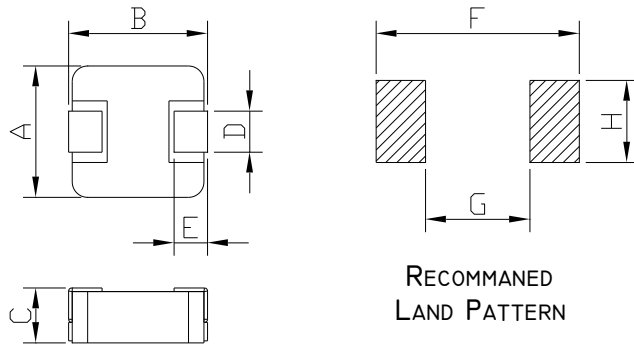


ITEM P/N	ESPA-0402-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

**PACKING DIMENSIONS (mm)**

ESPA 0402	Dimensions
A	4.05 ± 0.25
B	4.45 ± 0.25
C	2.0 MAX
D	1.5 ± 0.3
E	0.8 ± 0.3
F	4.95 Typ
G	2.15 Typ
H	2.3 Typ

**EXPLANATION OF PART NUMBERS**

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

**ELECTRICAL CHARACTERISTICS**

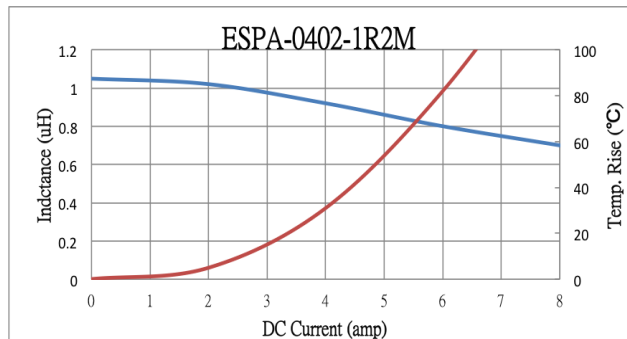
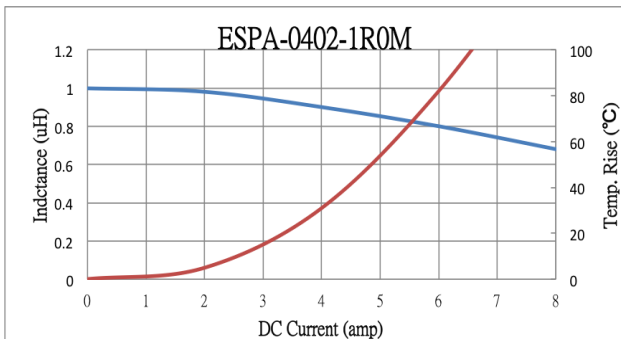
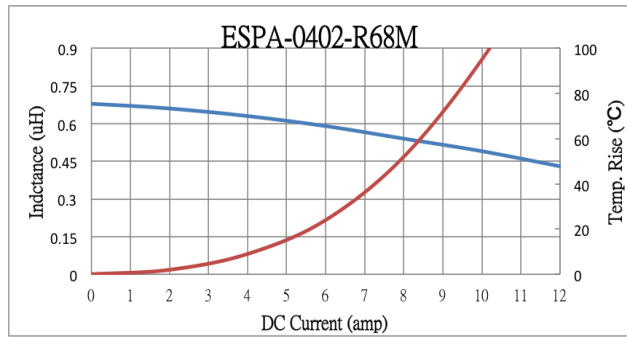
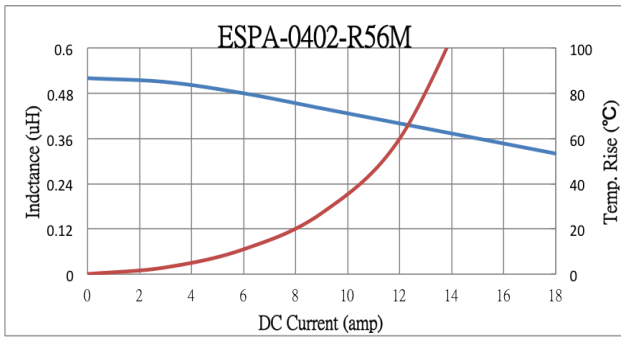
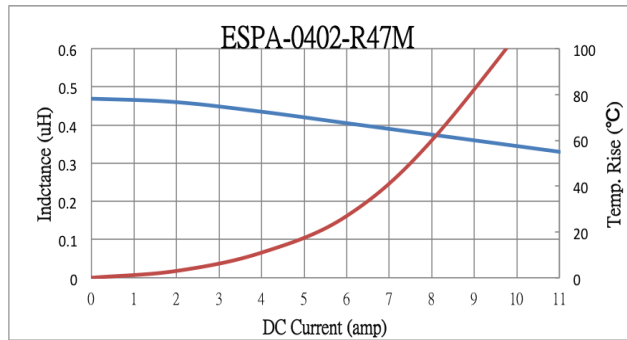
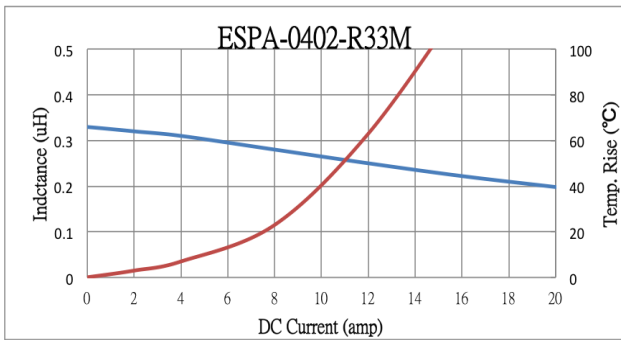
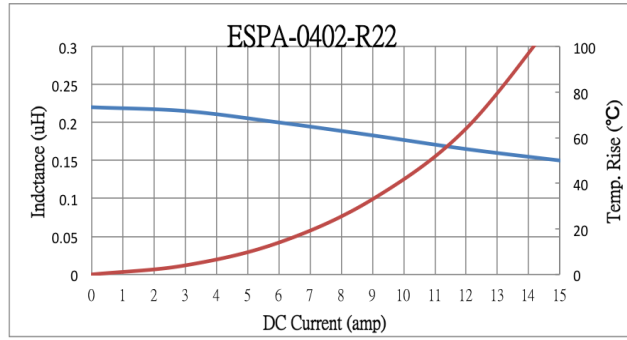
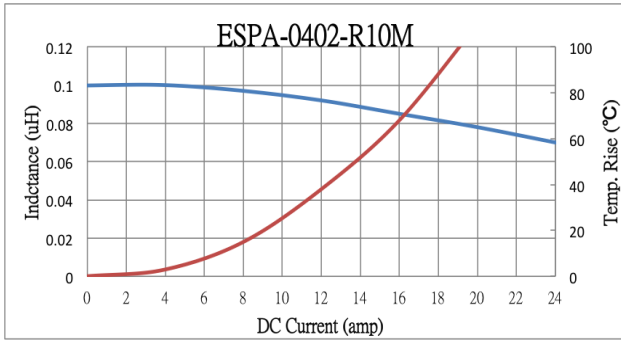
P/N	L0 Inductance μH ±20% @0A	DCR (mΩ)		Heat Rating Current Idc (AMP) Typical	Saturation Current Isat (AMP) Typical
		[Typical]	[ Max ]		
ESPA-0402-R10M	0.10	3.5	4.0	12.0	22.0
ESPA-0402-R22M	0.22	6.0	6.6	9.0	12.5
ESPA-0402-R33M	0.33	9.6	13.0	8.0	12.0
ESPA-0402-R47M	0.47	12.5	14.0	7.0	9.5
ESPA-0402-R56M	0.56	14.0	16.0	6.5	10.0
ESPA-0402-R68M	0.68	16.0	18.0	6.0	9.0
ESPA-0402-1R0M	1.0	24.0	27.0	4.5	7.0
ESPA-0402-1R2M	1.2	24.0	27.0	4.5	7.0
ESPA-0402-1R5M	1.5	38.0	46.0	4.0	6.0
ESPA-0402-2R2M	2.2	52.0	58.0	3.0	5.0
ESPA-0402-3R3M	3.3	74.0	87.0	2.5	4.0
ESPA-0402-4R7M	4.7	98.0	110.0	2.0	3.5
ESPA-0402-5R6M	5.6	105.0	115.0	1.8	3.0
ESPA-0402-6R8M	6.8	160.0	175.0	1.5	2.5
ESPA-0402-100M	10	256.0	282.0	1.2	2.2

ESPA-0402A-6R8M	6.8	120.0	135.0	1.6	2.5
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- ⊙ 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.

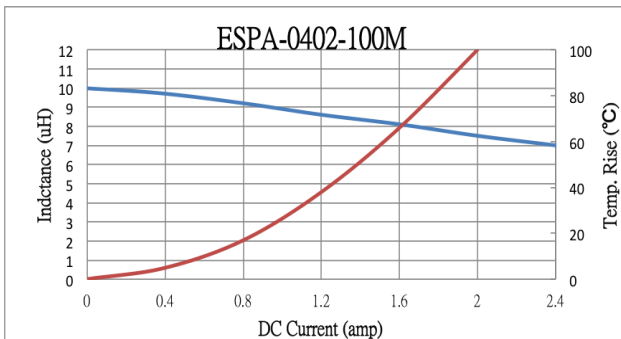
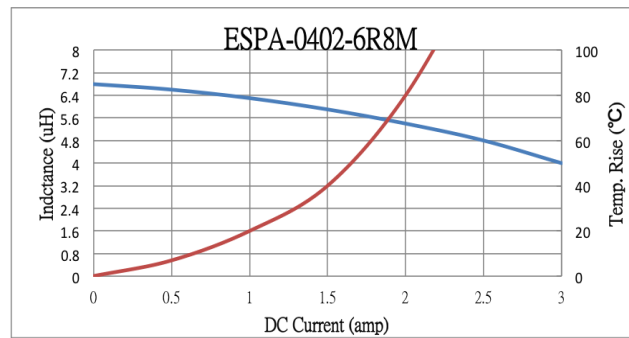
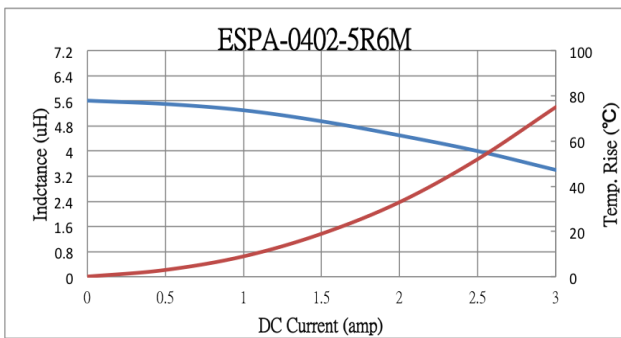
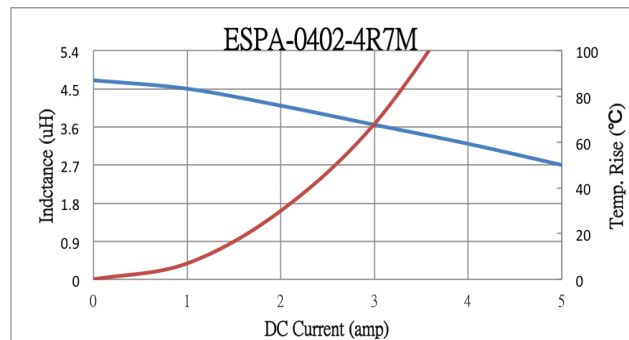
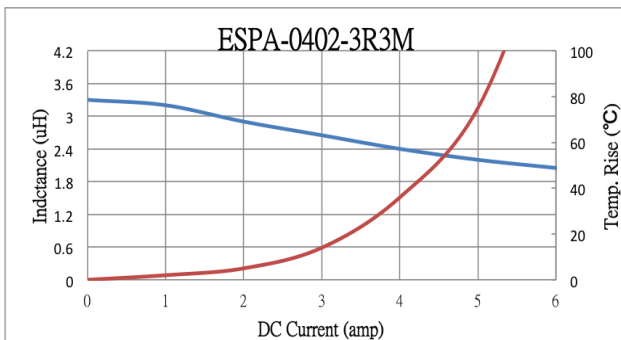
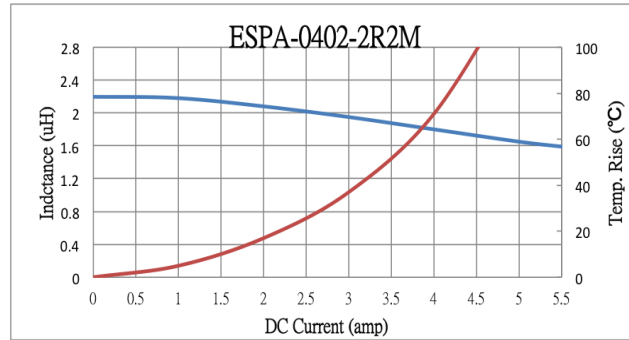
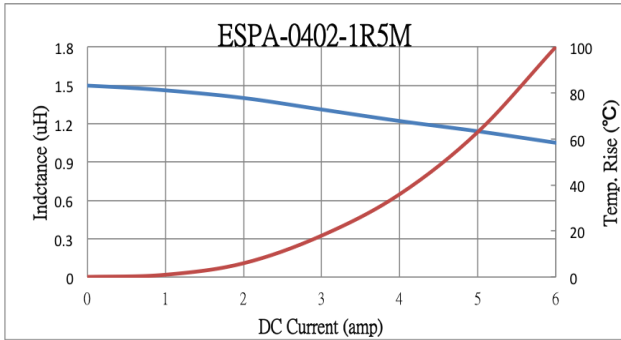
<b>ITEM P/N</b>	<b>ESPA-0402-SERIES</b>	<b>TEST INSTRUMENT</b>	<b>Zentech-3305 / Zentech502BC</b>
<b>PRODUCT</b>	<b>SMD Inductor</b>	<b>TEST FREQUENCY</b>	<b>100 kHz / 1.0V</b>

## PERFORMANCE CURVES

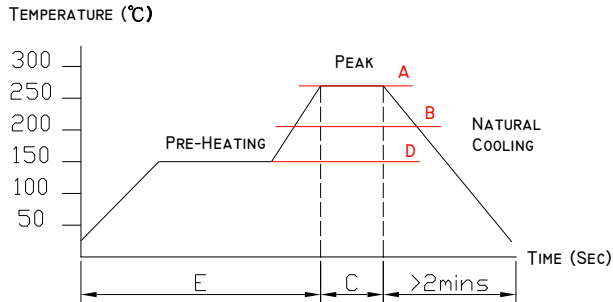


<b>ITEM P/N</b>	<b>ESPA-0402-SERIES</b>	<b>TEST INSTRUMENT</b>	<b>Zentech-3305 / Zentech502BC</b>
<b>PRODUCT</b>	<b>SMD Inductor</b>	<b>TEST FREQUENCY</b>	<b>100 kHz / 1.0V</b>

## PERFORMANCE CURVES



ITEM P/N	ESPA-0402-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 <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**

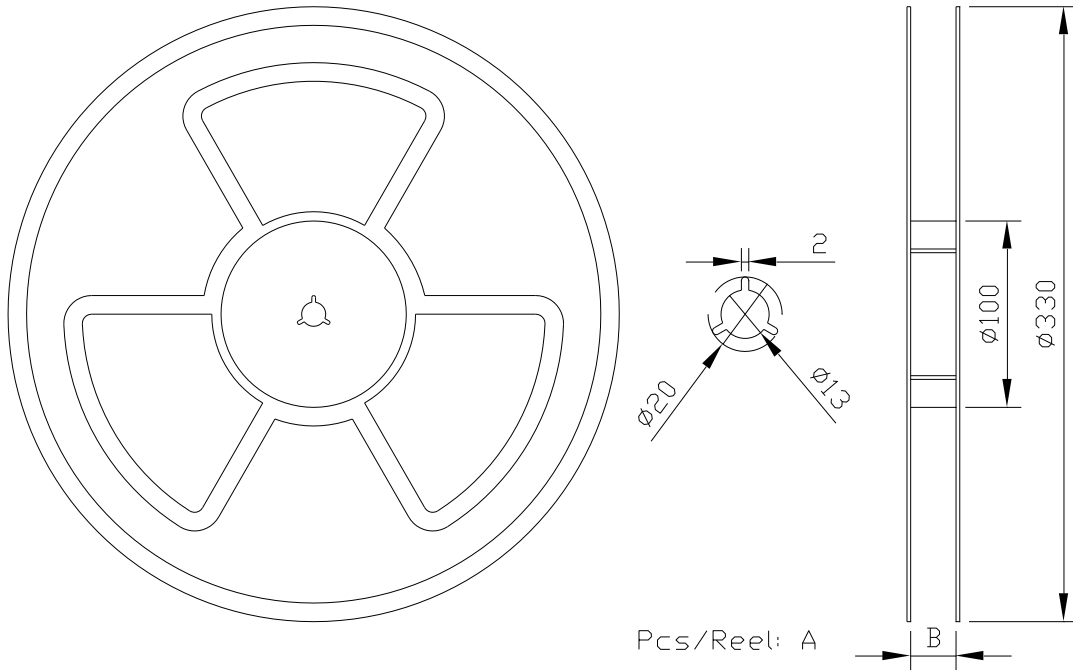
TEST	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25°C, (30 mins) -> room temp. (5 mins) -> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @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

# PACKING FOR SMD

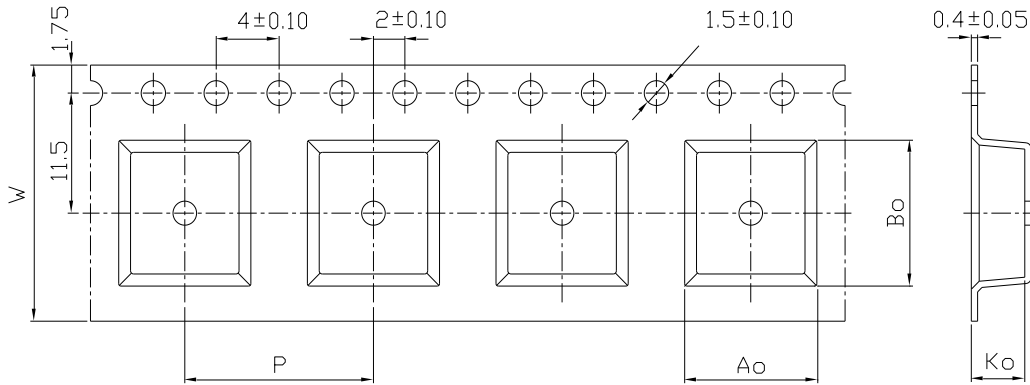
**RoHS  
COMPLIANT**

ITEM P/N	ESPA-0402-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	4.6 ± 0.2	4.75 ± 0.2	2.15 ± 0.2



W	P
12	8

Typical Pulling Force:

100 grams

