

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: _____

EP13

Semitel'S MODEL NO. : _____

EP13-563

VERSION: _____

E

DATE: _____

2021/7/15

Attachments:

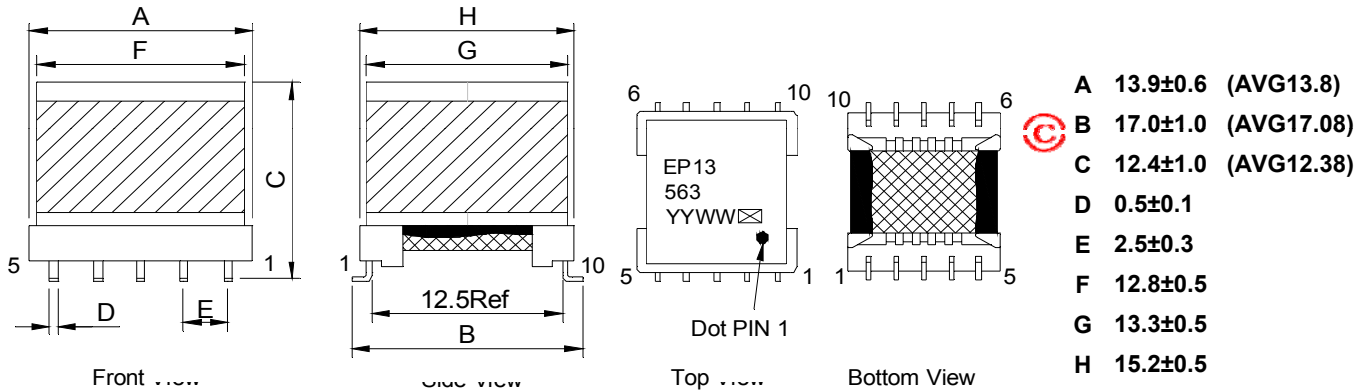
- Product Specification
- Sample Qty. :
- Test Data

Prepared By	Checked By	Approved By
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Product Specification

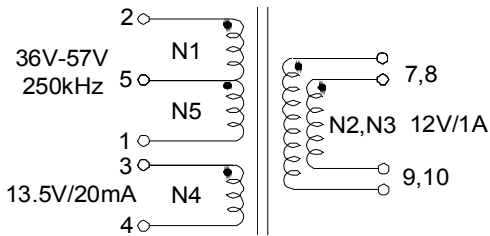
1.Physical Dimensions (Unit:mm)



Notes:

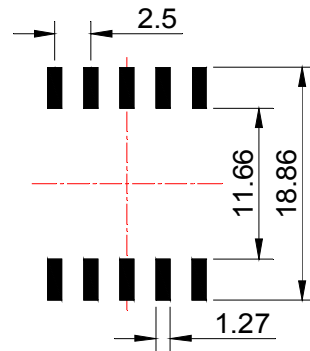
- (1).Marking type is laser printing
- (2).YY: Year Code; WW: Week Code
- (3). :When making samples, S is used to represent the product is a sample.
- (4). :Use different letters or numbers to represent the products are produced from different production lines .
- (5).Size B not including soldering tags
- (6).Coplanarity Requirement: Less than 0.15mm

2. Connection



" ● "Start of winding
 *Customer to tie terminals 7&8 and 9&10 on PC board.
 *Application of the transformer allows 7&8 and 9&10 to solder bridge.

3.Recommended Pad Layout (Unit:mm)



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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(2-1)	150uH±7%	at 100kHz,0.1Vrms
LK-Inductance	LK(2-1) Tie other	1.3uH MAX.	at 100kHz,0.1Vrms
DCR	R(2-1)	365mΩ MAX.	at 25°C
	R(3-4)	290mΩ MAX.	
	R(7,8-9,10)	40mΩ MAX.	
Turns Ratio	(2-1):(3-4)	2.25:1;±3%	at 100kHz,0.5Vrms
	(2-1):(7,8-9,10)	2.57:1;±3%	
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 JCP-95	FCRI or Equivalent	NIL	CANEC1913430901
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
4	Polyimide Tape	Brown adhesive plastic HN NC 0.025mm V-0	RUNSEA ,RAYITEK, or Equivalent	E339977	SZXEC1900617511
5	EPOXY	H907-HF 	HUA CHUANG or Equivalent	E304477	A2200309495101001
6	Varnish	8562*	HANG CHEUNG or Equivalent	E200154	CANEC1900008105
7	Solder	Lead free solder	HONGTAIZHOU or Equivalent	NIL	CANEC1911577101

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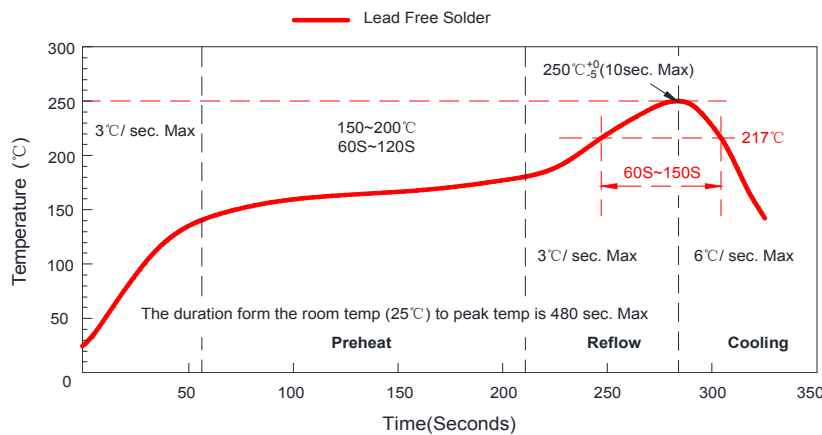
Vendor	Part number	Product Name	Type	Pin	Bobbin	Inductance	Application	Number of windings
Semitel	EP13-563	Power Transformer	SMT	10Pin	EP13	150uH	Flyback	Winding 5Layers

Input			Output			Operating Temp(°C)range Min	Operating Temp(°C)range Max
Vin(Min)	Vin(Max)	Pin	Vo	Io	Pin		
36V	57V	2-1	12V	1A	7,8-9,10	-40	125

Dimension (LXWXH)	Vendor Part no
13.9*17*12.4mm REF	EP13-563

8.Recommended Temperature Conditions of Air Reflow Soldering

Test Solderability Temperature Profile



Profile Feature	
Average Ramp-Up Rate (T _{max} to T _p)	3°C/Second Max.
Preheat	
-Temperature Min. (T _{min})	150°C
-Temperature Max. T _{max}	200°C
-Time (T _{min} to T _{max})	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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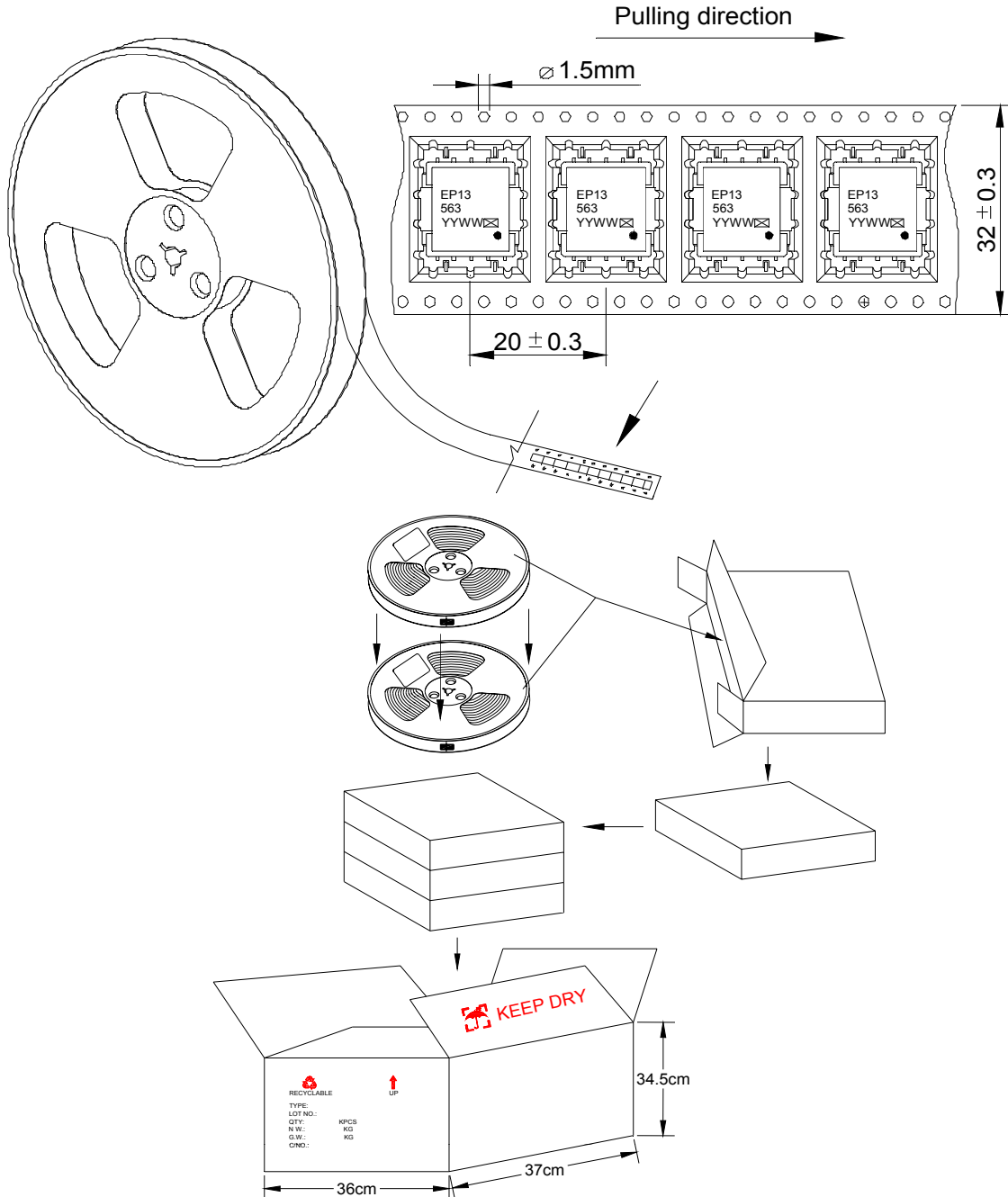
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9.Packing Request

*Every roll of the carrier tape can contain 200 pcs products.

*Every small packing box contains two rolls of carrier tape. Total quantity: 400 pcs.

*Every cartoon box contains 3 small packing boxes. Total quantity: 1200 pcs.



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Test Report

Test Instruments									
HP4284A		VR131			HP4284A		CS2670A		
Inductance	LK-Inductance	DCR			Turns Ratio		Hi-Pot		
at 100kHz,0.1Vrms	LK(2-1) Tie other	at 25°C			at 100kHz,0.5Vrms		5mA.3SEC.		
L(2-1)	LK(2-1) Tie other	R(2-1)	R(3-4)	R(7,8-9,10)	(2-1):(3-4)	(2-1):(7,8-9,10)	PRI. To SEC.	WIN. To CORE	
150uH±7%	1.3uH MAX.	365mΩ MAX.	290mΩ MAX.	40mΩ MAX.	2.25:1;±3%	2.57:1;±3%	1500VAC	500VAC	
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	Passed	Passed	Passed	Passed

Overall Dimensions Test **Measurement Tools: Caliper (Unit:mm)**

NO	A	B	C	D	E	F	G	H	
	13.9±0.6	17.0±1.0	12.4±1.0	0.5±0.1	2.5±0.3	12.8±0.5	13.3±0.5	15.2±0.5	
1									
2									
3									
4									
5									

MIN.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAX.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG.	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Result	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	

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