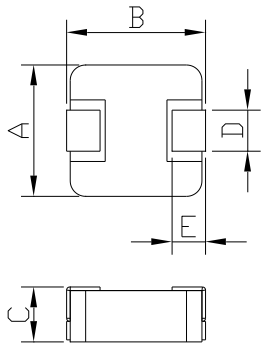
Version: A1.0

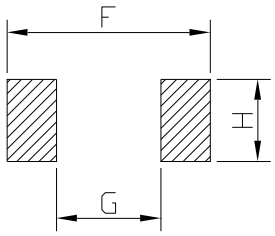
COIL SPECIFICATION

RoHS COMPLIANT

ITEM P/N	ESPC-104DT-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

PACKING DIMENSIONS (mm)





RECOMMANED
LAND PATTERN

ESPC 104DT	Dimensions
A	10.0 ± 0.3
B	11.5 MAX
C	4.0 MAX
D	2.8 ± 0.5
E	2.0 ± 0.5
F	13 Typ
G	6 Typ
H	4 Typ

EXPLANATION OF PART NUMBERS

1	2	3	4	5	6	7	8	9	10	11	12
E	S	P	C	- 1	0	4	DT	- 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
ESPC-104DT-R22M	0.22	0.80	0.90	35	65
ESPC-104DT-2R2M	2.2	6.00	7.00	12	18
ESPC-104DT-3R3M	3.3	10.8	11.8	10	16
ESPC-104DT-4R7M	4.7	17.0	20.0	8.5	15
ESPC-104DT-5R6M	5.6	20.0	23.0	7.5	14
ESPC-104DT-6R8M	6.8	22.5	25.0	6.5	9
ESPC-104DT-100M	10	27.0	30.0	7.5	8.5
ESPC-104DT-150M	15	40.0	45.0	6.25	7.0
ESPC-104DT-220M	22	60.0	66.0	5.0	5.5
ESPC-104DT-330M	33	85.0	92.0	4.4	5.0
ESPC-104DT-470M	47	130	145	4.0	3.5
ESPC-104DT-560M	56	150	170	3.8	2.8
ESPC-104DT-680M	68	175	200	3.5	2.6
ESPC-104DT-820M	82	210	240	3.2	2.4
ESPC-104DT-101M	100	249	270	3.0	2.25

- 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 : -55℃ ~ 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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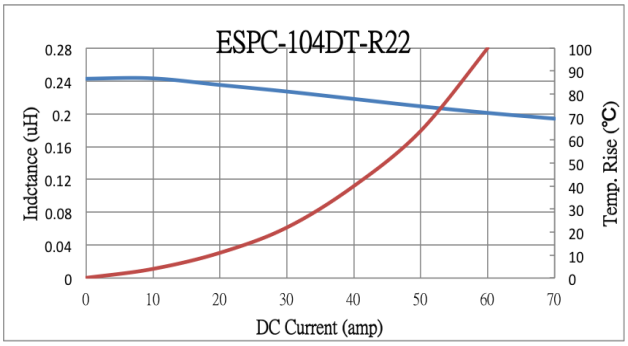
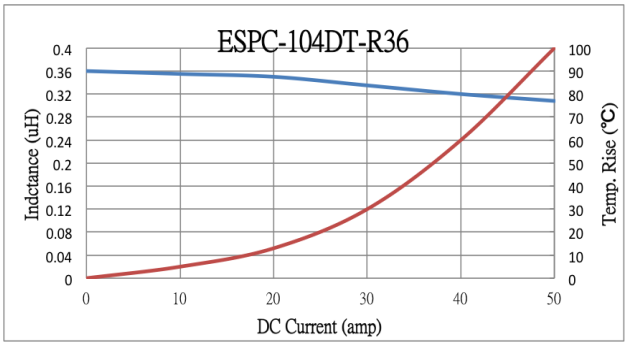
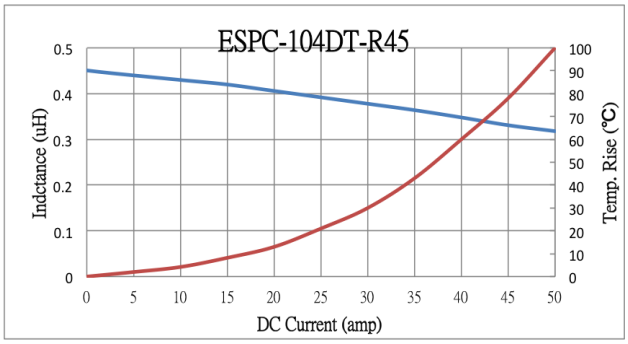
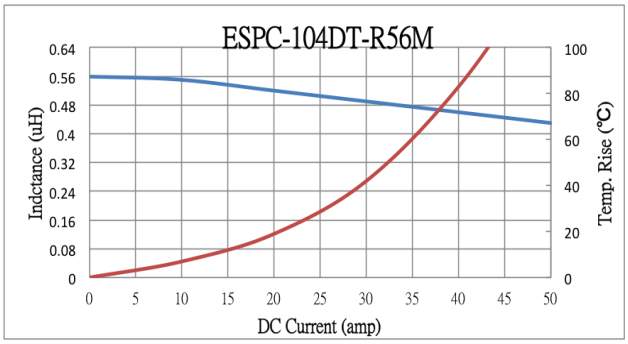
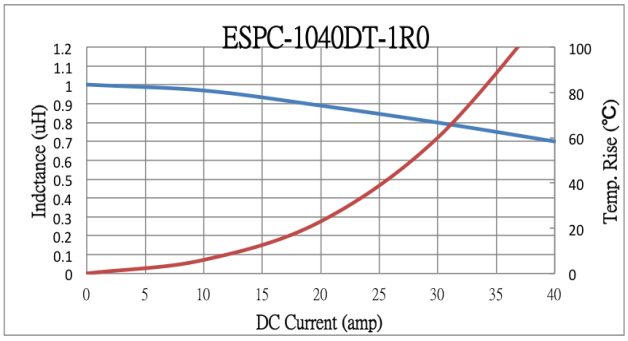
PERFORMANCE CURVES

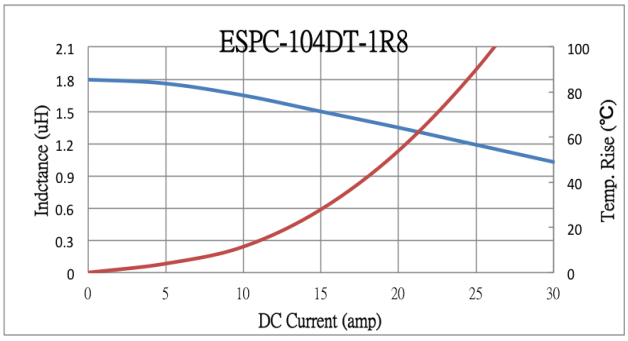


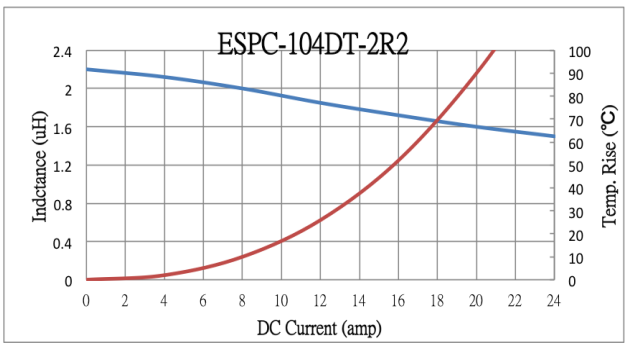


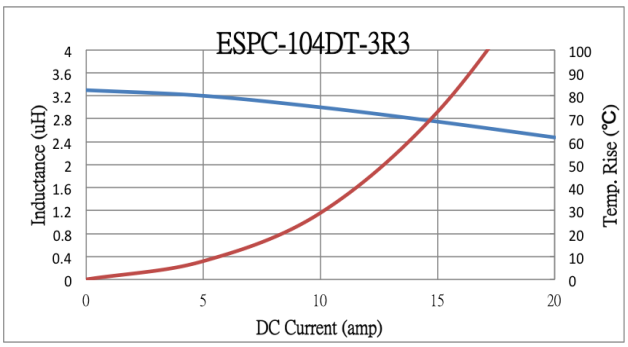












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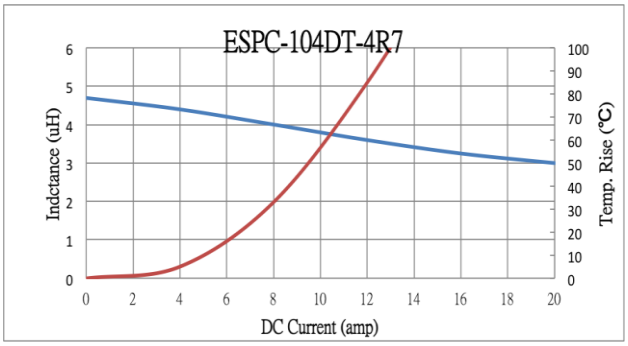

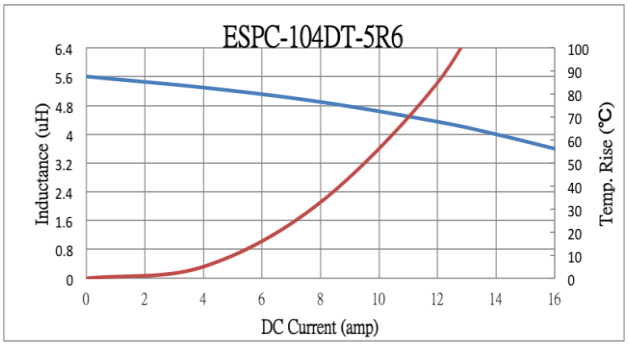

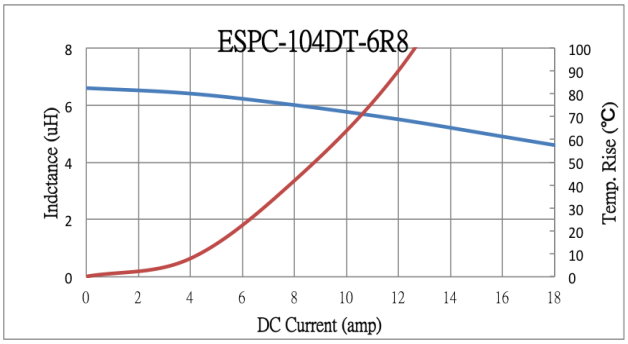

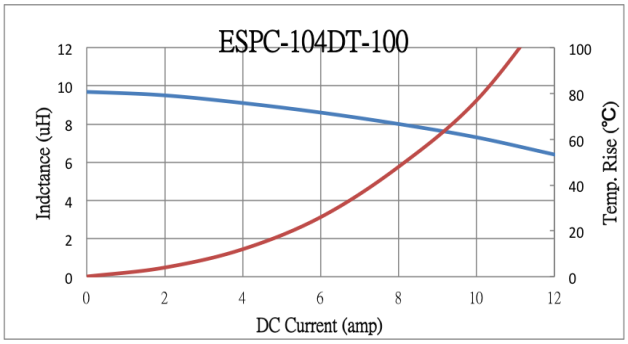

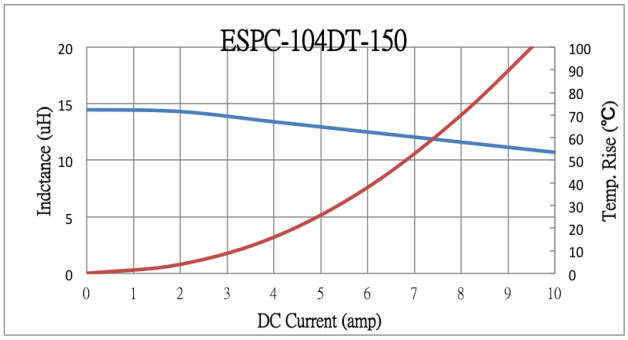

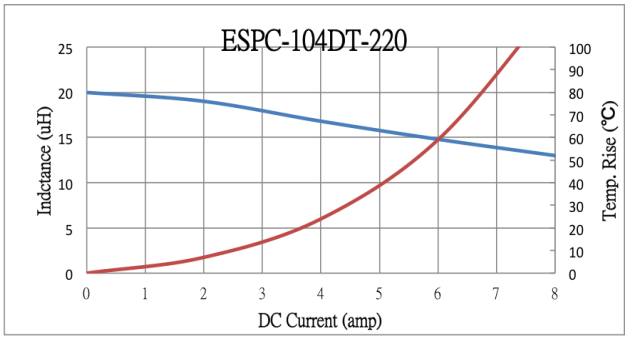

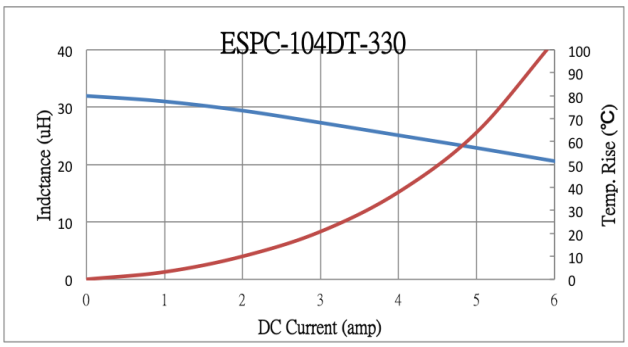

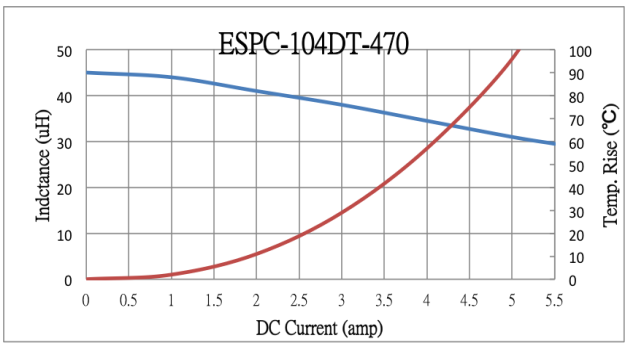

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RoHS COMPLIANT

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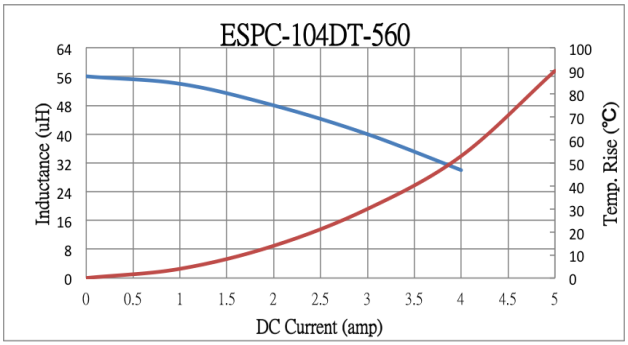
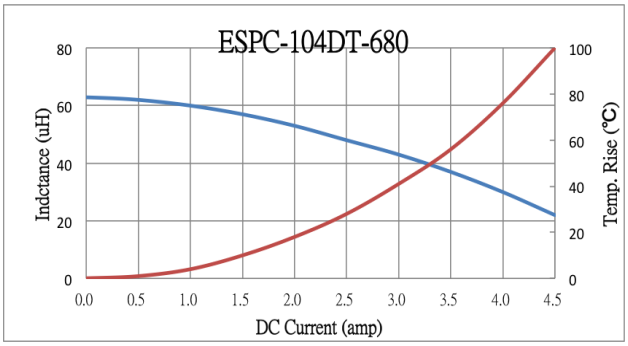
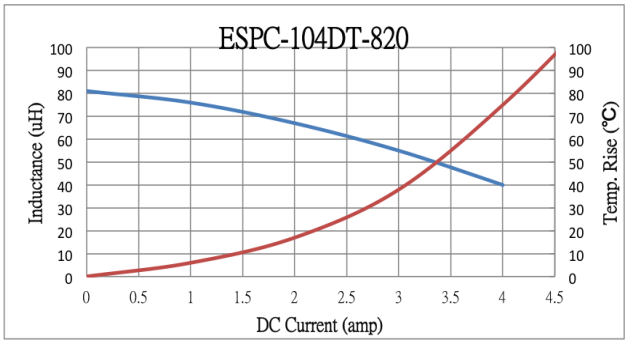
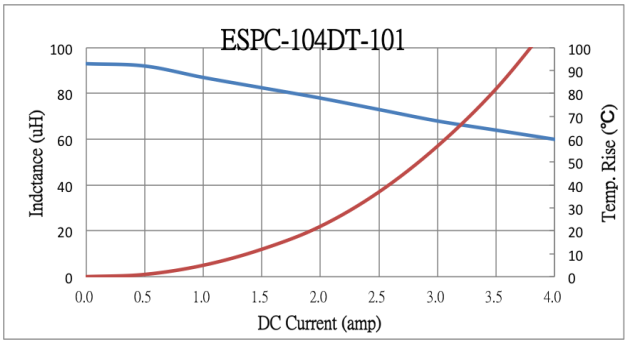
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

PERFORMANCE CURVES









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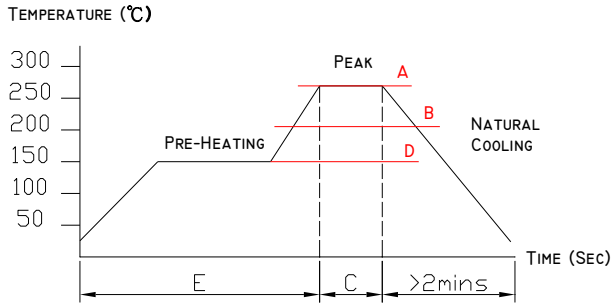
ITEM P/N	ESPC-104DT-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

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	-55℃, (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. -55 ±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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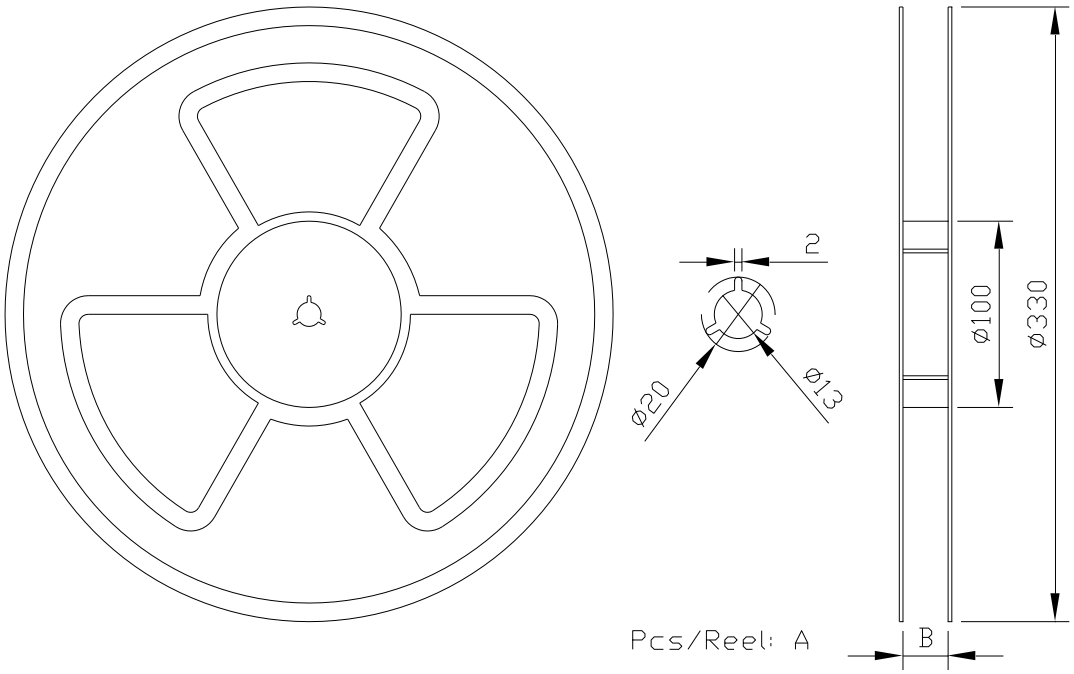
PACKING FOR SMD

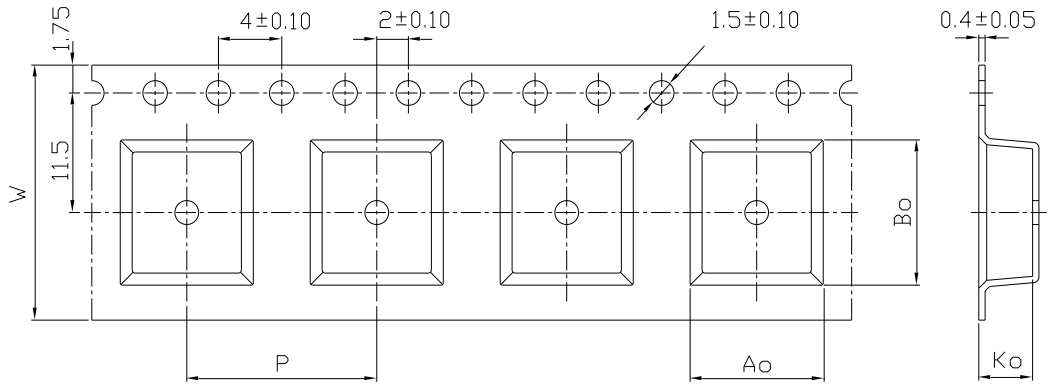
RoHS COMPLIANT

ITEM P/N	ESPC-104DT-SERIES	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

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



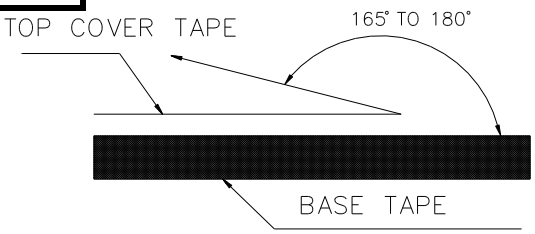
A	B	Ao	Bo	Ko
800	25	11.0 ± 0.1	12.6 ± 0.1	4.1 TYP



W	P
24	16

Typical Pulling Force:

10 grams



HUNG TRON

HUNGTRON TECHNOLOGY Co.,Ltd.