

## SPECIFICATION FOR APPROVAL

<p><b>CUSTOMER'S APPROVAL CHOP</b></p>  <p>Approval's Condition: _____</p> <p>Approved Date: _____</p>
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KINDLY RETURN A SET WITH YOUR COMPANY'S OFFICIAL STAMP ON APPROVAL OF THIS ITEM

**CUSTOMER'S NAME:** \_\_\_\_\_

**CUSTOMER'S MODEL NO. :** \_\_\_\_\_

**CUSTOMER'S PART NO. :** \_\_\_\_\_

**DESCRIPTION:** \_\_\_\_\_  
**EP13**

**Semitel'S MODEL NO. :** \_\_\_\_\_  
**EP13-316**

**VERSION:** \_\_\_\_\_  
**C**

**DATE:** \_\_\_\_\_  
**2020/6/8**

**Attachments:**

- Product Specification
- Sample Qty. :
- Test Data

Prepared By	Checked By	Approved By
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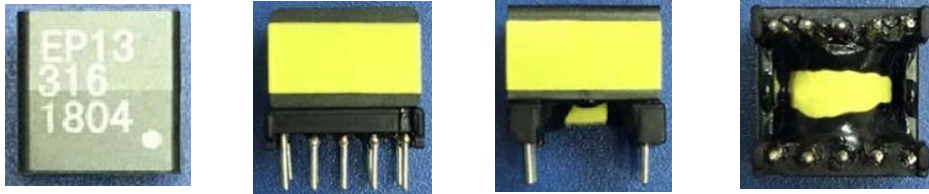
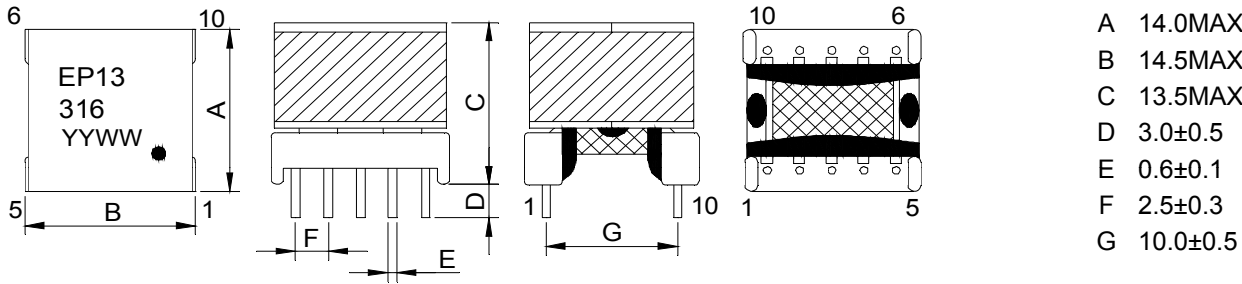
## Revision Record

Version	Revision Date	Revision For Items	Revision For Items
A	2017/5/28	New Revision	-
B	2017/8/25	Add the deta of Insulation Voltage	Customer request
C	2020/6/8	1,The THD checking frequency changes from 100kHz to 25kHz. 2,THD change from -84dB Max to -81dB Max.	Customer request

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VERSION:	C	CUSTOMER'S PART NO. :	
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# Product Specification

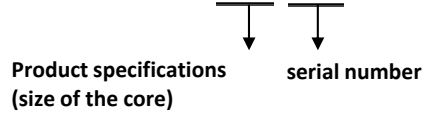
## 1.Physical Dimensions (Unit:mm)



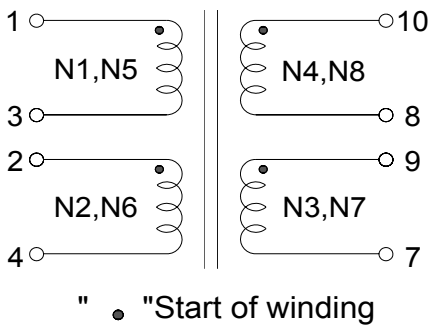
**Notes:**

- \*Marking type is laser printing
- \*YY: Year Code; WW: Week Code
- \*Size D not including soldering tags
- \*ITDSC Model:SF13AE

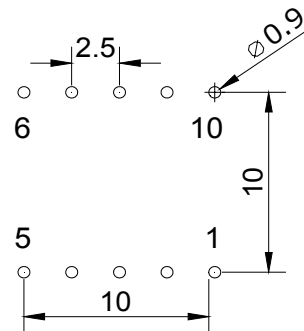
**\*Marking Rule: EP13-316**



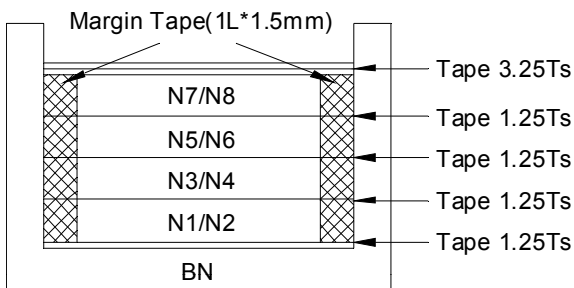
## 2.Connection



## 3.Recommended Pad Layout (Unit:mm)



## 4.Structure of Products



## 5.No of Turns & Wire Spec

No	No of Pin	Turns	Wire Spec
N1	1 - 3	20 Ts	ø0.10mm*1P P180
N2	2 - 4	20 Ts	ø0.10mm*1P P180
N3	9 - 7	8 Ts	ø0.16mm*1P P180
N4	10- 8	8 Ts	ø0.16mm*2P P180
N5	1 - 3	20 Ts	ø0.10mm*1P P180
N6	2 - 4	20 Ts	ø0.10mm*1P P180
N7	9 - 7	8 Ts	ø0.16mm*2P P180
N8	10 - 8	8 Ts	ø0.16mm*1P P180

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## Product Specification

### 6. Electrical Characteristics

\*EP13-316 was passed ITU-T K.21 2003 Enhance Level 6KV.

\*Electrical specifications @ 25°C unless otherwise noted:

\*Operating temperature range: -40°C to +85°C .

Item	Winding	Specifications	Test Conditions
Inductance	L(1-4) Tie(2-3)	400uH±7%	at 10KHz,0.1Vrms
LK-Inductance	LK(1-4) Tie(2-3,10-9-8-7)	1.1uH MAX.	at 1MHz,0.1Vrms
THD	THD	-81dB MAX. <span style="color:red">C</span>	at 25kHz,2Vrms <span style="color:red">C</span>
DCR	R(1-4) Tie(2-3)	1.5Ω MAX.	at 25°C
	R(10-7) Tie(9-8)	0.7Ω MAX..	
Cww	(1-10) Tie(2-3,9-8)	90pF MAX.	at 100KHz,0.1Vrms
Turns Ratio	(1-4):(10-7) Tie(2-3,9-8)	2.5:1±2%	at 100KHz,0.1Vrms
Insulation Voltage	Pri. To Sec.	1875Vac	@1Sec/0.5mA/60Hz

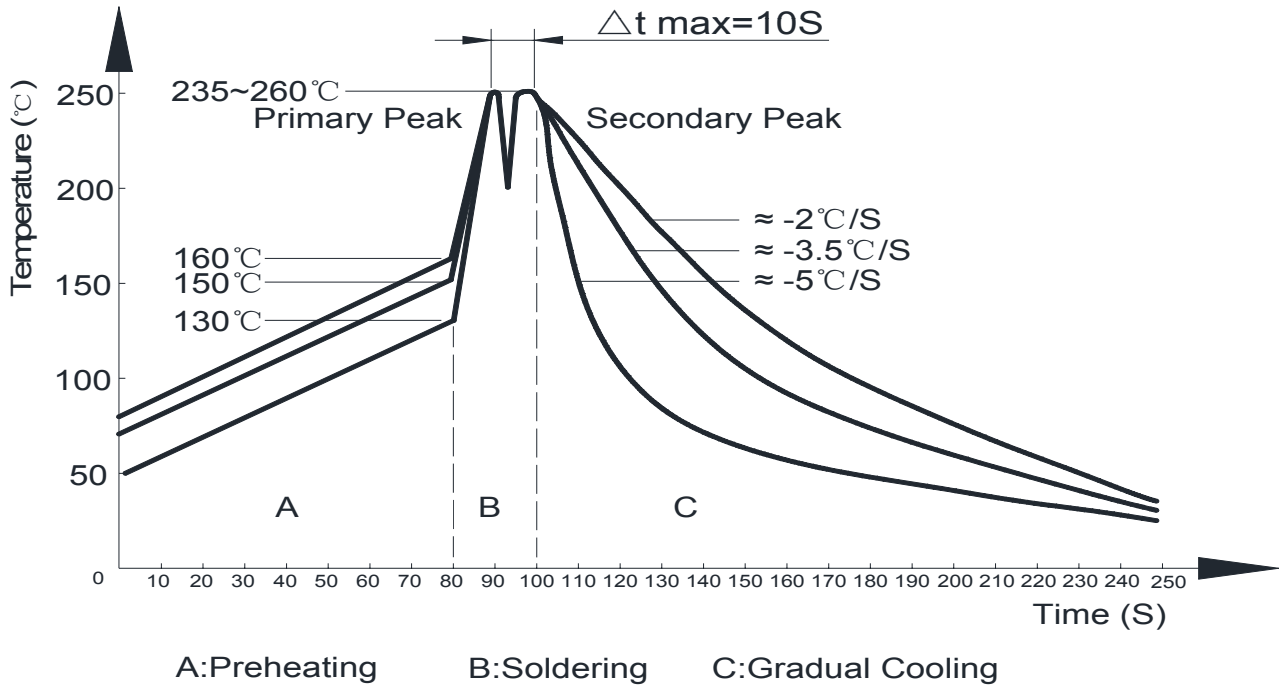
### 7. Bill of Material

No	Item	Material Name	Manufacturer	UL File No	SGS File No
1	Core	FERRITE CORE A101	ACME or Equivalent	NIL	CE/2016/A4681B
2	Bobbin	PM-9630	SUMITOMO (SumiDurez) or Equivalent	E41429	SHAEC1705662106
3	Copper Wire	Polyurethane bare wire (Cu) Polysol 180	ELEKTRISOLA or Equivalent	E258243	CE/2017/40923
OR	Copper Wire	enamelled wire QPN 180	SUNTEK or Equivalent	E234867	SCL01J005340014E
4	Margin Tape	NON-WOVEN CLOTH MARGIN TAPE WF* (c) (h)	YAHUA or Equivalent	E165111	CANEC1623096902
5	Insulation tape	Polyester Mylar Tape ( Yellow ) CT* (c) (g)	YAHUA or Equivalent	E165111	CANEC1612052101
6	EPOXY	TH320	TIAN HUAN or Equivalent	E257593	CANEC1619173404
7	EPOXY	EB-360	CHANGFENG or Equivalent	NIL	SHAEC1626152101
8	Solder	Lead free solder	HONGTAIZHOU or Equivalent	NIL	CANEC1610788406

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### 8.Wave Solder Profile



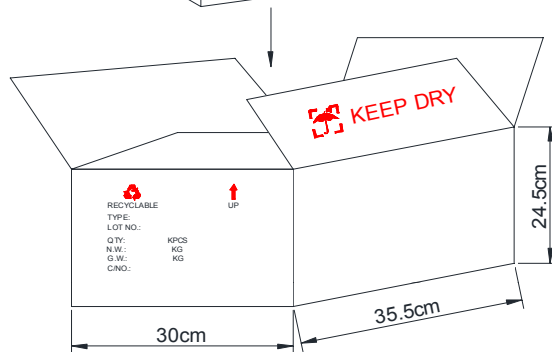
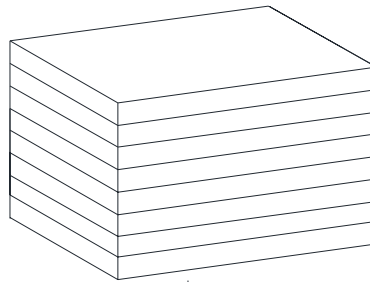
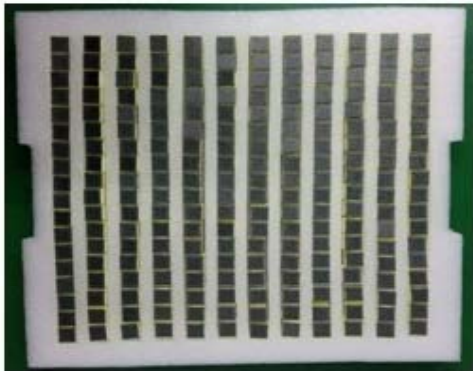
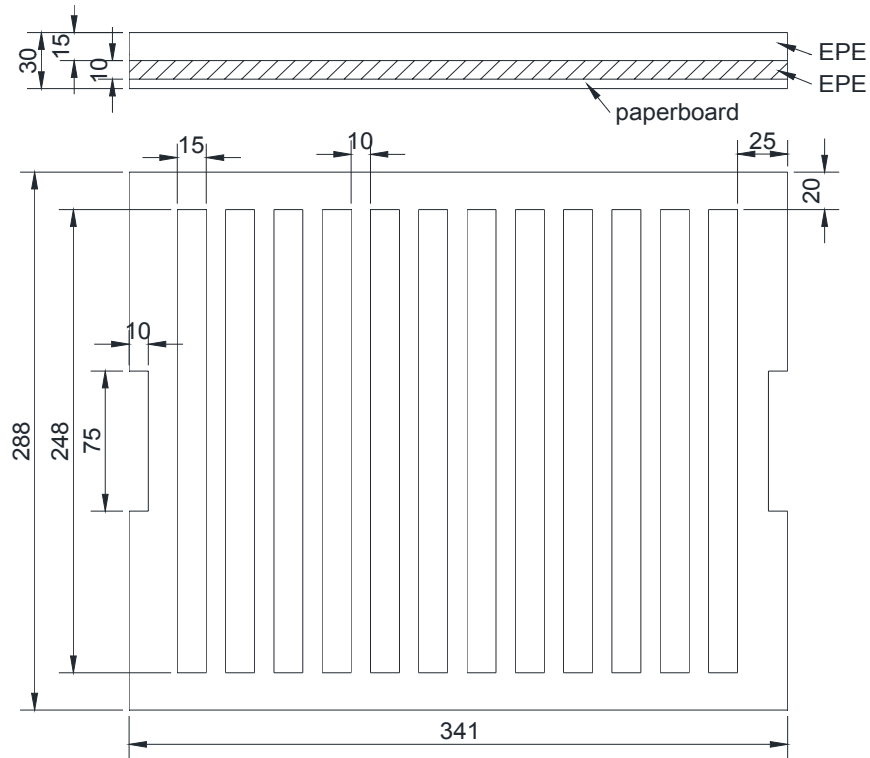
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### 9.Packing Request

\*Put in the EPE slot, each layer contains 216pcs products.

\*Every carton box contains 1728pcs products,with a total of 8 layers.



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## Test Report

Test Instruments								
NO	HP4284A	HP4284A		DCR METER 131	DCR METER 131		HP4284A	CS2670A
	Inductance	LK-Inductance	THD	DCR	DCR	Cww	Turns Ratio	Insulation Voltage
	at 10KHz,0.1Vrms	at 1MHz,0.1Vrms	at 25kHz,2Vrms	at 25°C	at 25°C	at 100KHz,0.1Vrms	at 100KHz,0.1Vrm	Pri. To Sec.
	L(1-4) Tie(2-3)	LK(1-4) Tie(2-3,10-9-8-7)		R(1-4) Tie(2-3)	R(10-7)Tie(9-8)		(1-4):(10-7) Tie(2-3,9-8)	1875Vac
	400uH±7%	1.1uH MAX.	-81dB MAX.	1.5Ω MAX.	0.7Ω MAX..	90pF MAX.	2.5:1±2%	@1Sec/0.5mA/ 60Hz
1	395.90	0.91	-92.600	0.920	0.113	66.33	PASS	PASS
2	388.40	0.90	-92.700	0.924	0.112	67.10	PASS	PASS
3	404.20	0.84	-92.200	0.923	0.116	68.10	PASS	PASS
4	401.20	0.90	-92.500	0.935	0.113	69.10	PASS	PASS
5	389.20	0.90	-92.400	0.921	0.113	64.80	PASS	PASS
MIN.	388.40	0.84	-92.700	0.920	0.112	64.80		
MAX.	404.20	0.91	-92.200	0.935	0.116	69.10		
AVG.	395.78	0.89	-92.480	0.925	0.113	67.09		
<b>Result</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>
<b>Overall Dimensions Test</b>				<b>Measurement Tools: Caliper (Unit:mm)</b>				
NO	A	B	C	D	E	F	G	
	14.0MAX	14.5MAX	13.5MAX	3.0±0.5	0.6±0.1	2.5±0.3	10.0±0.5	
1	13.72	13.22	12.59	3.27	0.62	2.55	10.04	
2	13.80	13.21	12.50	3.37	0.61	2.47	9.99	
3	13.75	13.21	12.57	3.38	0.63	2.52	10.06	
4	13.59	13.23	12.60	3.45	0.61	2.52	10.09	
5	13.60	13.20	12.61	3.34	0.60	2.52	10.06	
MIN.	13.59	13.20	12.50	3.27	0.60	2.47	9.99	
MAX.	13.80	13.23	12.61	3.54	0.63	2.55	10.09	
AVG.	13.69	13.21	12.57	3.38	0.61	2.52	10.05	
<b>Result</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	

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