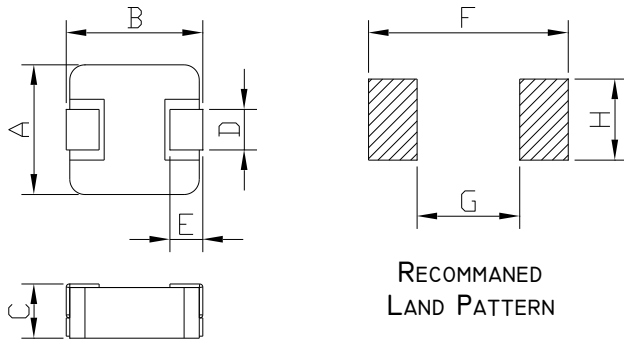


ITEM P/N	ESPA-0603-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

**PACKING DIMENSIONS (mm)**

ESPA 0603	Dimensions
A	6.6 ± 0.3
B	7.1 ± 0.3
C	3.0 MAX
D	3.0 ± 0.3
E	1.6 ± 0.5
F	7.4 Typ
G	3.7 Typ
H	3.5 Typ

**EXPLANATION OF PART NUMBERS**

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

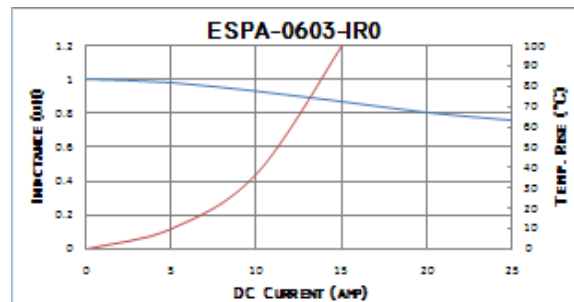
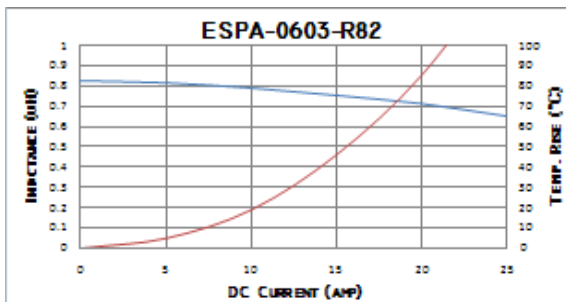
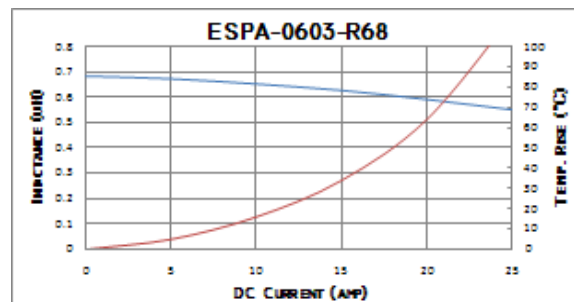
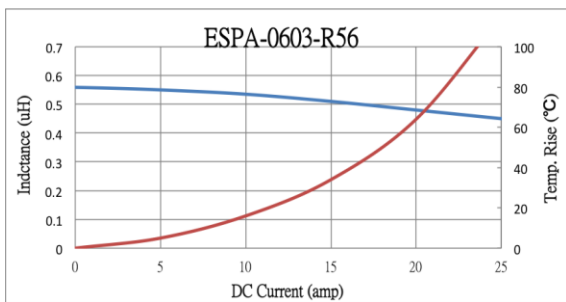
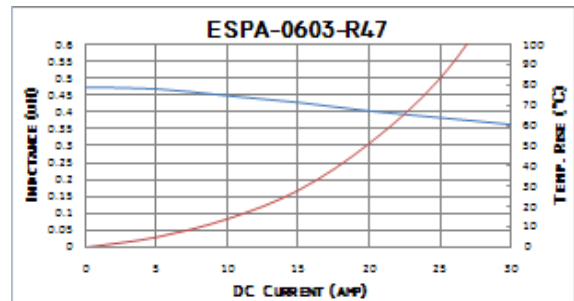
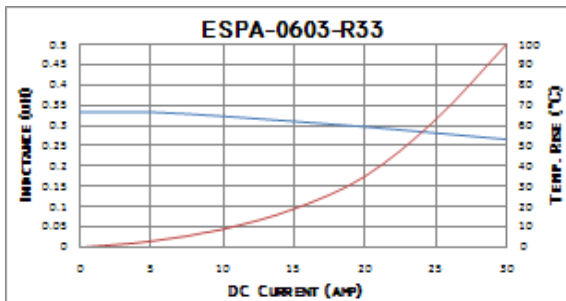
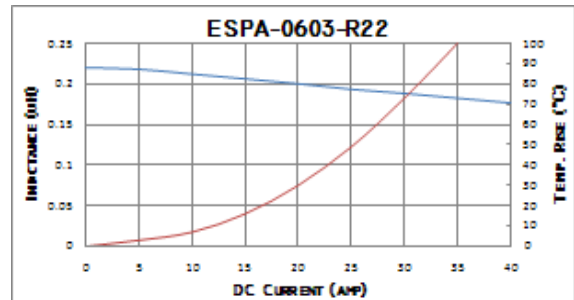
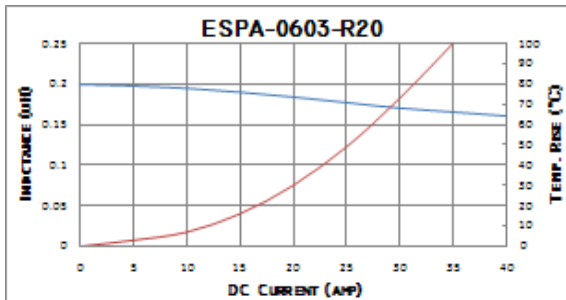
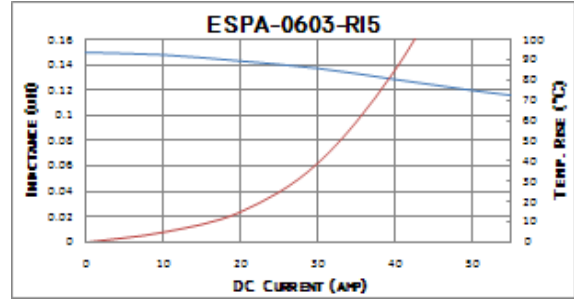
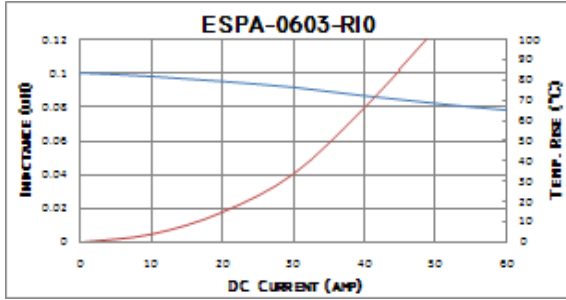
**ELECTRICAL CHARACTERISTICS**

P/N	LO Inductance μH ±20% @0A	DCR (mΩ)		Heat Rating Current Idc (AMP) Typical	Saturation Current Isat (AMP) Typical
		[Typical]	[ Max ]		
ESPA-0603-R10M	0.1	1.5	1.7	32.5	60
ESPA-0603-R15M	0.15	1.9	2.5	26	52
ESPA-0603-R20M	0.2	2.4	3	24	41
ESPA-0603-R22M	0.22	2.5	2.8	23	40
ESPA-0603-R33M	0.33	3.5	3.9	20	30
ESPA-0603-R47M	0.47	4.0	4.2	17.5	26
ESPA-0603-R56M	0.56	5.0	5.5	15.5	25
ESPA-0603-R68M	0.68	5.0	5.5	15.5	25
ESPA-0603-R82M	0.82	6.7	8	13	24
ESPA-0603-1R0M	1.0	9	10	11	22
ESPA-0603-1R5M	1.5	14	15	9	18
ESPA-0603-2R2M	2.2	18	20	8	14
ESPA-0603-3R3M	3.3	28	30	6	13.5
ESPA-0603-4R7M	4.7	37	40	5.5	10
ESPA-0603-5R6M	5.6	52	60	4.8	10
ESPA-0603-6R8M	6.8	54	60	4.5	8
ESPA-0603-8R2M	8.2	64	68	4	7.5
ESPA-0603-100M	10	102	105	3	7

- ⊙ 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 : -55°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.

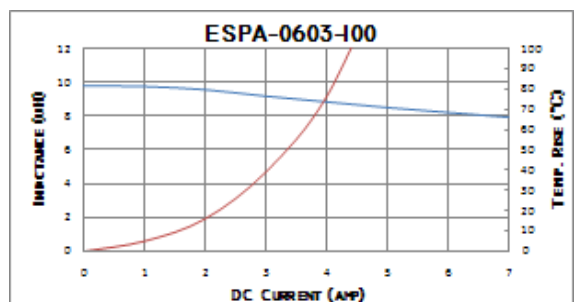
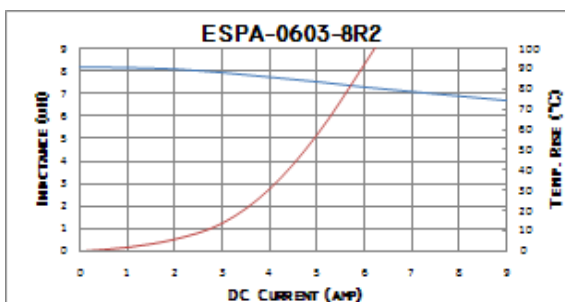
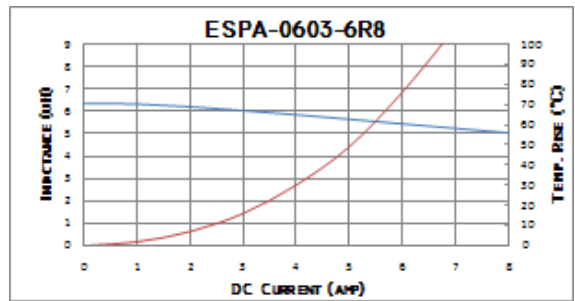
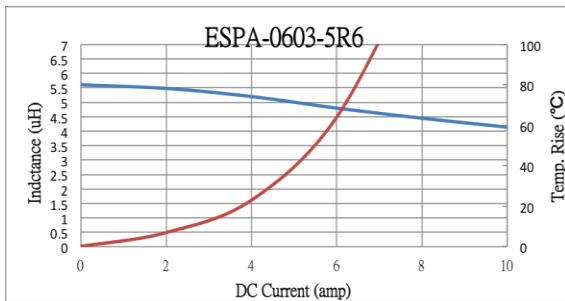
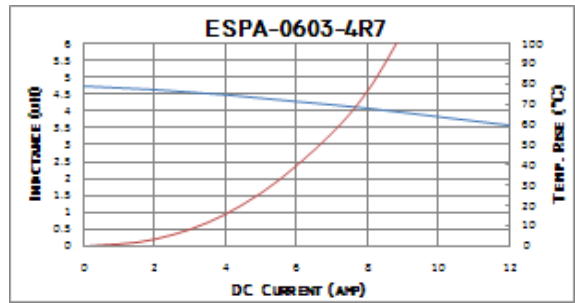
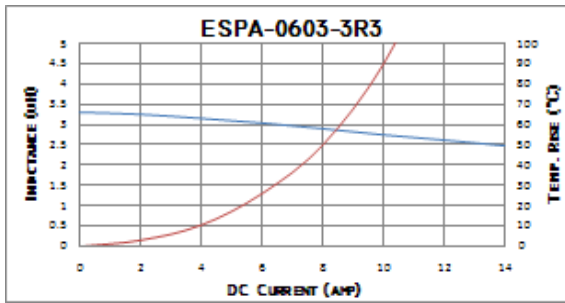
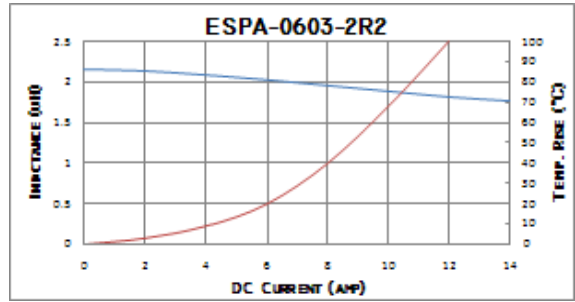
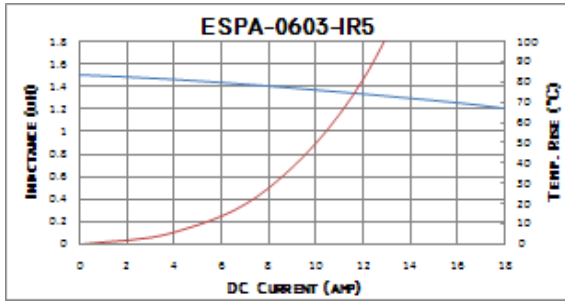
ITEM P/N	ESPA-0603-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

## PERFORMANCE CURVES

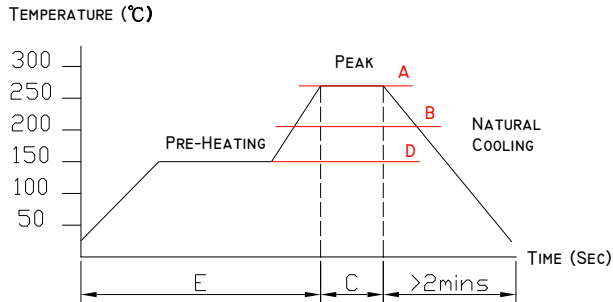


ITEM P/N	ESPA-0603-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

## PERFORMANCE CURVES



ITEM P/N	ESPA-0603-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**

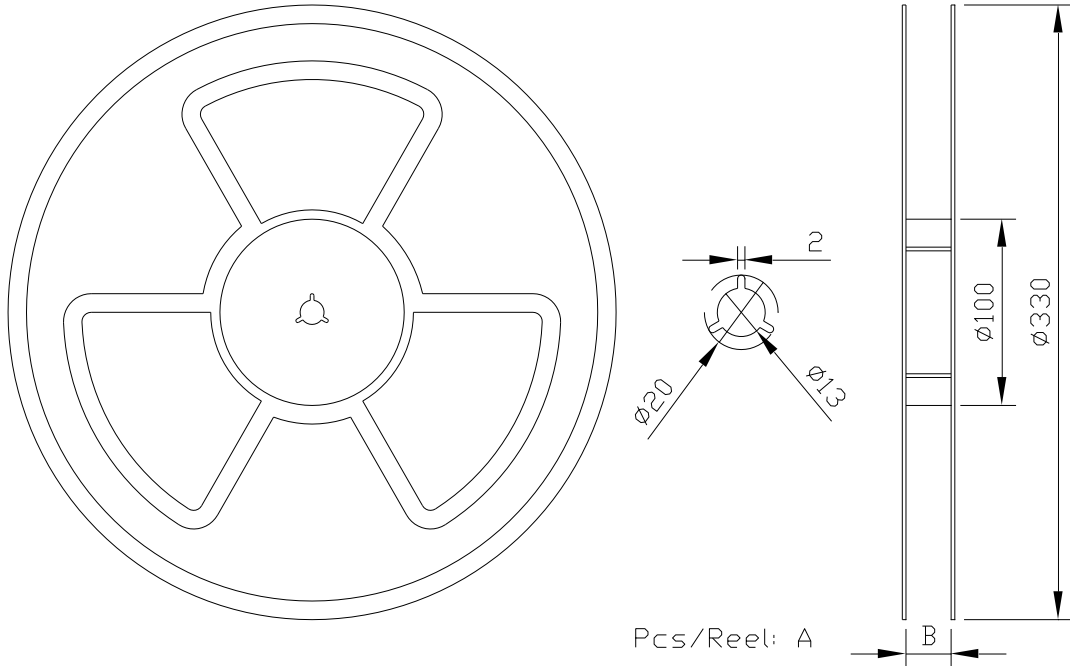
TEST	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-55°C, (30 mins) -> room temp. (5 mins) -> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 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. -55 ±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

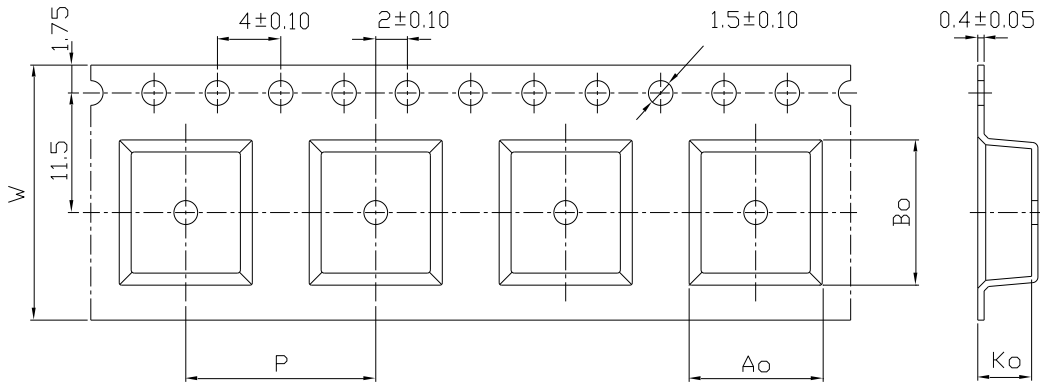
**RoHS  
COMPLIANT**

ITEM P/N	ESPA-0603-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
1000	17	$6.9 \pm 0.1$	$7.6 \pm 0.1$	$3.4 \pm 0.1$



W	P
16	12

Typical Pulling Force:

10 grams

