

# SHIRUI

Version: 1.0

## SPECIFICATION FOR APPROVAL

RoHS  
COMPLIANT

ITEM P/N	SR0450-R40M	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

**CUSTOMER :** \_\_\_\_\_

**CUSTOMER P/N :** \_\_\_\_\_

**DESCRIPTION :** SMD INDUCTOR

**Supplier P/N :** SR0450-R40M

**REVISION NO. :** V1.0

**DATE :** 2014-Apr-25

**NOTES :** STANDARD

### CUSTOMER APPROVAL

Supplier DOCUMENTED

APPROVED James Hu

CHECKED Una Wu

PREPARED Irina Li

company seals

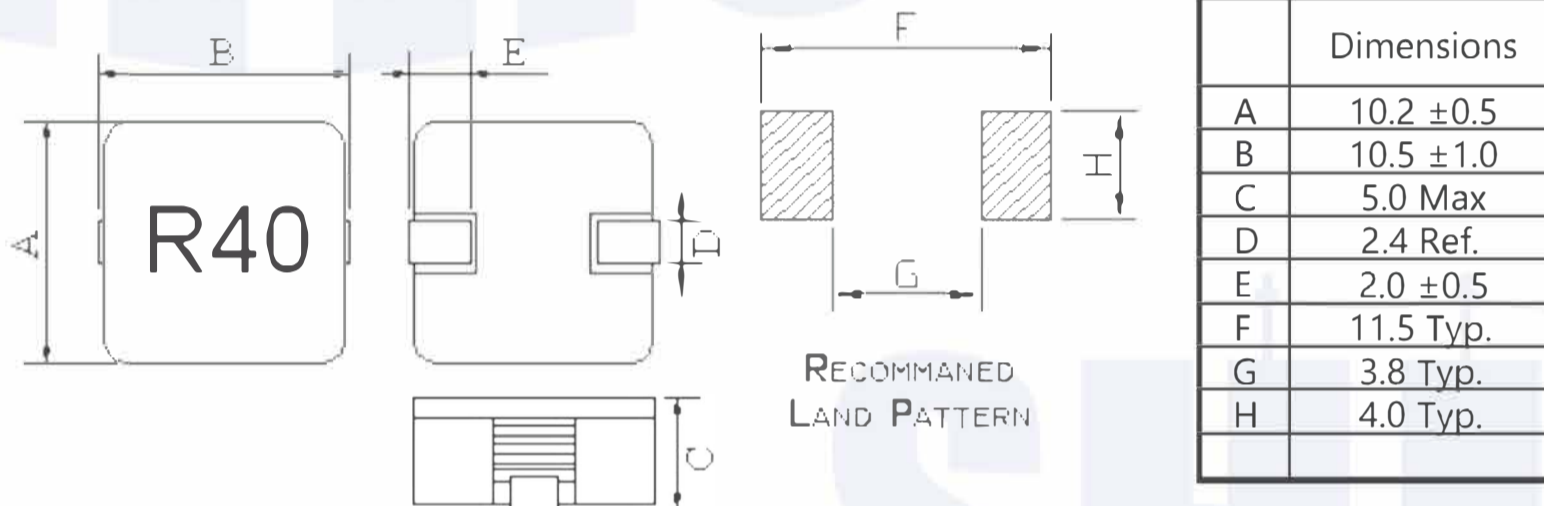
Version: 1.0

## COIL SPECIFICATION

RoHS  
COMPLIANT

ITEM P/N	SR0450-R40M	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

### PACKING DIMENSIONS (mm)



### EXPLANATION OF PART NUMBERS



### ELECTRICAL CHARACTERISTICS

ITEM P/N	@ 25 ± 5°C Ambient Temperature			DCR mΩ @ 25°C Typical	DCR mΩ @ 25°C MAX
	INDUCTANCE 100KHz, 1.0V	Typical Heat Rating DC Current (A) (I <sub>dc</sub> )	Typical Saturation DC Current (A) (I <sub>sat</sub> )		
	Lo (□H)				
SR0450-R40M	0.4 ±20%	24	37	0.67	0.74

- © All test Data is referenced to 25°C ambient.
- © Typical Heat Rating DC Current would cause an approximately ΔT of 50°C.
- © Typical Saturation DC Current would cause Lo to drop approximately 30%.
- © The Part temperature (ambient + ΔT) should not exceed 125°C under worst case operating conditions.
- © Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.

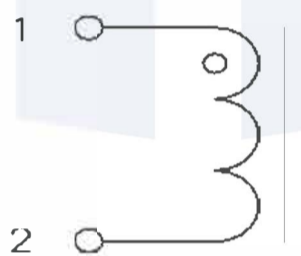
Version: 1.0

## CHARACTERISTICS

**RoHS  
COMPLIANT**

ITEM P/N	SR0450-R40M	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

### CONNECTIONS

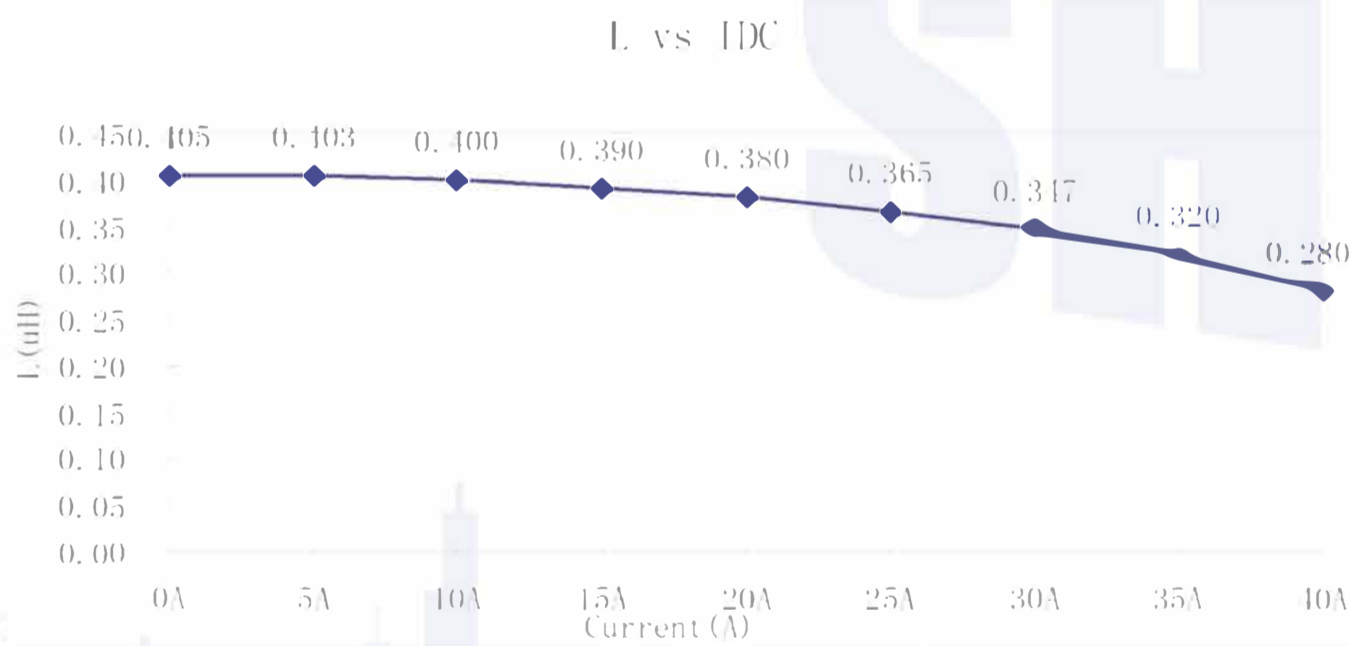


### MARKING

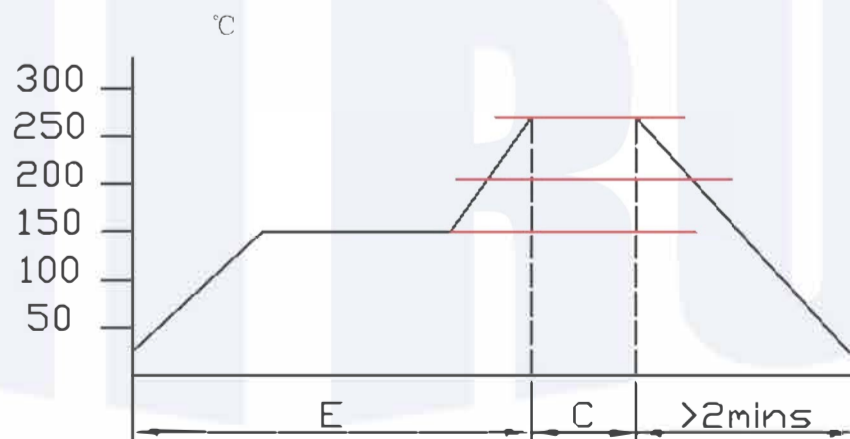


- ⊙ Inductor Contents ONE (1) Set(s) of Coil
- ⊙ DC/AC Current Shall Be Introduced By Any One of Two Pads

### PERFORMANCE CURVES



### RECOMMENDED SOLDERING TEMP. GRAPH



A	260°C
B	230°C
C	10 Sec
D	150°C
E	60~240 Sec

Version: 1.0

## CHARACTERISTICS

RoHS  
COMPLIANT

ITEM P/N	SR0450-R40M	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

### MECHANICAL RELIABILITY

TEST	Specification & Requirement	Method Used
Solderability	The surface of terminal/pin tested shall be covered with new solder by 95%	Solder heat proof: Preheating: 180 ±10°C 90 seconds Soldering: 255 ±5°C for 3 ±1 sec
Shock	Inductance change within ± 5% Without mechanical damage	Drop down with 981m/s <sup>2</sup> (100G) shock Attitude upon a rubber block method shock testing machinem, 3 tests.
Vibration	Inductance change within ± 5% Without mechanical damage	Vibration frequency: 10Hz to 55Hz to 10Hz 60 seconds cycle Vibration time: 2 hours

### ENDURANCE RELIABILITY

TEST	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25°C, (30 mins) -> room temp. (5 mins) -> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 85°C ambient Duration: 1000 hrs
Humidity Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 60°C ambient Humidity: 90~95% Duration: 1000 hrs
Low Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. -25 ±2°C for total 1,000 +4/-0 hours
High Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. 125 ±2°C for total 1,000 +4/-0 hours

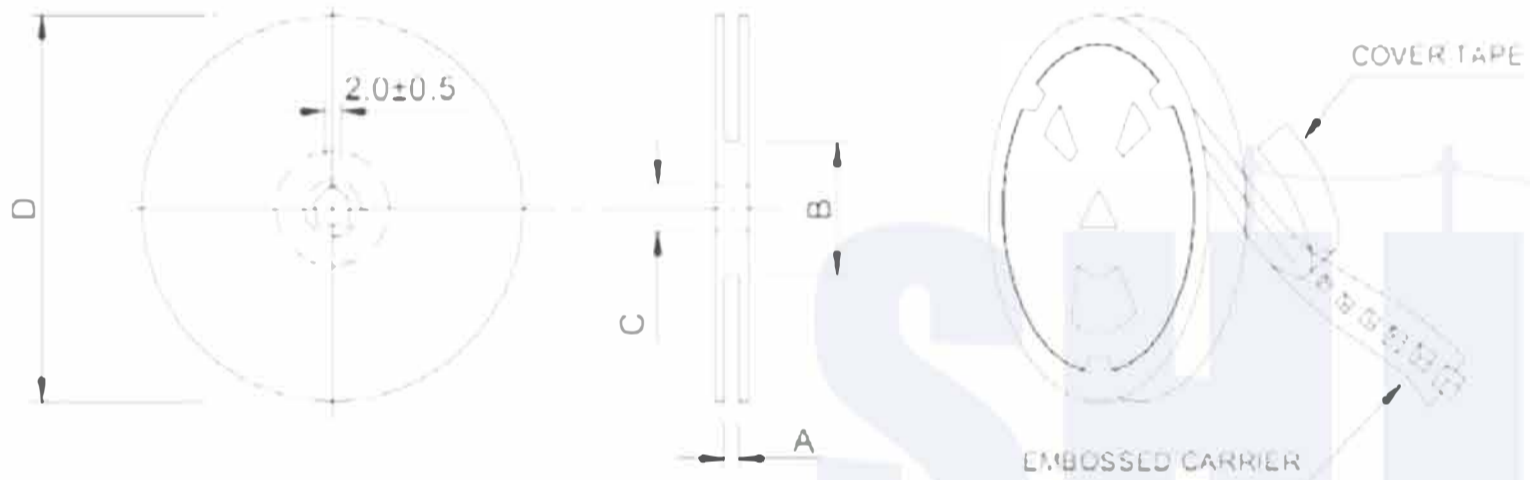
Version: 1.0

## PACKING FOR SMD

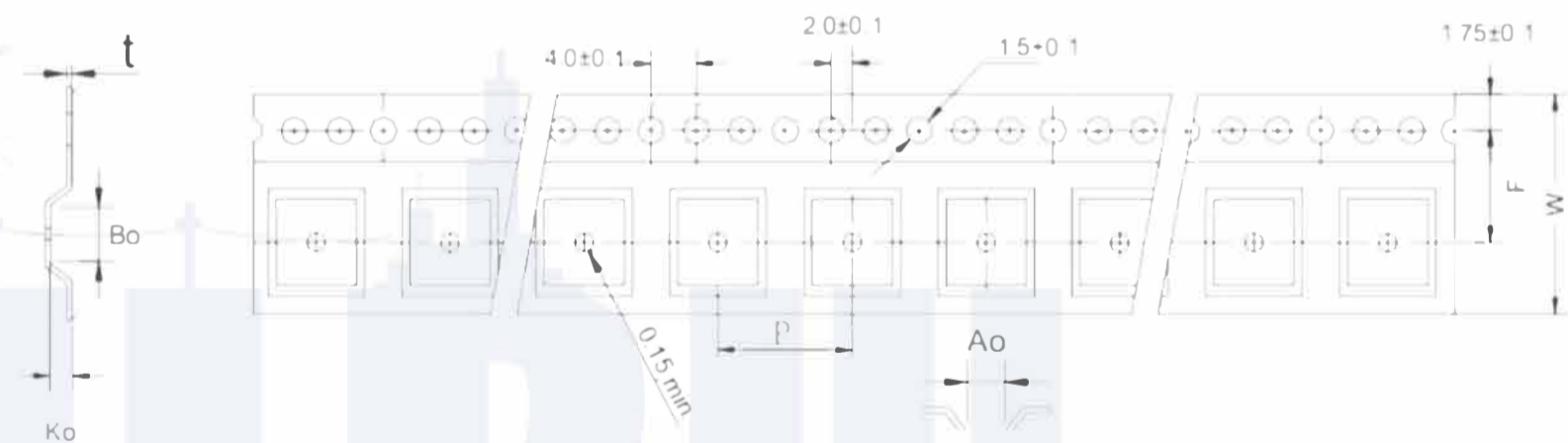
RoHS  
COMPLIANT

ITEM P/N	SR0450-R40M	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

CARRIERTAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT : (mm)



TYPE	A(mm)	B(mm)	C(mm)	D(mm)
13''*24mm	24.0±0.5	100±2	13.5±0.5	330



TYPE	QTY.	Ao	Bo	Ko	W	P
S0450	800	10.7	11.5	5.2	24	20

800PCS/REEL

Page: 4

Version: 1.0

## PACKING FOR SMD

RoHS  
COMPLIANT

ITEM P/N	SR0450-R40M	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

### TEST DATA

SPEC No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	DCR Max(mΩ)	INDUCTANCE	
	10.2 ±0.5	10.5 ±1.0	5.0 Max	2.4 Ref	2.0 ±0.5		L(0)(uH)	37 A L(0A)-30%
1	10.18	10.48	4.91	2.45	1.89	0.68	0.40	PASS
2	10.19	10.49	4.92	2.46	1.95	0.68	0.41	PASS
3	10.18	10.51	4.93	2.43	1.96	0.69	0.42	PASS
4	10.19	10.52	4.92	2.44	2.05	0.68	0.41	PASS
5	10.20	10.45	4.93	2.42	2.15	0.69	0.39	PASS
6	10.22	10.46	4.95	2.45	2.06	0.68	0.38	PASS
7	10.21	10.44	4.93	2.42	2.12	0.69	0.39	PASS
8	10.18	10.43	4.92	2.39	1.96	0.68	0.40	PASS
9	10.19	10.51	4.91	2.40	2.08	0.68	0.41	PASS
10	10.22	10.45	4.92	2.42	2.03	0.69	0.39	PASS
$\bar{X}$	10.20	10.47	4.92	2.43	2.03	0.68	0.40	
R	0.04	0.09	0.04	0.07	0.26	0.01	0.04	

© All test Data is referenced to 25°C ambient