

## 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. :** \_\_\_\_\_ **EP13-680** \_\_\_\_\_

**VERSION:** \_\_\_\_\_ **A** \_\_\_\_\_

**DATE:** \_\_\_\_\_ **2020/11/27** \_\_\_\_\_

**Attachments:**

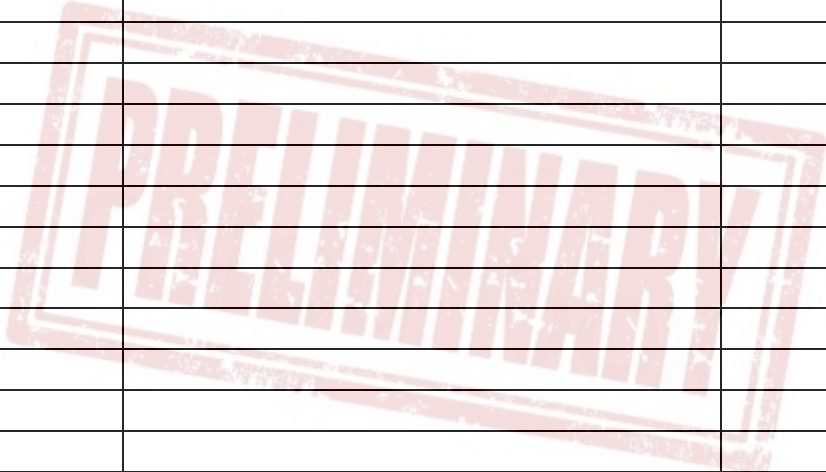
- Product Specification
- Sample Qty. :
- Test Data

Prepared By	Checked By	Approved By
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### Revision Record

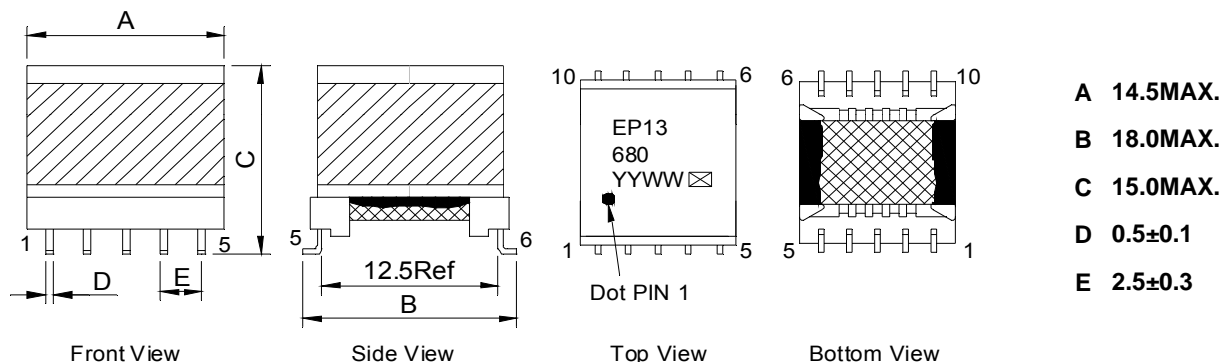
Version	Revision Date	Revision For Items	Reason For Revision
A	2020/11/27	New Product for SI34061 12V 2.1A	-



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# Product Specification

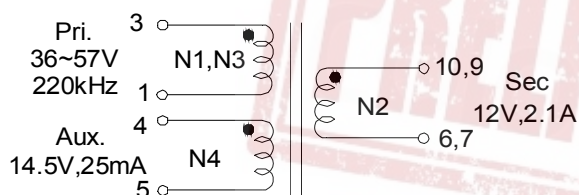
## 1. Physical Dimensions (Unit:mm)



### Notes:

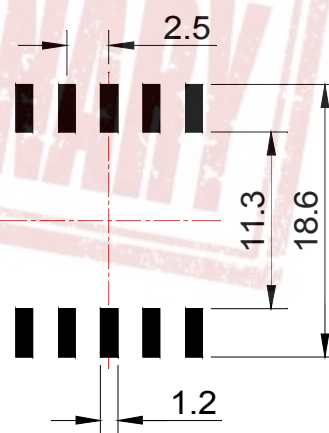
- (1). Marking type is laser printing
- (2). YY: Year Code; WW: Week Code
- (3). :When making samples, S is used to represent the product is a sample
- (4). :Use different letters or numbers to represent the products are produced from different production lines
- (5). Size B not including soldering tags
- (6). Coplanarity Requirement: Less than 0.10mm

## 2. Connection

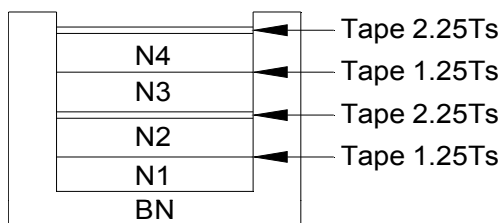


- "●" "Start of winding"
- \*Customer to tie terminals 6&7 and 9&10 on PC board.
- \*Application of the transformer allows for the leadwires between terminals 6&7 and 9&10 to solder bridge.

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



## 4. Structure of Products



## 5. No of Turns & Wire Spec

No	No of Pin	Turns	Wire Spec
N1	3--1	19 TS	ø0.18mm*2P P180
N2	10,9--6,7	6 TS	ø0.29mm*4P P180
N3	3--1	19 TS	ø0.18 mm*2P P180
N4	4--5	8 TS	ø0.18mm*2P P180

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### 6. Electrical Characteristics

\*Operating temperature range: -40°C to +125°C .

\*Storage temperature range: -40°C to +125°C .

Items	Winding	Specifications	Test Conditions
Inductance	L(3-1)	80uH±10%	at 100kHz,1Vrms
Saturation Current	L(3-1)	20% rolloff from intial	at 100kHz,1Vrms @3A
LK-Inductance	LK(3-1) Tie 4,5,6,7,9,10	1.0uH MAX.	at 100kHz,1Vrms
DCR	R(3-1)	140mΩ MAX.	at 25°C
	R(10,9-6,7)	22mΩ MAX.	
	R(4-5)	195mΩ MAX.	
Turns Ratio	(3-1):(4-5):(10,9-6,7)	19:8:6;±3%	at 100kHz,1Vrms
Hi-Pot	PRI. To SEC.	1500VAC	1mA.2SEC.
	WIN. To CORE	500VAC	1mA.2SEC.

### 7. Bill of Material

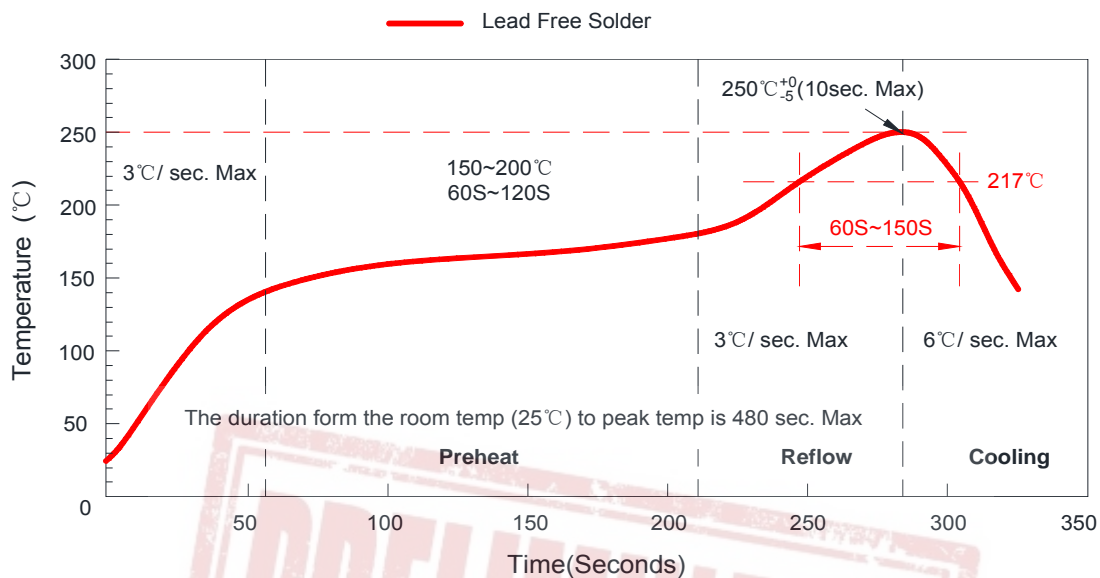
No	Item	Material Name	Manufacturer	UL File No	SGS File No
1	Core	MnZn ferrite core DP95	DA WHA or Equivalent	NIL	A2200005916101001
2	Bobbin	PM-9630	SUMITOMO (SumiDurez) or Equivalent	E41429	SHAEC2002442505
3	Copper Wire	Polyurethane bare wire (Cu) Polysol 180	ELEKTRISOLA or Equivalent	E258243	CE/2020/34972
OR	Copper Wire	Polyurethane wire UEWH/U	PACIFIC or Equivalent	E201757	A219029024010101E
4	Polyimide Tape	Brown adhesive plastic HN NC 0.025mm V-0	RUNSEA (RAYITEK) or Equivalent	E339977	SZXEC2000536905
5	EPOXY	EB-360	CHANGFENG or Equivalent	NIL	SHAEC1925290501
6	EPOXY	TH320	TIAN HUAN or Equivalent	E257593	SZXEC1902353001
7	Varnish	8562*	HANG CHEUNG or Equivalent	E200154	CANEC2000055005
8	Solder	Lead free solder	HONGTAIZHOU or Equivalent	NIL	SZXEC2001415205

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### 8.Recommended Temperature Conditions of Air Reflow Soldering

Test Solderability Temperature Profile



<b>Profile Feature</b>	
Average Ramp-Up Rate (T <sub>smax</sub> to T <sub>p</sub> )	3°C/Second Max.
<b>Preheat</b>	
-Temperature Min. (T <sub>smin</sub> )	150°C
-Temperature Max. (T <sub>smax</sub> )	200°C
-Time (T <sub>smin</sub> to T <sub>smax</sub> )	60-120 Seconds
<b>Time maintained above:</b>	
-Temperature (T <sub>L</sub> )	217°C
-Time (T <sub>L</sub> )	60-150 Seconds
Peak/Classification Temperature (T <sub>p</sub> )	250°C
Time within 5°C of actual PeakTemperature (T <sub>p</sub> )	10 Seconds Max.
Ramp-Down Rate	6°C/Second Max.
Time 25°C to Peak Temperature	8 Minutes Max.

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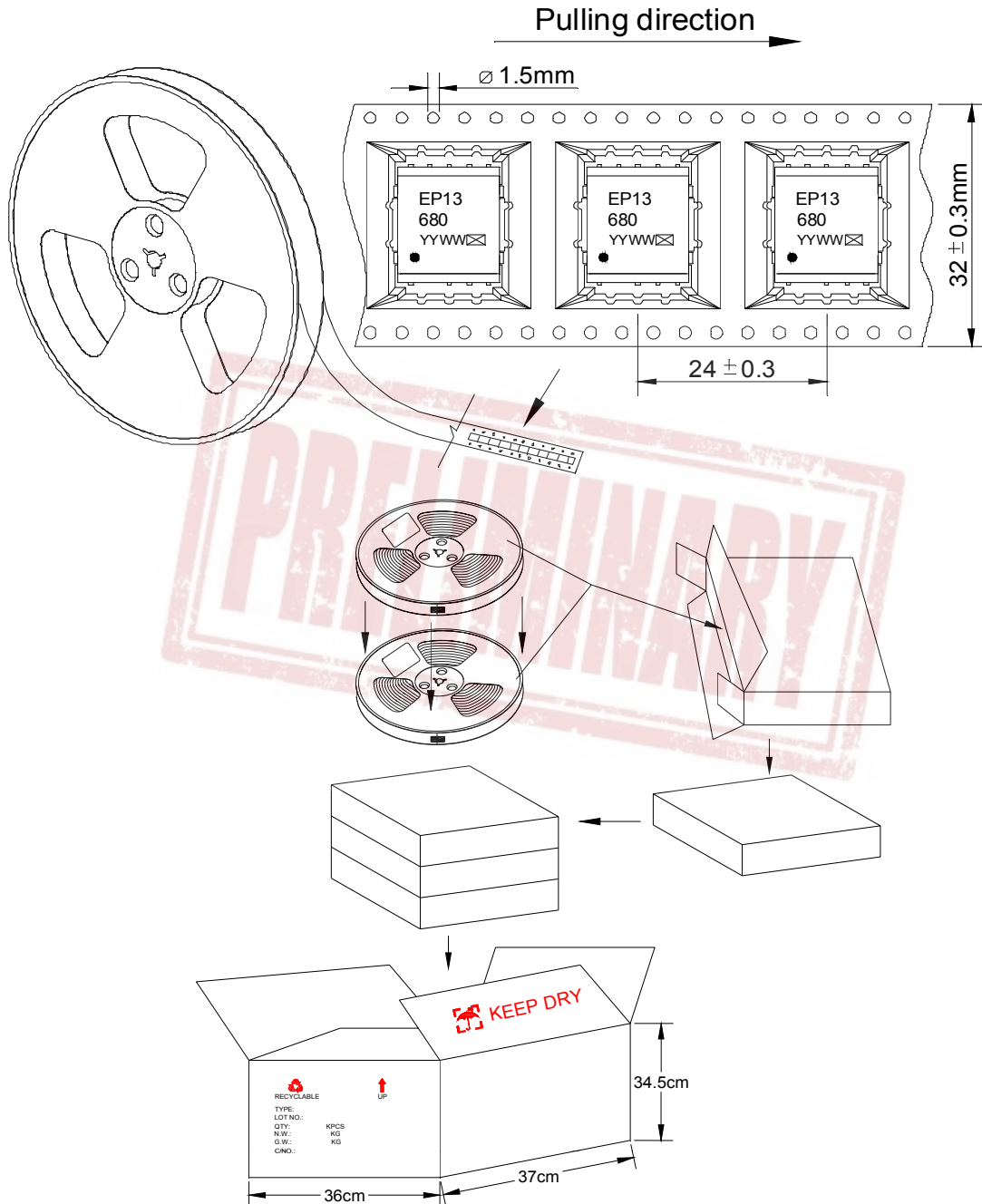
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### 9.Packing Request

\*Every roll of the carrier tape can contain 160pcs products.

\*Every small packing box contains two rolls of carrier tape. Total quantity: 320pcs.

\*Every carton box contains 3 small packing boxes. Total quantity: 960pcs.



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## Test Report

Test Instruments									
HP4284A			VR131			HP4284A	CS2670A		
Inductance	Saturation Current	LK-Inductance	DCR			Turns Ratio	Hi-Pot		
at 100kHz,1Vrms	at 100kHz,1Vrms @3A	at 100kHz,1Vrms	at 25°C			at 100kHz,1Vrms	1mA.2SEC.		
NO.	L(3-1)	L(3-1)	LK(3-1) Tie 4,5,6,7,9,10	R(3-1)	R(10,9-6,7)	R(4-5)	(3-1):(4-5):(10,9-6,7)	PRI. To SEC.	WIN. To CORE
	80uH±10%	20% rolloff from intial	1.0uH MAX.	140mΩ MAX.	22mΩ MAX.	195mΩ MAX.	19:8:6;±3%	1500VAC	500VAC
1	81.70	68.50	0.35	97.00	12.50	104.00	Passed	Passed	Passed
2									
3									
4									
5									
MIN.	81.70	68.50	0.35	97.00	12.50	104.00			
MAX.	81.70	68.50	0.35	97.00	12.50	104.00			
AVG.	81.70	68.50	0.35	97.00	12.50	104.00			
<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>Passed</b>
Overall Dimensions Test						Measurement Tools: Caliper (Unit:mm)			
NO	A	B	C	D	E				
	14.5MAX.	18.0MAX.	15.0MAX.	0.5±0.1	2.5±0.3				
1									
2									
3									
4									
5									
MIN.	0.00	0.00	0.00	0.00	0.00				
MAX.	0.00	0.00	0.00	0.00	0.00				
AVG.	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!				
<b>Result</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>				

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