

SPECIFICATION FOR APPROVAL

CUSTOMER'S APPROVAL CHOP

Approval's condition: _____

Approved date: _____

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: **EP13A**

Semitel'S MODEL NO. : **EP13A-1021**

VERSION: **A**

DATE: **2024/12/2**

Attachments:

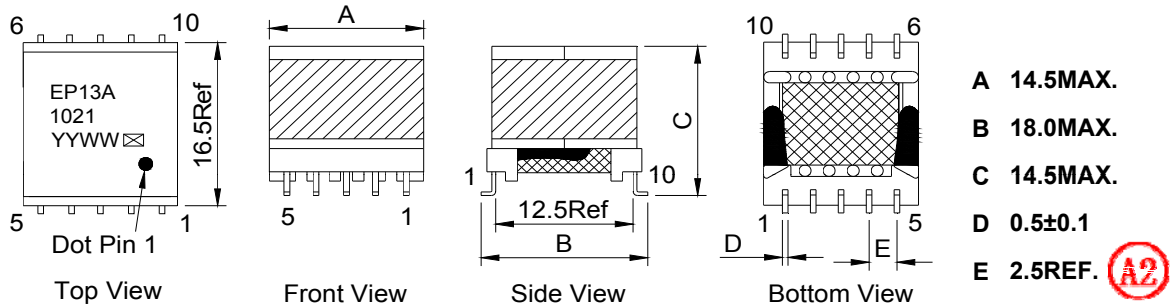
- Product Specification
- Sample Qty. :
- Test Data

Prepared By	Checked By	Approved By
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Product Specification

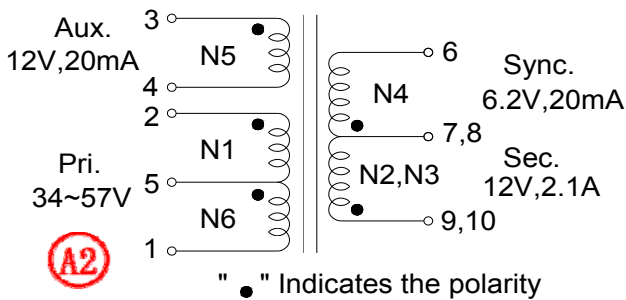
1. Physical Dimensions (Unit:mm)



Notes:

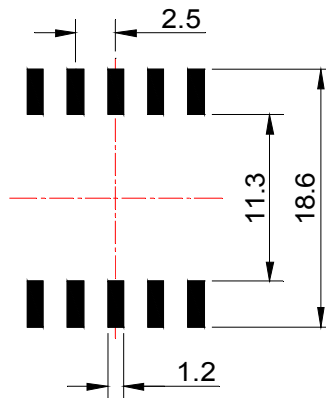
- (1). Marking type is laser printing
- (2). YY: Year Code; WW: Week Code
- (3). ☒ :When making samples, S is used to represent the product is a sample
- (4). ☒ :Use different letters or numbers to represent the products are produced from different production lines
- (5). Size B does not include solder tips
- (6). Coplanarity requirement: Less than 0.10mm
- (7). Add epoxy to the center column of the cores

2. Connection



*Connect pin 9 to 10 and pin 7 to 8 on the PC board.

3. Recommended Pad Layout (Unit:mm)



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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(1-2)	65uH±7%	at 1kHz,0.1V
LK-Inductance	LK(1-2) Tie others	0.53uH MAX. A2	at 250kHz,0.1V
DCR	R(1-2)	112mΩ MAX. A2	at 25°C
	R 7,8-9,10	13mΩ MAX.	
	R(4-3)	41mΩ MAX.	
	R(6-7)	20mΩ MAX. A2	
Turns Ratio	(1-2):(7,8-9,10):(4-3):(6-7)	18:6:6:3;±3%	at 1kHz,0.1V
Inter cap.	C(1,2-7,8,9,10)	55pF MAX. A2	at 100kHz,0.1V
Hi-Pot	Pri. To Sec.	1500VAC	5mA.3S
	Pin1 To Pin4	500VAC	5mA.3S
	Win. To Core	500VAC	5mA.3S

7. Bill of Material

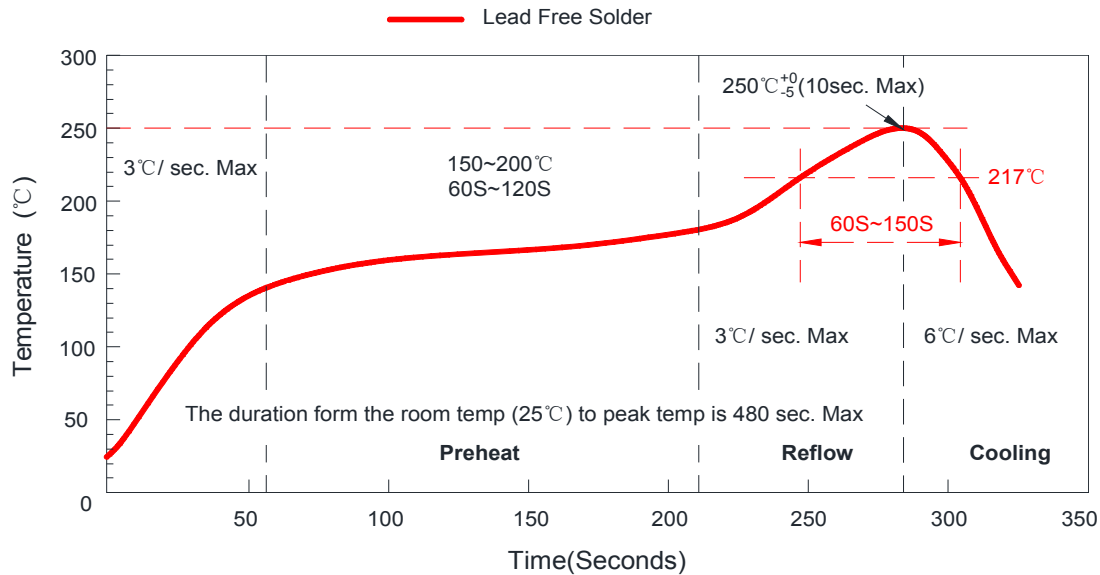
No	Items	Material Name	Manufacturer	UL File No	SGS File No
1	Core	Soft ferrite cores SSP-95	SUNSHINE or Equivalent	NIL	CANEC2302733601
2	Bobbin	PM-9630	SUMITOMO or Equivalent	E41429	SHAEC23020708503
3	Copper Wire	Polyurethane bare wire (Cu) Polysol 180	ELEKTRISOLA or Equivalent	E258243	ETR23302045
OR	Copper Wire	Polyurethane wire UEWH/U	PACIFIC or Equivalent	E201757	A2230419474101001E
4	Polyimide Tape	Polyimide Adhesive Tape PF*(d)(g)	YAHUA or Equivalent	E165111	CANEC23011965803
5	Epoxy	H907-HF	HUA CHUANG or Equivalent	E304477	A2230397899101002
6	Solder	Lead free solder	BAIMU or Equivalent	NIL	CANEC23003886003

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8.Recommended Temperature Conditions of Air Reflow Soldering

Test Solderability Temperature Profile



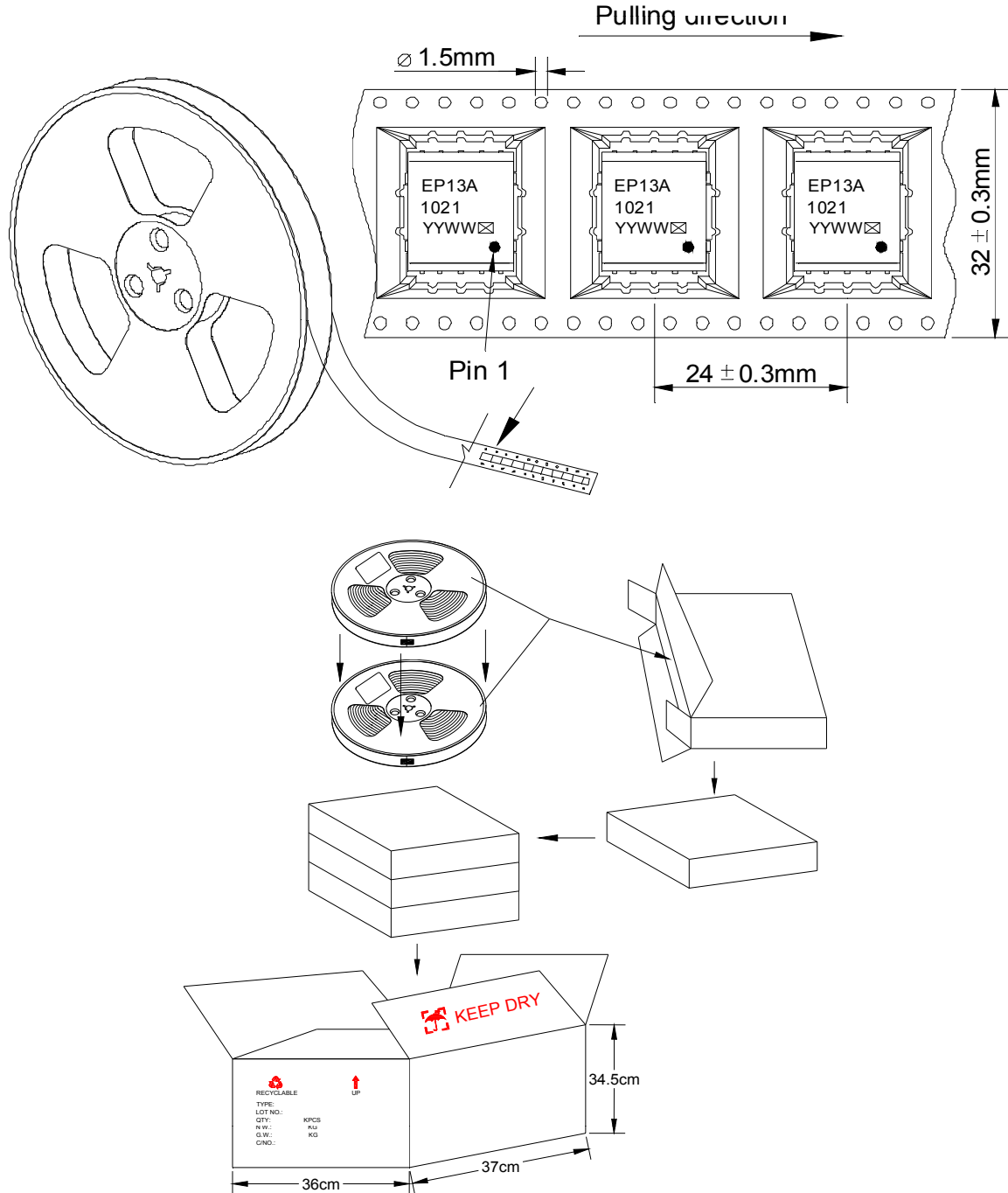
Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (T _{smax} to T _p)	3°C/Second Max.
Preheat	
-Temperature Min. (T _{smin})	150°C
-Temperature Max. (T _{smax})	200°C
-Time (T _{smin} to T _{smax})	60-120 Seconds
Time maintained above:	
-Temperature (T _L)	217°C
-Time (T _L)	60-150 Seconds
Peak/Classification 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.

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9.Packing Request

- *Every roll of the carrier tape can contain 160pcs products.
- *Every small packing box contains 2 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		HP4284A		VR131			HP4284A		HP4284A		CS2670A
Inductance		LK-Inductance		DCR			Inter cap.		Turns Ratio		Hi-Pot
at 1kHz,0.1V		at 250kHz,0.1V		at 25°C			at 100kHz,0.1V		at 1kHz,0.1V		5mA.3S
No	L(1-2)	LK(1-2) Tie others	R(1-2)	R(7,8-9,10)	R(4-3)	R(6-7)	C(1,2-7,8,9,10)	(1-2):(7,8-9,10):(4-3):(6-7)	Pri. To Sec.	Pin1 To Pin4	Win. Core
	65uH±7%	0.53uH MAX.	112mΩ MAX.	13mΩ MAX.	41mΩ MAX.	20mΩ MAX.	55pF MAX.	18:6:6:3;±3%	1500VAC	500VAC	500VAC
1	65.09	0.379	94.54	11.45	34.82	16.15	38.59	Passed	Passed	Passed	Passed
2	65.29	0.375	93.96	11.54	34.34	16.02	39.26	Passed	Passed	Passed	Passed
3	64.66	0.362	94.11	11.39	34.41	16.07	38.72	Passed	Passed	Passed	Passed
4	64.92	0.395	94.64	11.62	34.52	16.50	37.05	Passed	Passed	Passed	Passed
5	64.49	0.382	94.54	11.47	34.71	16.24	37.81	Passed	Passed	Passed	Passed
6	65.11	0.399	94.34	11.25	34.44	16.04	36.08	Passed	Passed	Passed	Passed
7	64.65	0.403	93.99	11.17	34.29	16.08	41.73	Passed	Passed	Passed	Passed
8	65.15	0.376	93.97	11.12	34.36	16.20	40.01	Passed	Passed	Passed	Passed
9	65.64	0.401	94.20	11.44	34.24	16.58	35.45	Passed	Passed	Passed	Passed
10	64.29	0.383	94.06	11.46	34.22	16.51	37.22	Passed	Passed	Passed	Passed

MIN.	64.29	0.362	93.96	11.12	34.22	16.02	35.45				
MAX.	65.64	0.403	94.64	11.62	34.82	16.58	41.73				
AVG.	64.93	0.386	94.24	11.39	34.44	16.24	38.19				
Result	Passed	Passed	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.	14.5MAX.	0.5±0.1	2.5REF.						
1	13.45	17.22	14.10	0.49	2.50						
2	13.44	17.17	14.11	0.49	2.50						
3	13.41	17.23	14.14	0.49	2.50						
4	13.42	17.16	14.24	0.50	2.50						
5	13.44	17.21	14.10	0.49	2.50						
6	13.45	17.24	14.10	0.49	2.50						
7	13.41	17.21	14.10	0.50	2.50						
8	13.43	17.21	14.10	0.50	2.50						
9	13.50	17.21	14.10	0.50	2.50						
10	13.44	17.19	14.10	0.50	2.50						

MIN.	13.41	17.16	14.10	0.49	2.50						
MAX.	13.50	17.24	14.24	0.50	2.50						
AVG.	13.44	17.21	14.12	0.50	2.50						
Result	Passed	Passed	Passed	Passed	Passed						

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