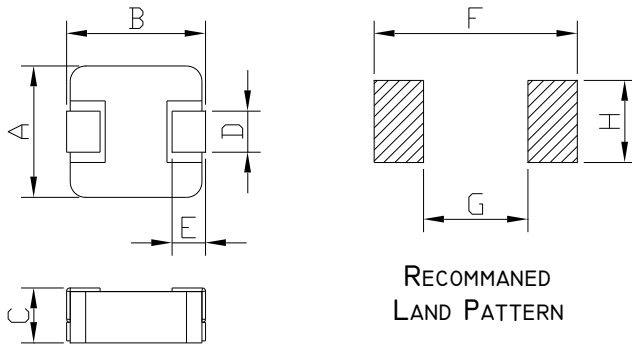


ITEM P/N	ESPA-0503-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

PACKING DIMENSIONS (mm)

ESPA 0503	Dimensions
A	5.2 ± 0.3
B	5.4 ± 0.3
C	3.0 MAX
D	2.2 ± 0.3
E	1.2 ± 0.2
F	5.99 Typ
G	2.2 Typ
H	2.5 Typ

EXPLANATION OF PART NUMBERS

1	2	3	4	5	6	7	8	9	10	11	12		
E	S	P	A	-	0	5	0	3	-	1	R	0	M
<u>Serial Codes</u>			<u>Size</u>				<u>Inductance Code</u>						

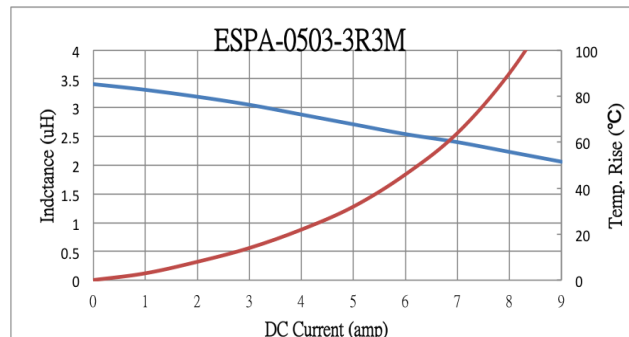
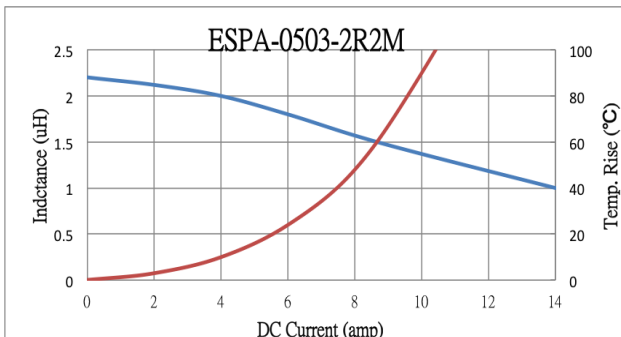
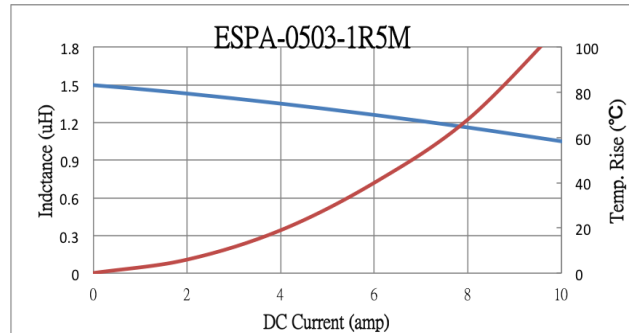
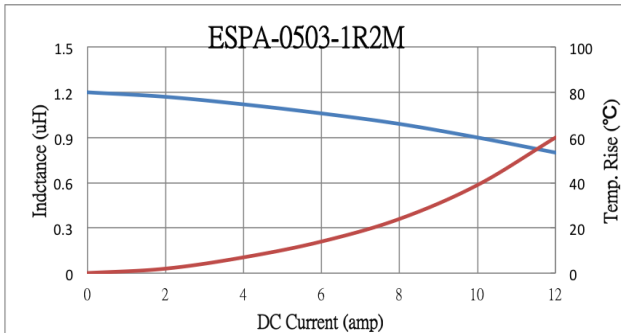
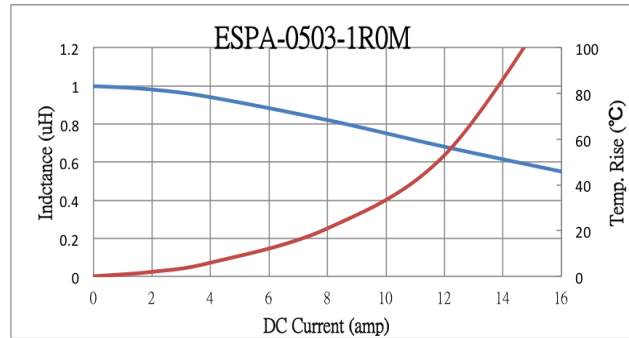
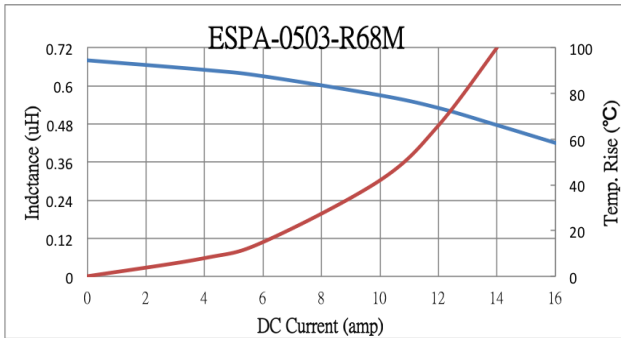
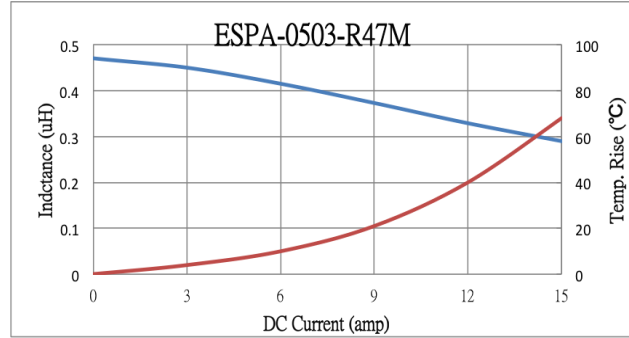
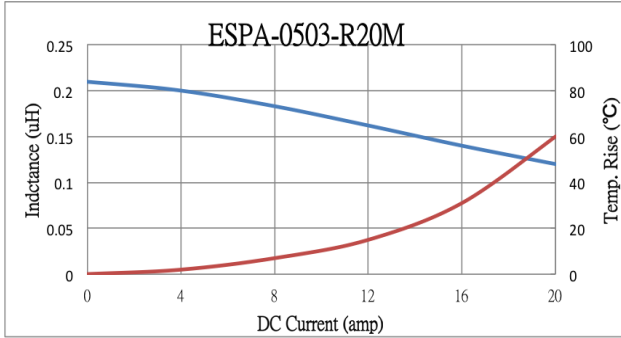
ELECTRICAL CHARACTERISTICS

P/N	L0 Inductance μH ±20% @0A	DCR (mΩ)		Heat Rating Current	Saturation Current
		[Typical]	[Max]	Idc (AMP) Typical	Isat (AMP) Typical
ESPA-0503-R20M	0.20	3.5	3.9	18.0	14.5
ESPA-0503-R47M	0.47	7.4	8.5	13.5	12.0
ESPA-0503-R68M	0.68	11.0	12.0	8.5	14.0
ESPA-0503-1R0M	1.00	13.0	14.0	7.0	11.0
ESPA-0503-1R2M	1.20	15.0	16.0	6.5	11.0
ESPA-0503-1R5M	1.50	20.0	25.0	6.0	8.5
ESPA-0503-2R2M	2.20	25.0	29.0	5.5	7.5
ESPA-0503-3R3M	3.30	32.0	38.0	5.0	6.0
ESPA-0503-4R7M	4.70	50.0	60.0	3.5	5.0
ESPA-0503-6R8M	6.80	75.0	90.0	3.0	4.0
ESPA-0503-100M	10.00	110.0	125.0	2.5	3.5

- ⊙ All test Data is referenced to 25°C ambient
- ⊙ Typical Heat Rating DC Current would cause an approximately ΔT of 40°C
- ⊙ Typical Saturation DC Current would cause Lo to drop approximately 30%
- ⊙ Operation Temperature Range : -25°C ~ 125°C
- ⊙ 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.

ITEM P/N	ESPA-0503-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

PERFORMANCE CURVES

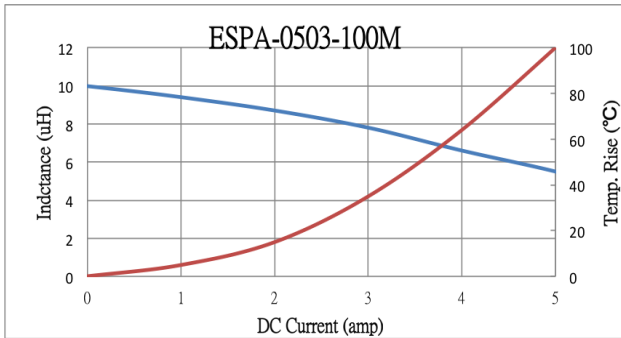
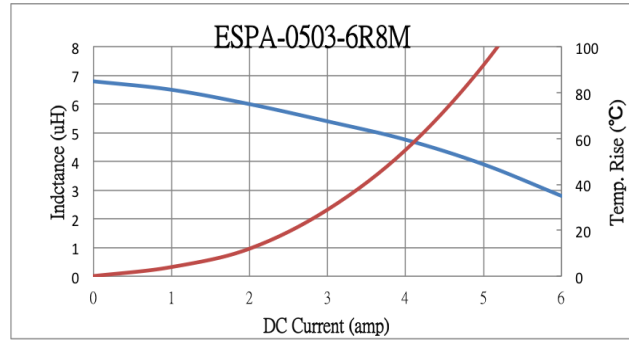
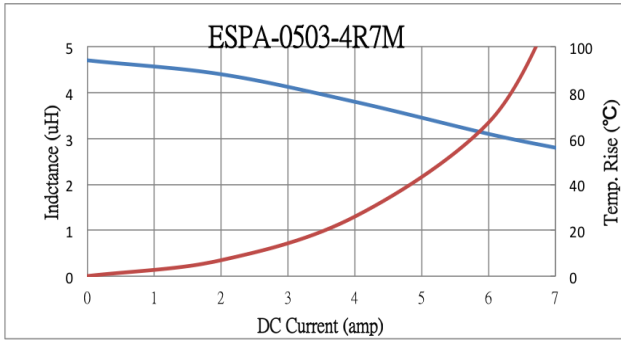


CHARACTERISTICS

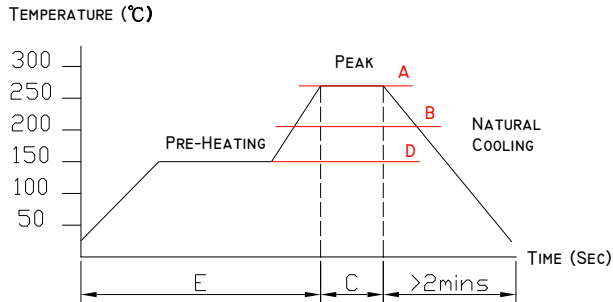
**RoHS
COMPLIANT**

ITEM P/N	ESPA-0503-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

PERFORMANCE CURVES



ITEM P/N	ESPA-0503-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

RECOMMENDED SOLDERING TEMP. GRAPH

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

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 ² (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

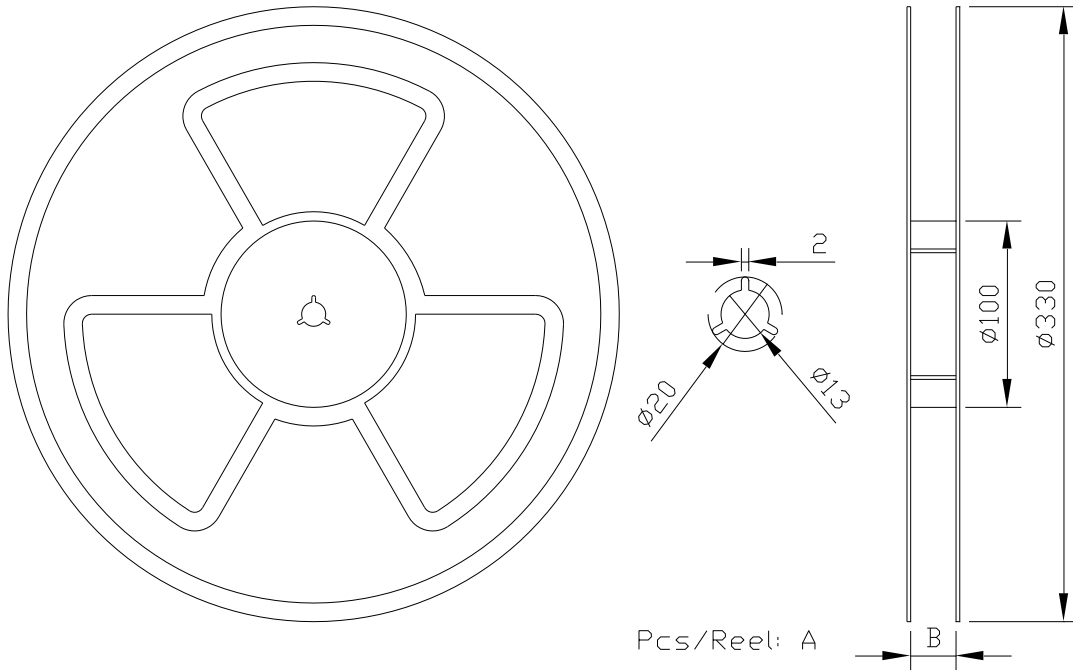
TEST	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25°C, (30 mins) -> room temp. (5 mins) -> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 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

PACKING FOR SMD

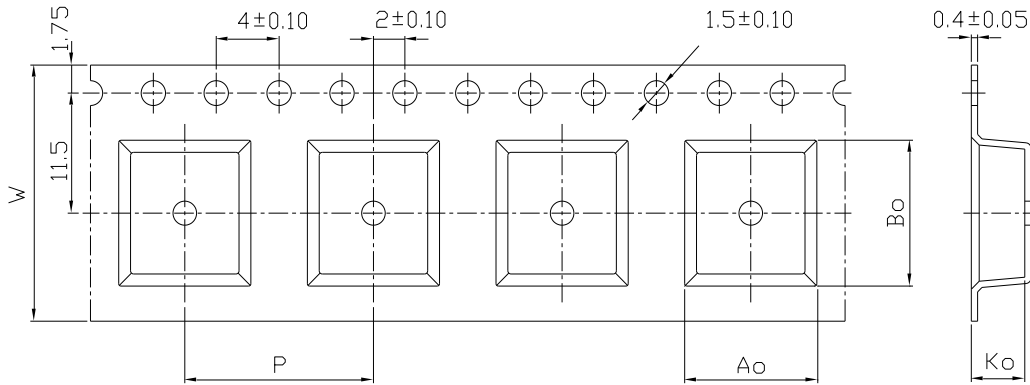
**RoHS
COMPLIANT**

ITEM P/N	ESPA-0503-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

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



A	B	Ao	Bo	Ko
2000	12.5	5.7 ± 0.1	5.9 ± 0.1	3.6 ± 0.1



W	P
12	8

Typical Pulling Force:

100 grams

