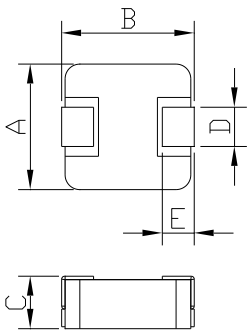
Version: A1.0

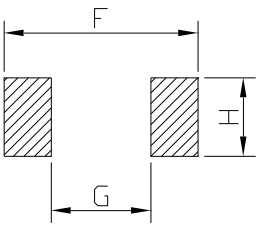
COIL SPECIFICATION

RoHS COMPLIANT

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

PACKING DIMENSIONS (mm)





RECOMMANED
LAND PATTERN

ESPC 104CT	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	CT	- 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-104CT-R15M	0.15	0.50	0.65	40	75
ESPC-104CT-R19M	0.19	0.70	0.80	38	60
ESPC-104CT-R22M	0.22	0.90	1.00	35	60
ESPC-104CT-R36M	0.36	1.05	1.20	30	60
ESPC-104CT-R39M	0.39	1.10	1.30	30	60
ESPC-104CT-R41M	0.41	1.10	1.30	30	60
ESPC-104CT-R45M	0.45	1.10	1.30	29	45
ESPC-104CT-R47M	0.47	1.60	1.80	26	40
ESPC-104CT-R56M	0.56	1.60	1.80	25	40
ESPC-104CT-R68M	0.68	2.40	2.70	22	39
ESPC-104CT-R88M	0.88	2.70	3.00	20	38
ESPC-104CT-1R0M	1.0	3.00	3.30	18	30
ESPC-104CT-1R5M	1.5	3.80	4.20	16	26
ESPC-104CT-2R2M	2.2	6.70	7.00	12	24
ESPC-104CT-3R3M	3.3	10.8	11.8	10	18.7
ESPC-104CT-4R7M	4.7	15.0	16.5	9.5	17
ESPC-104CT-5R6M	5.6	17.6	19.3	8.5	16
ESPC-104CT-6R8M	6.8	21.2	23.3	8	13.5
ESPC-104CT-8R2M	8.2	26.0	29.0	7	9
ESPC-104CT-100M	10.0	33.2	36.5	6.8	12

- 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.

Version: A1.0

CHARACTERISTICS

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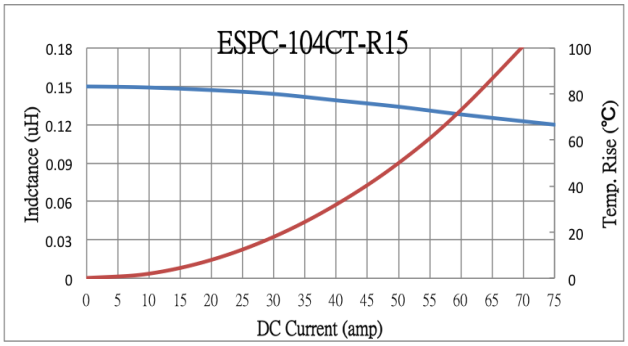
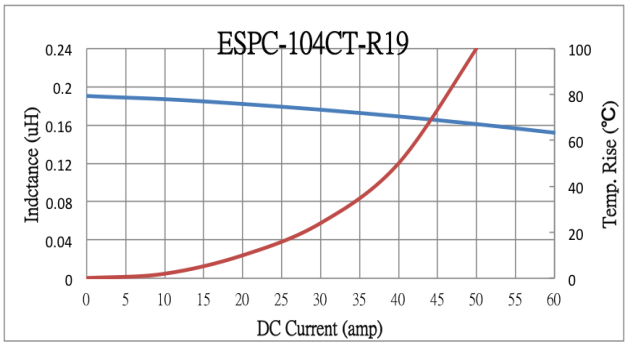
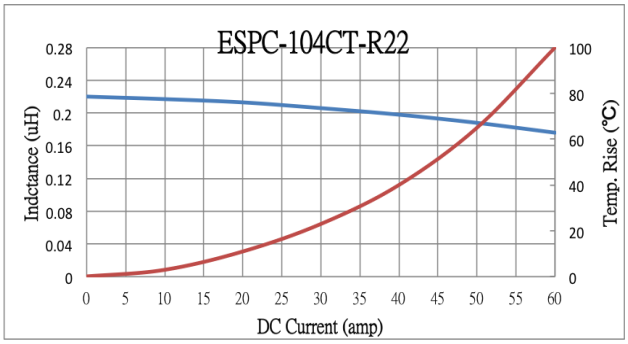
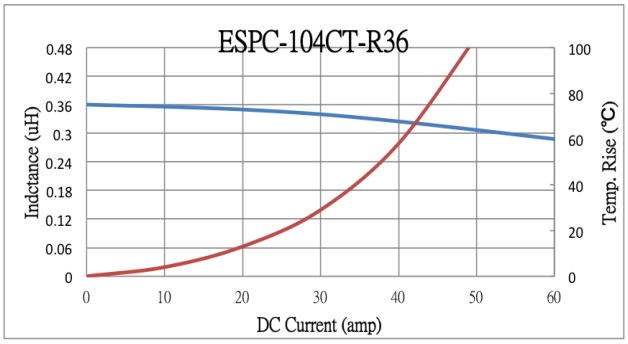
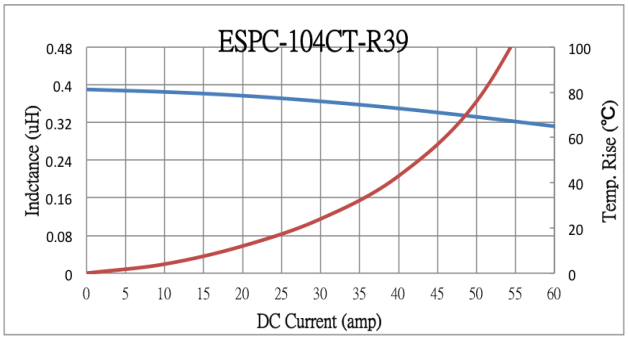
PERFORMANCE CURVES

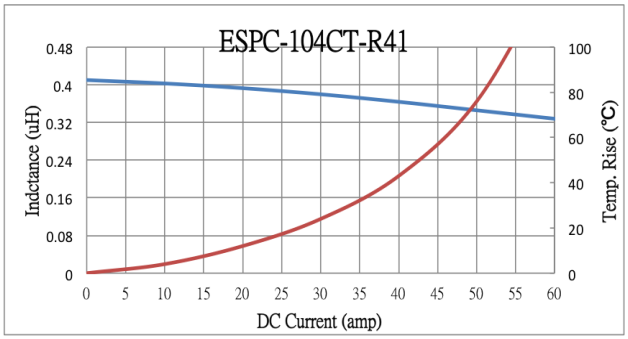


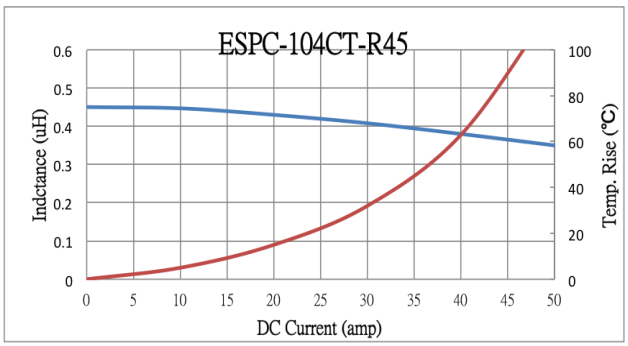


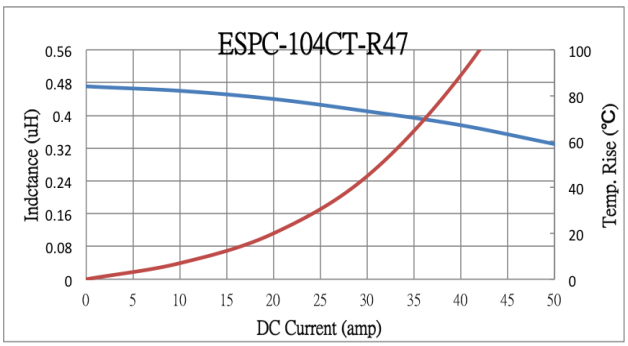












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Version: A1.0

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PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

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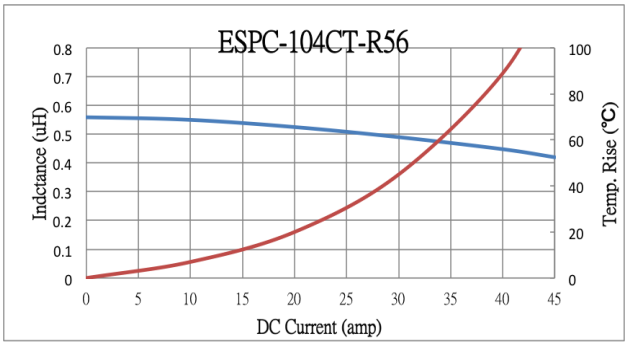

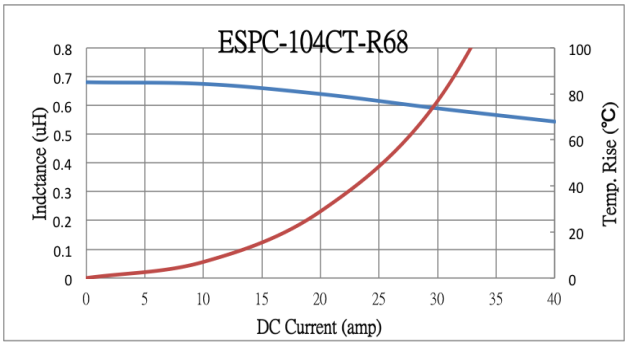

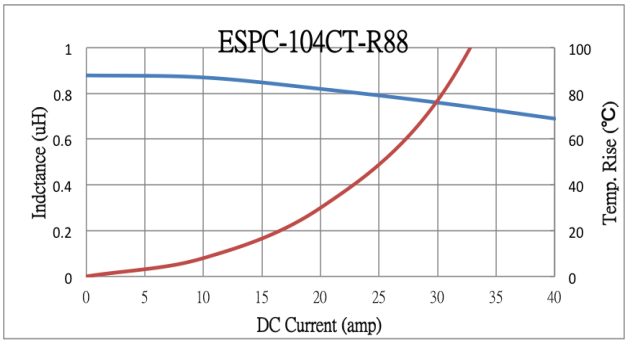

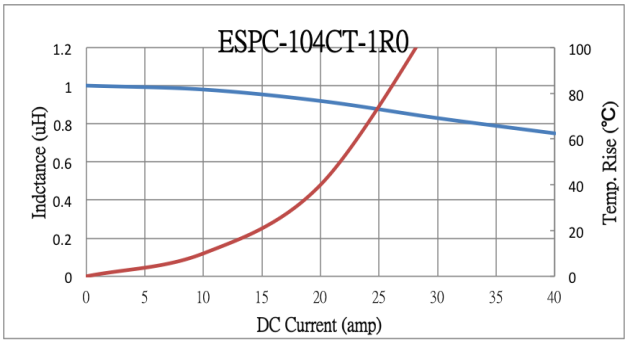

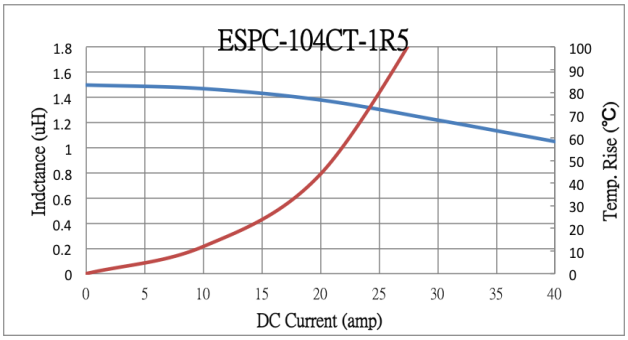

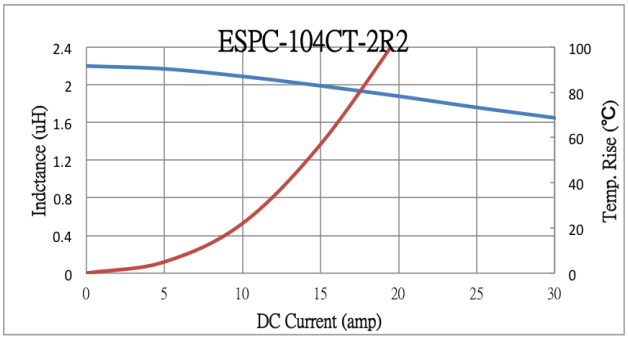

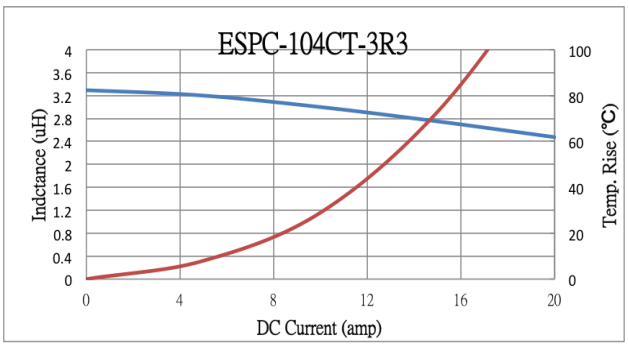

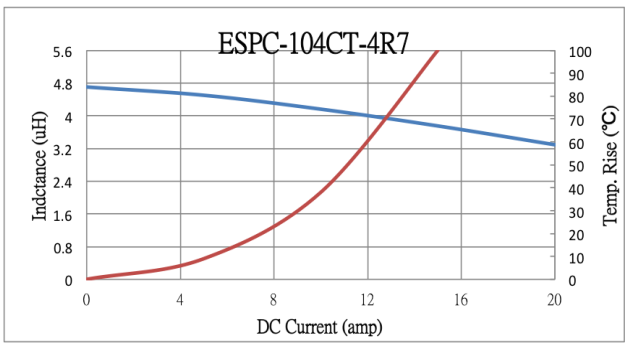

Version: A1.0

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PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

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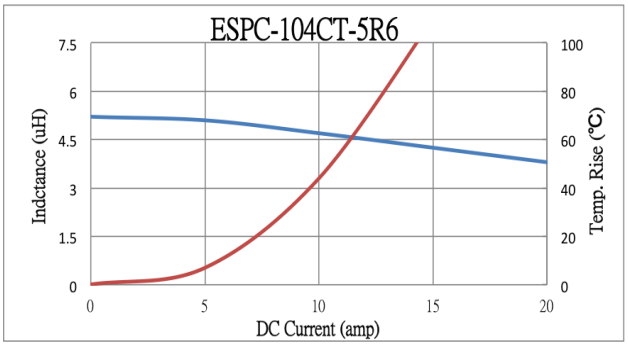

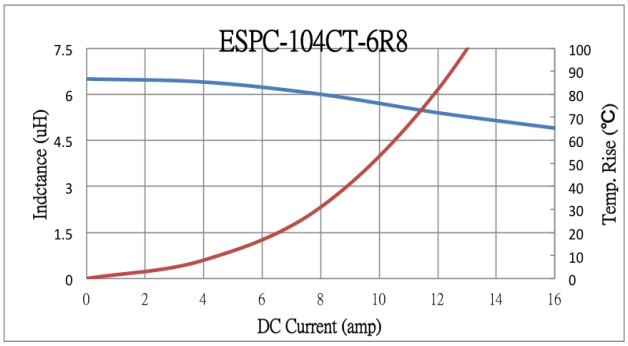

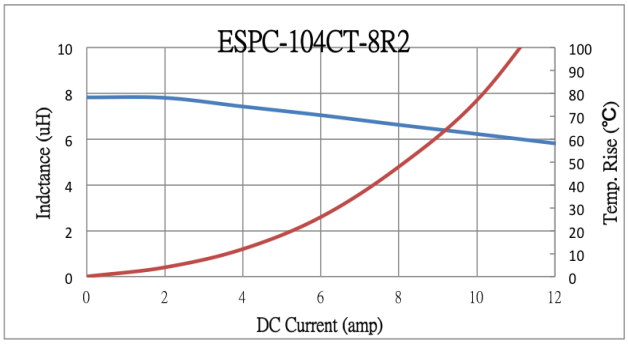

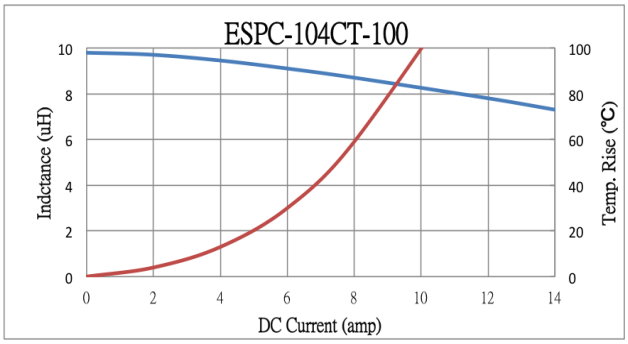

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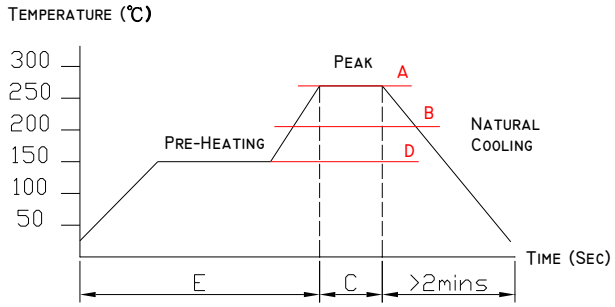
RECOMMENDED SOLDERING TEMP. GRAPH



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

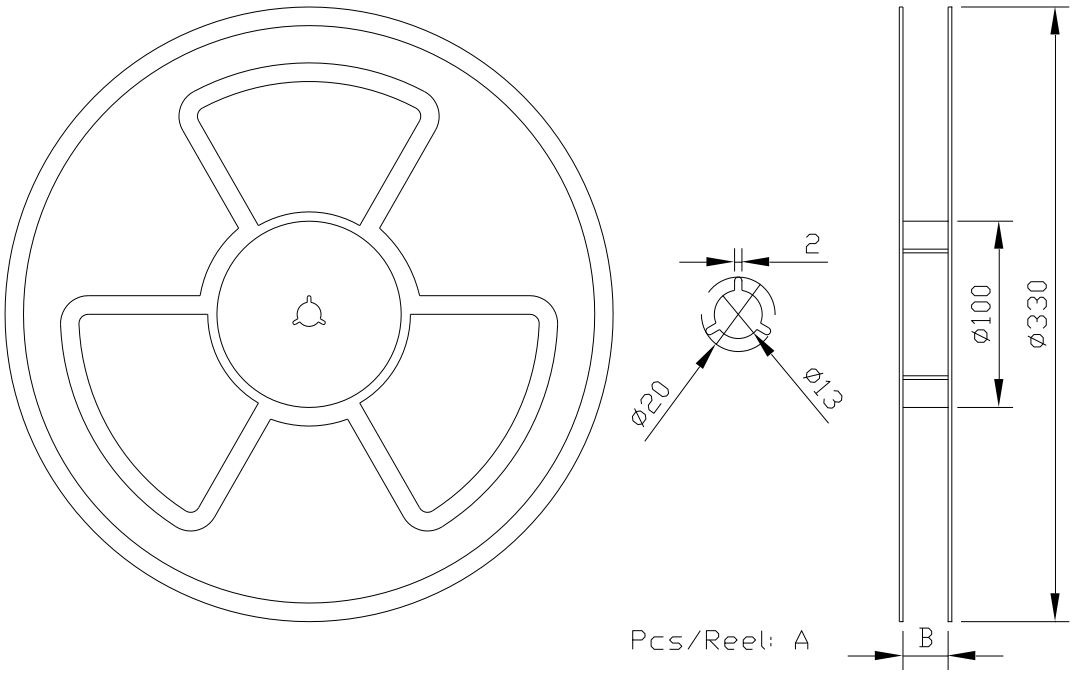
Version: A1.0

PACKING FOR SMD

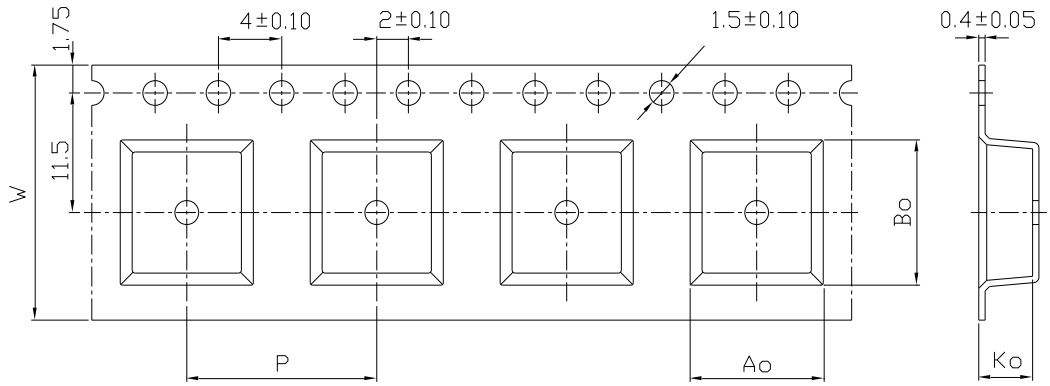
RoHS COMPLIANT

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

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



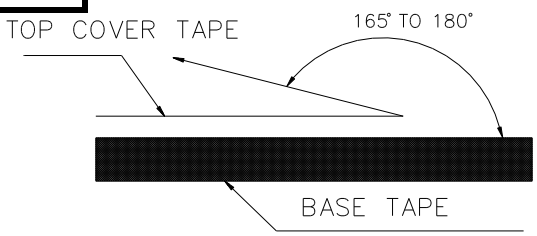
A	B	Ao	Bo	Ko
800	25	11.0 ± 0.1	12.6 ± 0.1	4.1 TYP



W	P
24	16

Typical Pulling Force:

10 grams



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