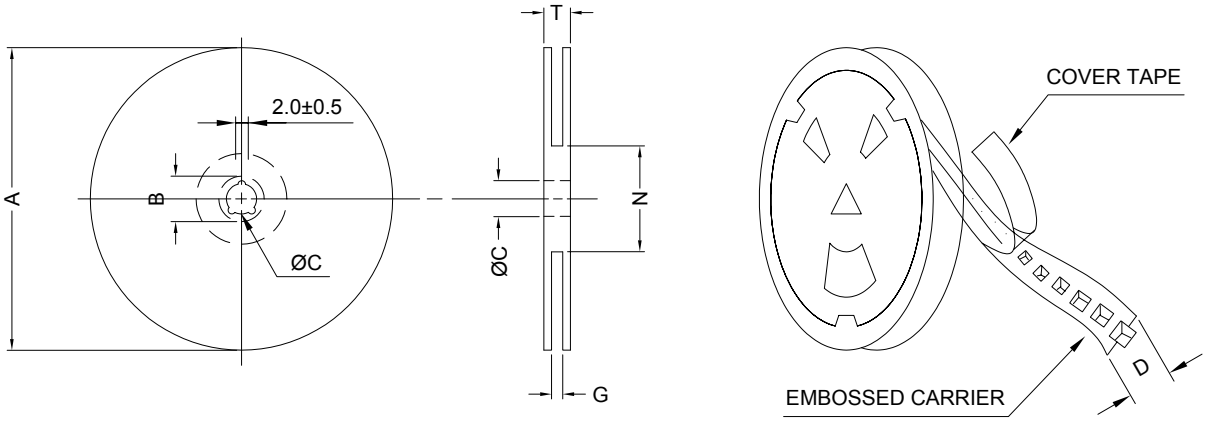
RECOMMENDED SOLDERING CONDITIONS
REFLOW SOLDERINGS

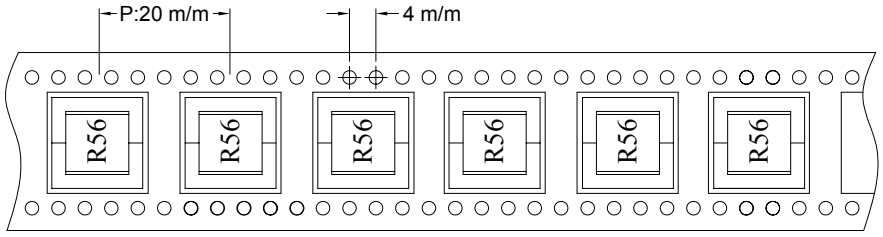


8. PACKAGING INFORMATION :

(1) CONFIGURATION



* CARRIER TAPE WIDTH : D



(2) DIMENSIONS

Unit:m/m

STYLE	A	B	C	D	G	N	T
13-32	330	21±0.8	13±0.5	32	34 $^{+0}$	100 $^{-0}$	38.4

(3) Q'TY & G.W. PER PACKAGE

SERIES	INNER : REEL			OUTER : CARTON		
	Q'TY (PCS)	G.W. (gw)	STYLE	Q'TY (PCS)	G.W. (Kg)	SIZE (cm)
SMC1409	350	1750	13-32	1400	10.5	40 x 40 x 26

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9. RELIABILTY AND TEST CONDITION :

TEST ITEM	SPECIFICATION	TEST CONDITION
SOLDERABILITY	MORE THAN 90% OF THE TERMINAL ELECTRODE SHALL BE COVERED WITH FRESH SOLDER.	PREHEAT : 125±25°C FOR 60 SECONDS SOLDER : 99%Sn/0.3%Ag/0.7%Cu OR EQUIVALENT SOLDER TEMP. : 245±5°C FLUX : ROSIN DIP TIME : 4±1 SECONDS
THERMAL SHOCK TEST (TEMP. CYCLE)	INDUCTANCE SHALL NOT CHANGE MORE THAN ±20%	ROOM TEMP. (15 MINUTES) → -25±2°C (30 MINUTES) ROOM TEMP. (15 MINUTES) → 85±2°C (30 MINUTES) TOTAL : 50 CYCLES
HUMIDITY RESISTANCE TEST		TEMPERATURE : 40±2°C HUMIDITY : 90 ~ 95% APPLIED CURRENT : PER SPEC. TIME : 500 HOURS
HIGH TEMP. RESISTANCE TEST		TEMPERATURE : 85±2°C APPLIED CURRENT : PER SPEC. TIME : 500 HOURS

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10. UL CARD :

OANZ2 March 15, 1999
Insulating Tape-Component

FOUR PILLARS ENTERPRISE CO LTD E50292
443 TAO YING RD, TAOYUAN 33009 TAIWAN

Flame retardant polyvinyl chloride tape, Cat. No. 33047+.
Polyethylene-Terephthalate film insulating tape with acrylic adhesive, Cat. No. 35660*@,355660y*b. rated 130C.
Flame retardant double sided acrylic tape, Cat. No. DS31+.
Aramie "Nomex"paper tape, Cat. No. NM130* rated 155C.
Glass cloth backing with silicone adhesive, Cat. No. GL06* rated 180C.
Glass cloth backing with acrylic adhesive, Cat. No. GL15* rated 155C.
Glass cloth backing with rubber adhesive, Cat. No. GL27* rated 130C.
Polyethylene - Terephalate film insulating tape with acrylic adhesive. Cat. No. MY130# Rated 130 C.
Polyesterfilm insulating tape with silicone base adhesive, Cat. No. KA180°rated 180C.
Polyimide film insulating tape with silicone base adhesive, Cat. No. KA180* rated 200 C.
Acetate cloth backing with rubber base adhesive, Cat. No. ACO* rated 130 C.
Polyethylene-Terephthalate film insulating tape with acrylic adhesive, Cat. No.35661$ Rated 130 C.
Aluminum/polyester tape, Cat No. PAN1* rated 80 C.

6/17/1999 Underwriters Laboratories Inc. Card 1 of 3

QMFZ2 January 15, 1991
Component-Plastics

SUMITOMO BAKELITE CO LTD E41429 (M)

(11-cont. from I card)

PM-9630	BK	0.40	94V-0	150	150	150	—	—	—	—	—
		0.51	94V-0	150	150	150	0	0	—	—	—
		3.18	94V-0	150	150	150	0	1	0	4	3
PM-8315	BK	0.50	94V-0	150	150	150	3	0	0	—	—
PM-8315J	BN	0.71	94V-0	150	150	150	2	0	0	—	—
		1.47	94V-0	150	150	150	0	2	0	—	—
		3.05	94V-0	150	150	150	0	1	0	5	4
		6.10	94V-0	150	150	150	0	1	0	5	4
PM-8315K	BK	0.78	94V-1	150	150	150	—	—	—	—	—
		1.52	94V-0	150	150	150	—	—	—	—	—
PM-8320J	BK	0.71	**94HB**	150	150	150	—	—	—	—	—
PM-8330	BK	0.71	94V-1	150	150	150	—	—	—	—	—
		1.57	94V-0	150	150	150	—	—	—	—	—
PM-8400	BK	0.71	**94HB**	150	150	150	—	—	—	—	—
PM-9830	BK	0.69	94V-0	150	150	150	0	0			
		3.18	94V-0	150	150	150	0	0	0	4	3

Reports: March 29, 1985: May 14, 1974: September 16, 1971: September 16, 1971: September 16, 1971: September 16, 1971: March 29, 1985.

Replaces E4142911 dated February 28, 1990. (Cont. on J card)
683540014 N7047 Underwriters Laboratories Inc. ® D11/0043416

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