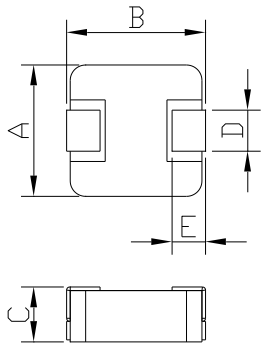
Version: A1.0

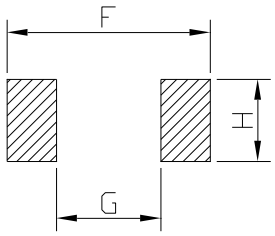
COIL SPECIFICATION

RoHS COMPLIANT

ITEM P/N	ESPA-0518-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

PACKING DIMENSIONS (mm)





RECOMMANED
LAND PATTERN

ESPA 0518	Dimensions
A	5.2 ± 0.3
B	5.4 ± 0.3
C	1.8 MAX
D	2.2 ± 0.3
E	1.2 ± 0.3
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	1	8	- 1	R	0	M
	Serial Codes				Size				Inductance Code		

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-0518-R47M	0.47	7.6	8.5	11.0 / 10.0	16.0 / 15.5
ESPA-0518-R56M	0.56	8.0	10.0	10.0 / 9.5	15.5 / 15.0
ESPA-0518-R68M	0.68	12.0	14.0	9.0 / 8.0	13.0 / 11.2
ESPA-0518-1R0M	1.00	15.0	18.0	8.5 / 7.5	10.0 / 8.6
ESPA-0518-1R2M	1.20	17.0	20.0	7.5 / 6.5	9.5 / 8.0
ESPA-0518-1R5M	1.50	23.0	28.0	6.2 / 5.5	9.0 / 7.2
ESPA-0518-2R2M	2.20	30.0	35.0	5.2 / 4.7	7.0 / 6.0
ESPA-0518-3R3M	3.30	45.0	52.0	4.7 / 4.5	5.5 / 4.8
ESPA-0518-4R7M	4.70	70.0	81.0	3.5 / 3.2	4.5 / 3.9
ESPA-0518-6R8M	6.80	103.0	125.0	2.9 / 2.6	3.6 / 3.4
ESPA-0518-8R2M	8.20	131.0	145.0	2.6 / 2.4	3.5 / 3.0
ESPA-0518-100M	10.00	139.0	154.0	2.5 / 2.3	3.3 / 2.8

- All test Data is referenced to 25℃ ambient
- Typical Heat Rating DC Current would cause an approximately △T of 40℃
- Typical Saturation DC Current would cause Lo to drop approximately 30%
- Operation Temperature Range : -25℃ ~ 125℃
- The Part temperature (ambient + △T) should not exceed 125℃ 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.

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CHARACTERISTICS

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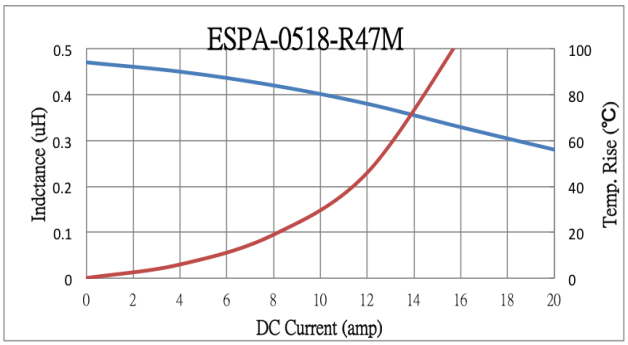
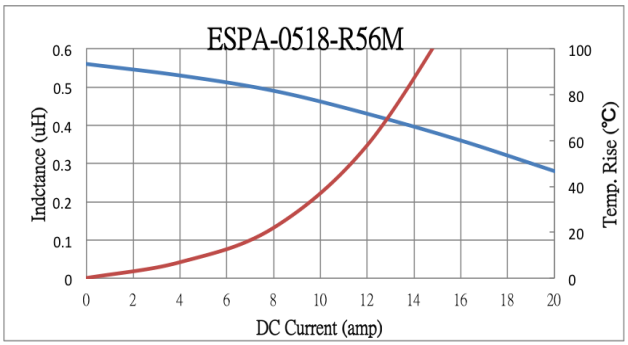
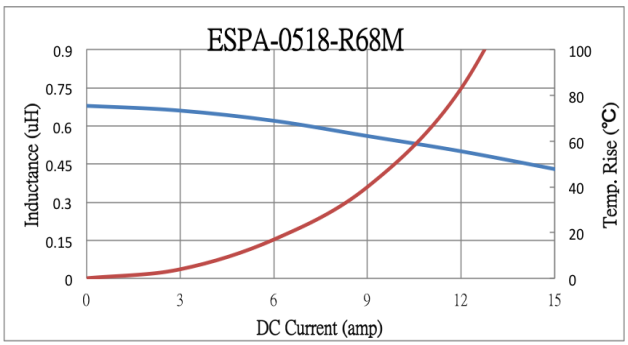
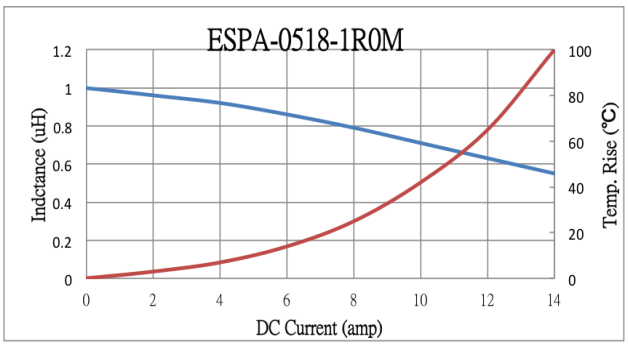
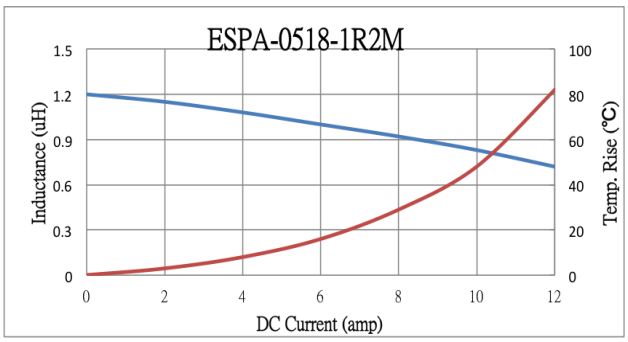
PERFORMANCE CURVES

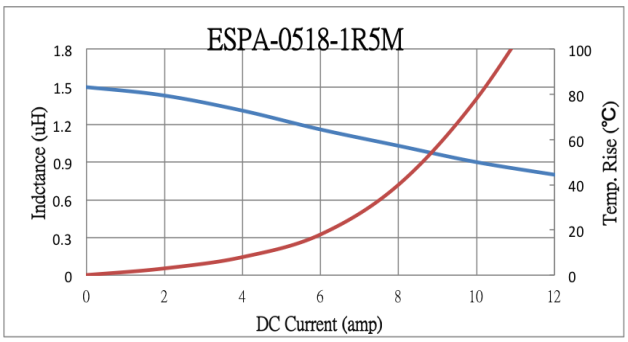


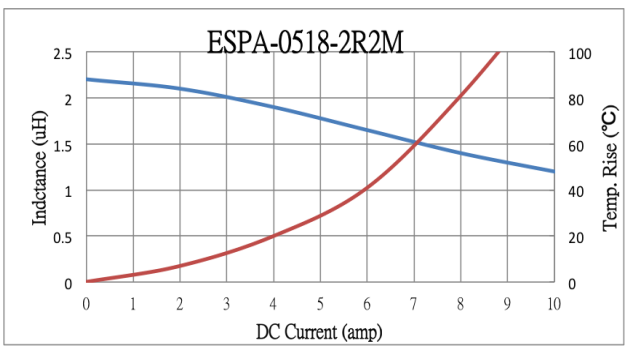


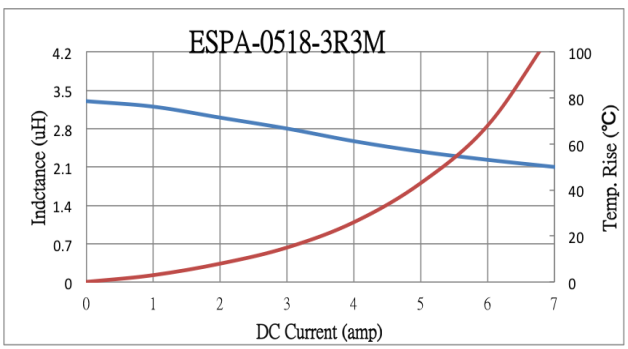












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CHARACTERISTICS

RoHS COMPLIANT

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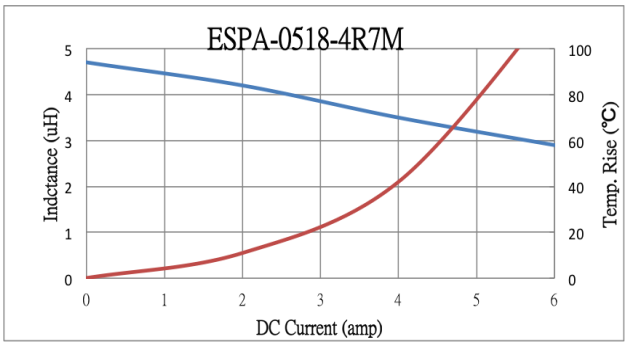
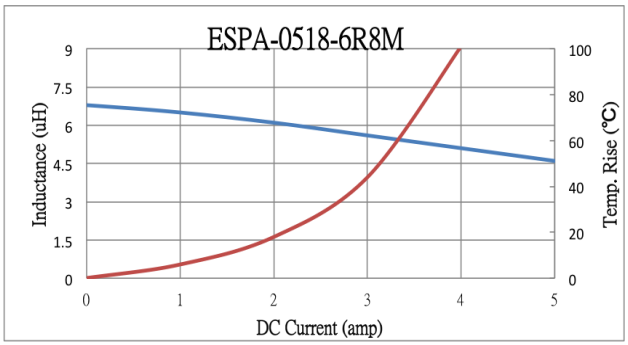
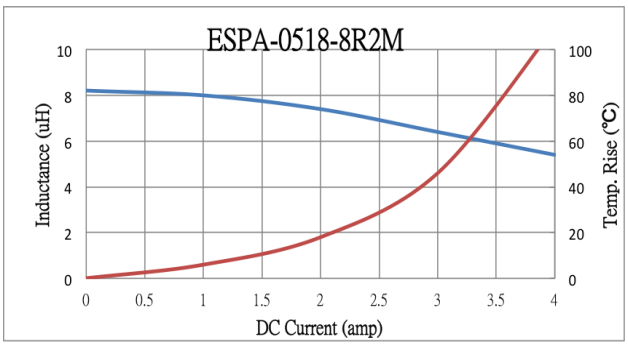
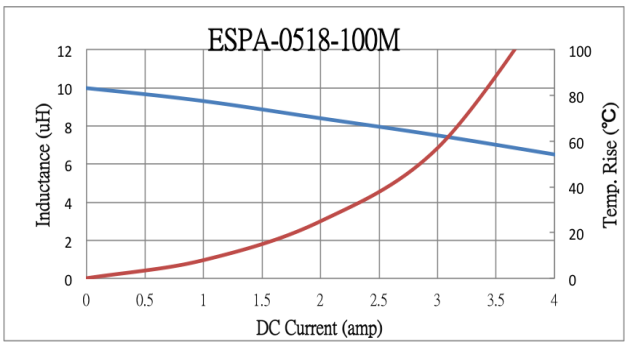
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

PERFORMANCE CURVES









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CHARACTERISTICS

RoHS COMPLIANT

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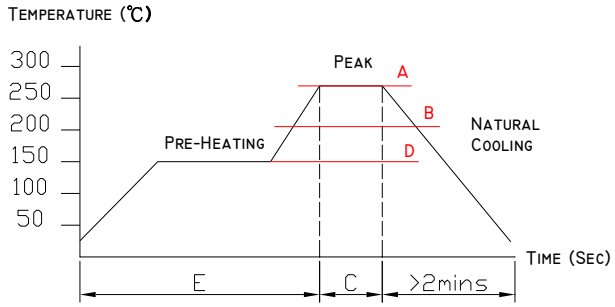
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

RECOMMENDED SOLDERING TEMP. GRAPH



A	260℃
B	230℃
C	10 Sec
D	150℃
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℃ 90 seconds Soldering: 255 ±5℃ for 3 ±1 sec
Shock	Inductance change within ± 5% Without mechanical damage	Drop down with 981m/s2 (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℃, (30 mins) -> room temp. (5 mins) -> 125℃, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 85℃ ambient Duration: 1000 hrs
Humidity Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 60℃ ambient Humidity: 90~95% Duration: 1000 hrs
Low Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. -25 ±2 ℃ for total 1,000 +4/-0 hours
High Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. 125 ±2 ℃ for total 1,000 +4/-0 hours

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PACKING FOR SMD

RoHS COMPLIANT

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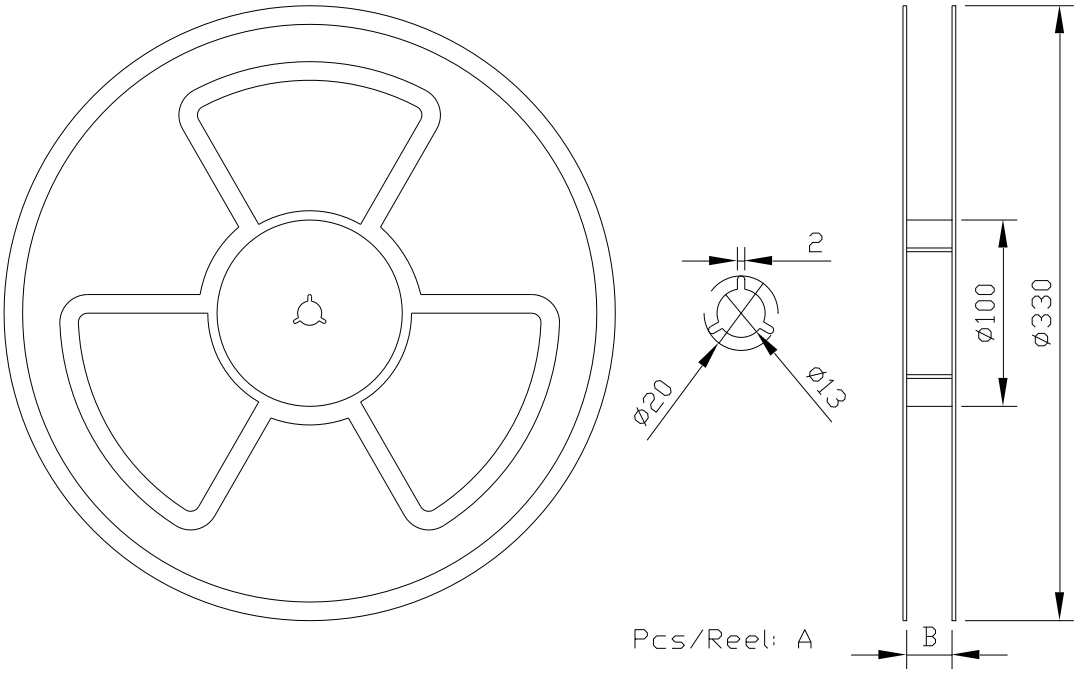
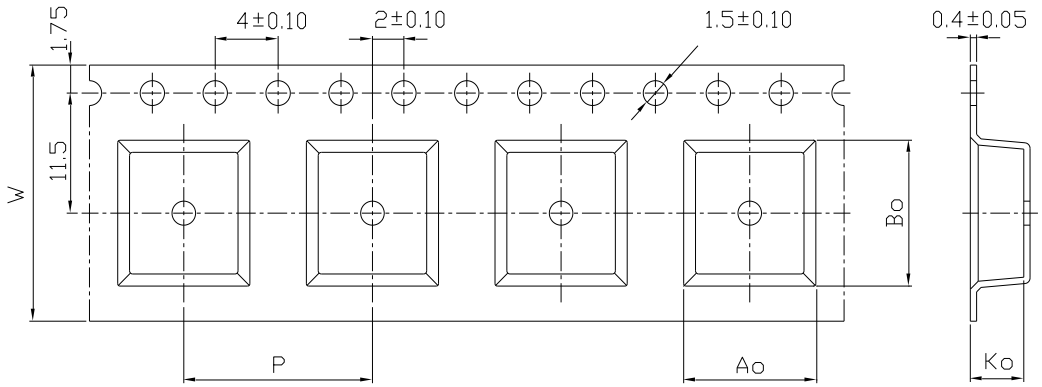
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

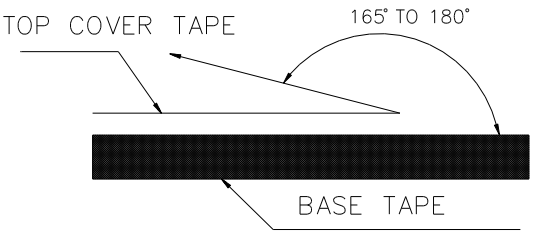
CARRIERTAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT : (mm)



A	B	Ao	Bo	Ko
2000	12.5	5.7 ± 0.1	5.9 ± 0.1	2.3 ± 0.1



W	P
12	8



Typical Pulling Force:

100 grams

HUNG TRON

HUNGTRON TECHNOLOGY Co.,Ltd.