

SPECIFICATION FOR APPROVAL

<p>CUSTOMER'S APPROVAL CHOP</p> <p>Approval's condition: _____</p> <p>Approved date: _____</p>
--

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. : _____ **EP13-681** _____

VERSION: _____ **A** _____

DATE: _____ **2020/12/24** _____

Attachments:

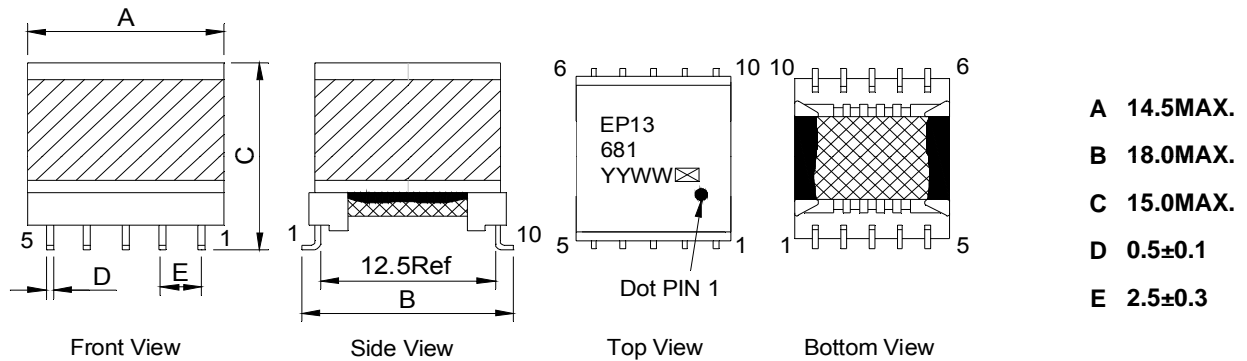
- Product Specification
- Sample Qty. :
- Test Data

Prepared By	Checked By	Approved By
Hebe Deng 2020/12/24	Liang Wong 2020/12/24	Alan Wong 2020/12/24

Semitel International Ltd.,	TEL: 886-2-86922121 FAX: 886-2-26483379
www.semitelint.com	12F, No.183, Sec.1, Datong Rd., Xizhi Dist., New Taipei City 22145, Taiwan

Product Specification

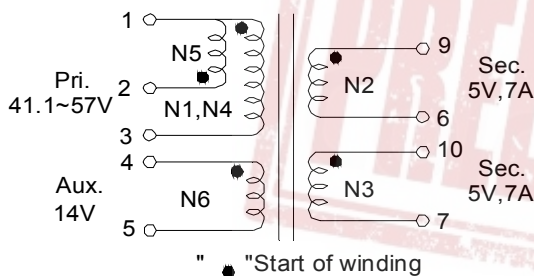
1. Physical Dimensions (Unit:mm)



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

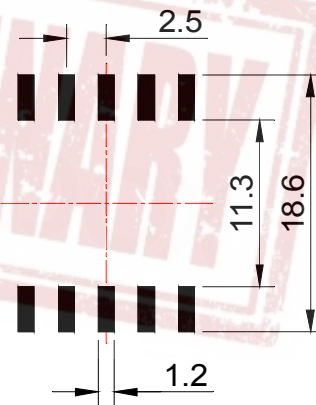
2. Connection



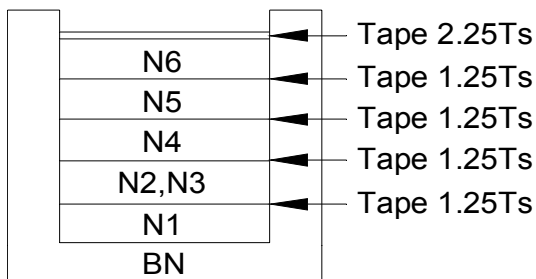
*Customer to tie terminals 6&7 and 9&10 on PC board.

*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	1--3	10 TS	ø0.18 mm* 3P P180
N2	9--6	3 TS	ø0.30 mm* 5P P180
N3	10--7	3 TS	ø0.30 mm* 5P P180
N4	1--3	10 TS	ø0.18 mm* 3P P180
N5	2--1	10 TS	ø0.20mm* 2P P180
N6	4--5	7 TS	ø0.20mm* 3P P180

Semitel'S MODEL NO. :	EP13-681	CUSTOMER'S MODEL NO. :	
VERSION:	A	CUSTOMER'S PART NO. :	
DATE:	2020/12/24		

Product Specification

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(1-3)	85uH MIN.	at 100kHz,0.1Vrms
LK-Inductance	LK(1-3) Tie other	0.5uH MAX.	at 100kHz,0.1Vrms
DCR	R(1-3)	50mΩ MAX.	at 25°C
	R(2-1)	221mΩ MAX.	
	R(4-5)	69mΩ MAX.	
	R(9,10-6,7)	3.8mΩ MAX.	
Turns Ratio	(1-3):(2-1):(4-5):(9-6):(10-7)	10:10:7:3:3;±3%	at 100kHz,0.1Vrms
Hi-Pot	PRI. To SEC.	1500VAC	5mA.3SEC.
	WIN. To CORE	500VAC	5mA.3SEC.

7. Bill of Material

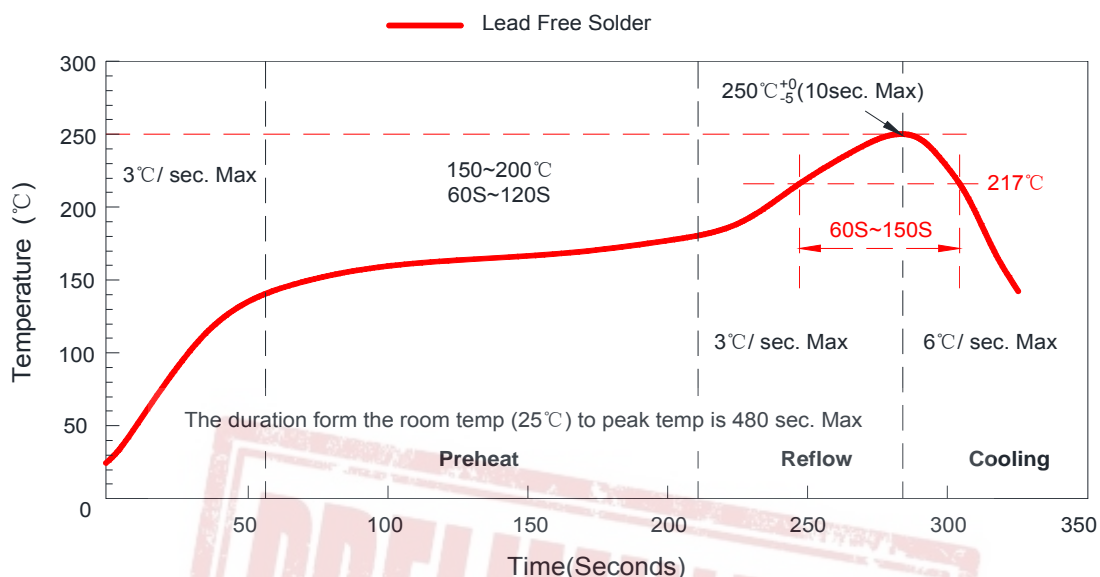
No	Item	Material Name	Manufacturer	UL File No	SGS File No
1	Core	MnZn ferrite core DP95	DA WHA or Equivalent	NIL	A2200005916101001
2	Bobbin	PM-9630	SUMITOMO (SumiDurez) or Equivalent	E41429	SHAEC2002442505
3	Copper Wire	Polyurethane bare wire (Cu) Polysol 180	ELEKTRISOLA or Equivalent	E258243	CE/2020/34972
OR	Copper Wire	Polyurethane wire UEWH/U	PACIFIC or Equivalent	E201757	A220035992510301E
4	Polyimide Tape	Brown adhesive plastic HN NC 0.025mm V-0	RUNSEA (RAYITEK) or Equivalent	E339977	SZXEC2000536905
OR	Polyimide Tape	Polyimide Adhesive Tape PF-301	YAHUA or Equivalent	E165111	CANEC2008940301
5	EPOXY	EB-360	CHANGFENG or Equivalent	NIL	SHAEC2022446003
6	Varnish	8562*	HANG CHEUNG or Equivalent	E200154	CANEC2000055005
7	Solder	Lead free solder	HONGTAIZHOU or Equivalent	NIL	SZXEC2001415205

Semitel'S MODEL NO. :	EP13-681	CUSTOMER'S MODEL NO. :	
VERSION:	A	CUSTOMER'S PART NO. :	
DATE:	2020/12/24		

Product Specification

8.Recommended Temperature Conditions of Air Reflow Soldering

Test Solderability Temperature Profile



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

Semitel'S MODEL NO. :	EP13-681	CUSTOMER'S MODEL NO. :	
VERSION:	A	CUSTOMER'S PART NO. :	
DATE:	2020/12/24		

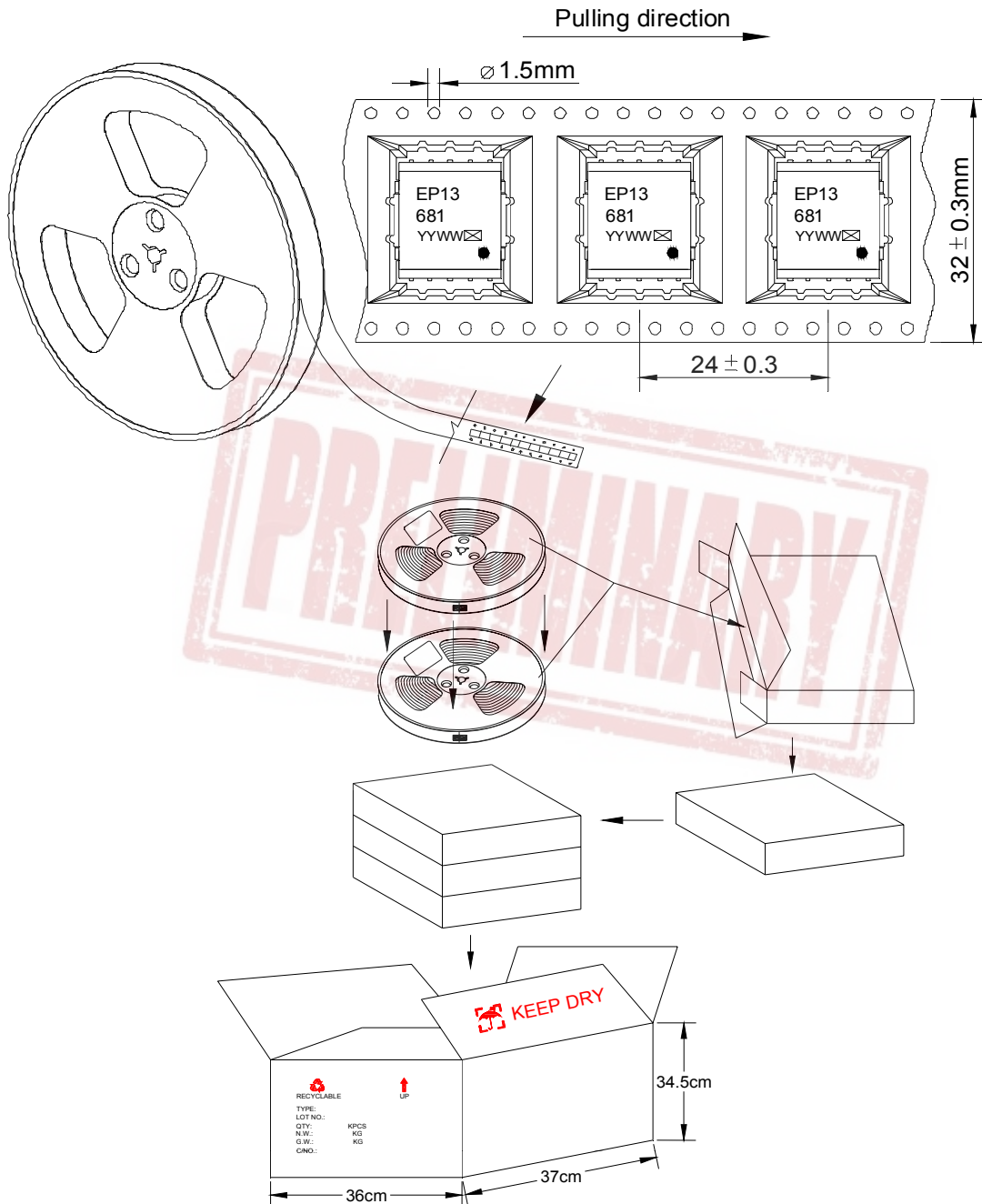
Product Specification

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.



Semitel'S MODEL NO. :	EP13-681	CUSTOMER'S MODEL NO. :	
VERSION:	A	CUSTOMER'S PART NO. :	
DATE:	2020/12/24		

Test Report

Test Instruments									
HP4284A		VR131				HP4284A	CS2670A		
Inductance	LK-Inductance	DCR				Turns Ratio	Hi-Pot		
at 100kHz,0.1Vrms	at 100kHz,0.1Vrms	at 25°C				at 100kHz,0.1Vrms	5mA.3SEC.		
NO.	L(1-3)	LK(1-3) Tie other	R(1-3)	R(2-1)	R(4-5)	R(9,10-6,7)	(1-3):(2-1):(4-5):(9-6):(10-7)	PRI. To SEC.	WIN. To CORE
	85uH MIN.	0.5uH MAX.	50mΩ MAX.	221mΩ MAX.	69mΩ MAX.	3.8mΩ MAX.	10:10:7:3:3;±3%	1500VAC	500VAC
1	200.00	0.12	35.00	123.00	54.00	2.60	Passed	Passed	Passed
2									
3									
4									
5									
MIN.	200.00	0.12	35.00	123.00	54.00	2.60			
MAX.	200.00	0.12	35.00	123.00	54.00	2.60			
AVG.	200.00	0.12	35.00	123.00	54.00	2.60			
Result	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
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!				
Result	Passed	Passed	Passed	Passed	Passed				

Semitel'S MODEL NO. :	EP13-681	CUSTOMER'S MODEL NO. :	
VERSION:	A	CUSTOMER'S PART NO. :	
DATE:	2020/12/24		