

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: **EFD25**

Semitel'S MODEL NO. : **EFD25-490**

VERSION: **B**

DATE: **2020/12/7**

Attachments:

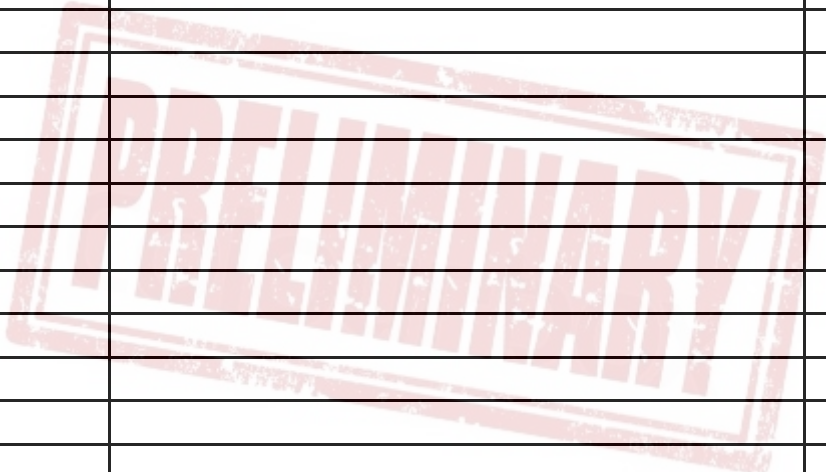
- Product specification
- Sample Qty.:
- Test data

Prepared By	Checked By	Approved By
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Revision Record

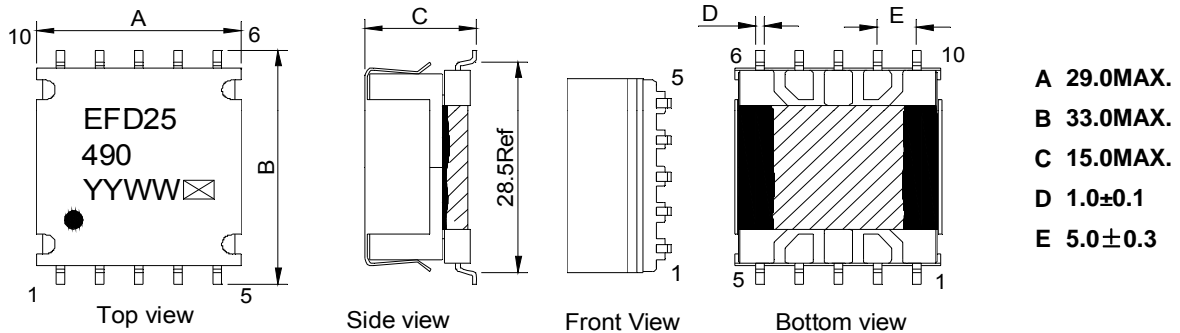
Version	Revision Date	Revision For Items	Reason For Revision
A	2020/11/9	New product TPS23730 12V 4A Flyback	/
B	2020/12/7	1,The wire spec of Pin5-4 change from ø0.28 mm*8P to ø0.28 mm*5P.	Customer request
		2,DCR(5-4) change from 15mΩ Max to 24mΩ Max.	Change according to the measured sample data



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Product Specification

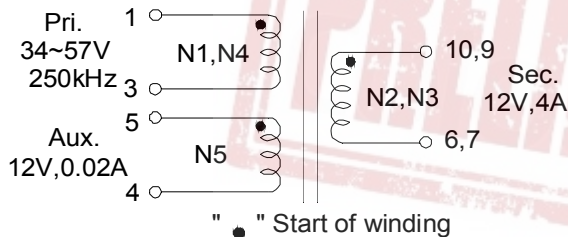
1. Physical Dimensions (Unit:mm)



Notes:

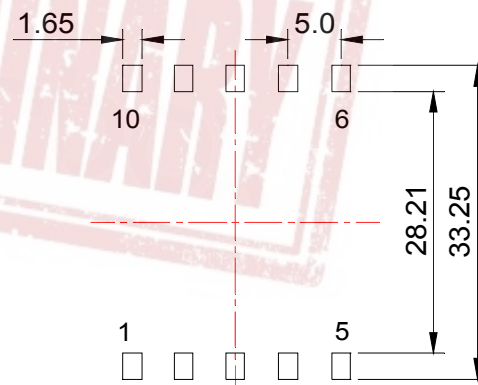
- *Marking type is laser printing
- *YY: Year Code; WW: Week Code
- * :When making samples, S is used to represent the product is a sample.
- * :Use different letters or numbers to represent the products are produced from different production lines .
- *Size B not including soldering tags
- *Coplanarity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

2. Connection

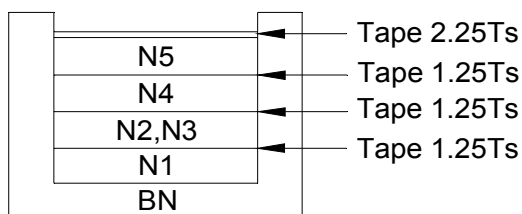


- *Customer to tie terminals 6&7 and 9&10 on PC board.
- *Application of the transformer allows for the leadwires between terminals 6&7 and 9&10 to solder bridge.

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	14 Ts	∅0.28 mm*2P P180
N2,N3	10,9 -- 7,6	6 Ts	∅0.32 mm*8P P180
N4	1 -- 3	14 Ts	∅0.28 mm*2P P180
N5	5 -- 4	6 Ts	∅0.28 mm*5P P180


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6. Electrical Characteristics

*Operating temperature:-40°C to +125°C including temp rise.

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

Items	Winding	Specifications	Test Conditions
Inductance	L(1-3)	55uH±10%	at 250kHz,0.1Vrms
LK-Inductance	LK(1-3) Tie other	0.6uH MAX.	at 250kHz,0.1Vrms
DCR	R(1-3)	55mΩ MAX.	at 25°C
	R(5-4)	24mΩ MAX. 	
	R(10,9-6,7)	10mΩ MAX.	
Turns Ratio	(1-3):(10,9-6,7):(5-4)	1:0.428:0.428;±3%	at 250kHz,0.1Vrms
Hi-Pot	Pri.TO Sec.	2500VDC	5mA.3Sec
	Pri.TO Aux.	800VAC	
	Win. TO Core	800VAC	

7.Bill of Material

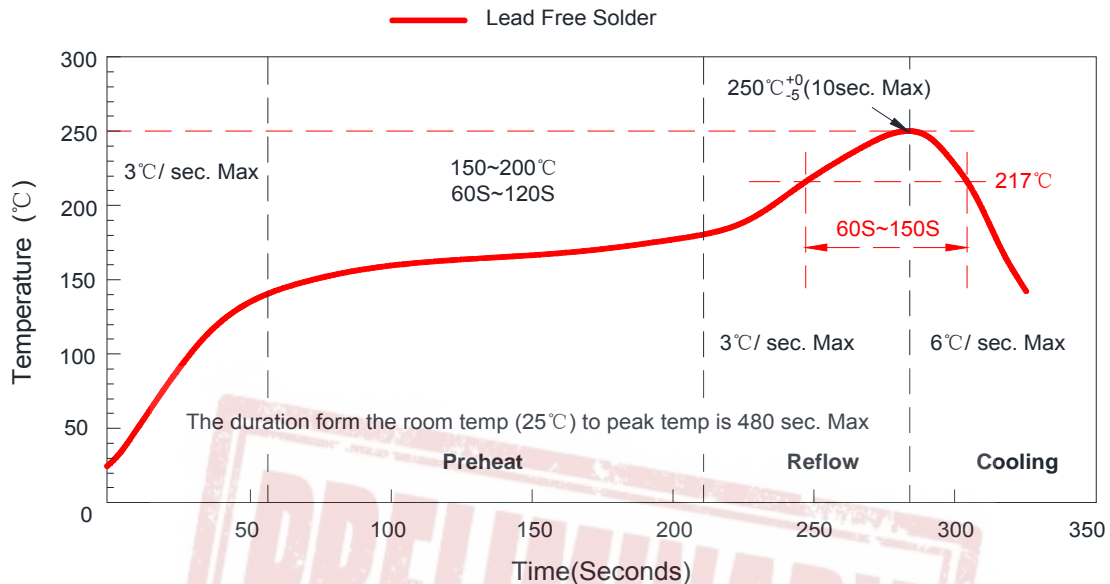
No	Items	Material Name	Manufacturer	UL File No	SGS File No
1	Core	FERRITE CORE JCP-95	FCRI or Equivalent	NIL	A2200234874101001R1
2	Bobbin	PM-9630	SUMITOMO (SumiDurez) or Equivalent	E41429	SHAEC2002442505
3	CLIP	SUS301	TONG FENG or Equivalent	NIL	SZXEC2001378801
4	Copper Wire	Polyurethane bare wire (Cu) Polysol 180	ELEKTRISOLA or Equivalent	E258243	CE/2020/34972
OR	Copper Wire	Polyurethane wire UEWH/U	PACIFIC or Equivalent	E201757	A219029024010101E
5	Polyimide Tape	Brown adhesive plastic HN NC 0.025mm V-0	RUNSEA (RAYITEK)or Equivalent	E339977	SZXEC2000536905
6	EPOXY	TH320	TIAN HUAN or Equivalent	E257593	SZXEC1902353001
7	EPOXY	EB-360	CHANGFENG or Equivalent	NIL	SHAEC1925290501
8	Varnish	ZS-NJ-D938XX	ZHAOSHUN or Equivalent	E329120	CANEC2003028910
9	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



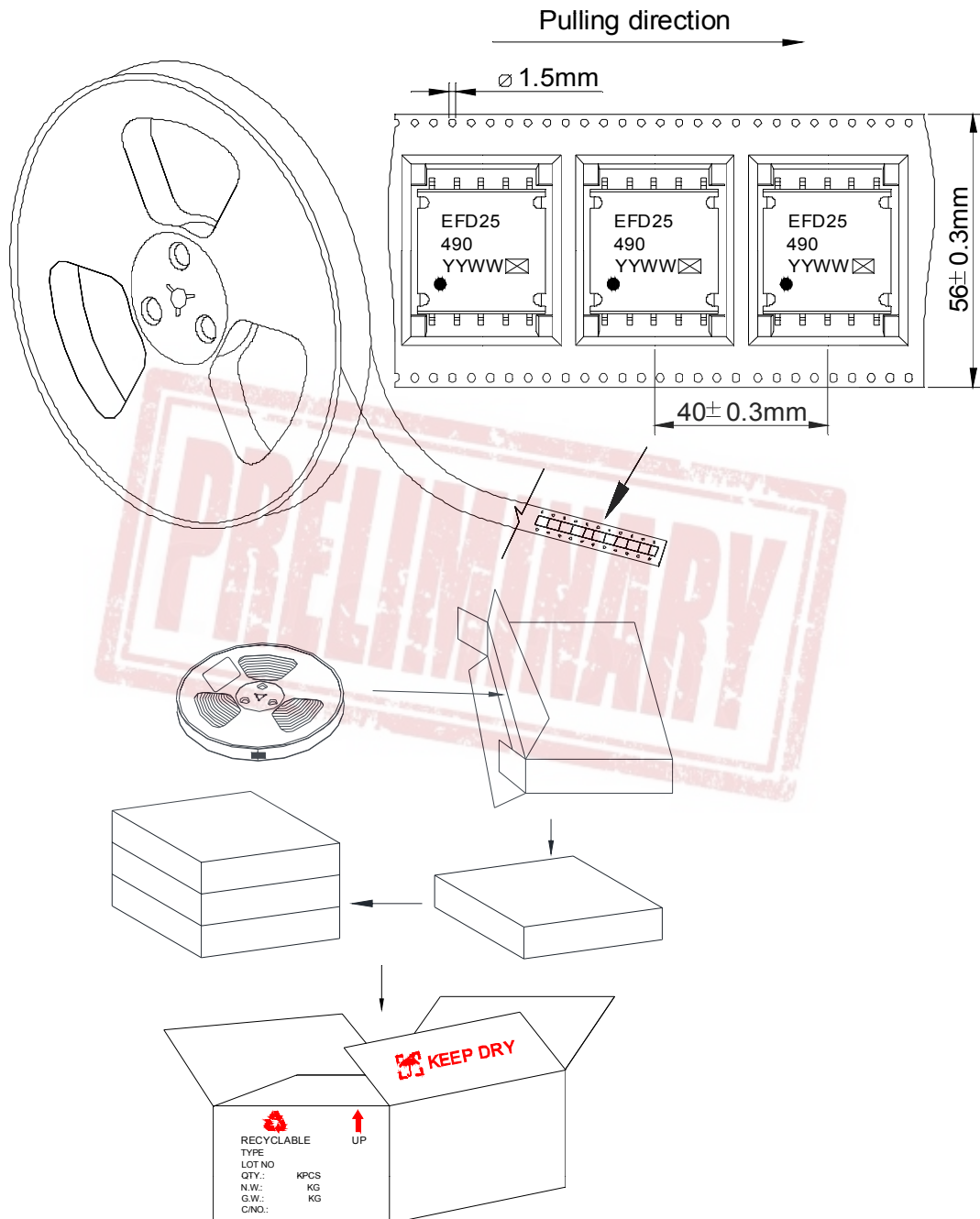
Profile Feature	
Average Ramp-Up Rate (T _{max} to T _p)	3°C/Second Max.
Preheat	
-Temperature Min. (T _{min})	150°C
-Temperature Max. (T _{max})	200°C
-Time (T _{min} to T _{max})	60-120 Seconds
Time maintained above:	
-Temperature (T _L)	217°C
-Time (T _L)	60-150 Seconds
Peak/Classification Temperature (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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9.Packing Request

- (1), Every roll of the carrier tape can contain 95 pcs products.
- (2), Every small packing box contains one rolls of carrier tape. Total quantity: 95 pcs.
- (3), Every carton box contains 3 small packing boxes. Total quantity: 285 pcs.



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Test Report

Test Instruments									
HP4284A		DCR METER 131			HP4284A	CS2670A			
NO	Inductance	LK-Inductance	DCR			Turns Ratio	Hi-Pot		
	at 250kHz,0.1Vrms	at 250kHz,0.1Vrms	at 25°C			at 250kHz,0.1Vrms	5mA.3Sec		
	L(1-3)	LK(1-3) Tie other	R(1-3)	R(5-4)	R(10,9-6,7)	(1-3):(10,9-6,7):(5-4)	Pri.TO Sec.	Pri.TO Aux.	Win. TO Core
	55uH±10%	0.6uH MAX.	55mΩ MAX.	24mΩ MAX.	10mΩ MAX.	1:0.428:0.428;±3%	2500VDC	800VAC	800VAC
1	55.00	0.15	44.30	18.20	7.50	Passed	Passed	Passed	Passed
2									
3									
4									
5									
MIN.	55.00	0.15	44.30	18.20	7.50				
MAX.	55.00	0.15	44.30	18.20	7.50				
AVG.	55.00	0.15	44.30	18.20	7.50				
Result	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Overall Dimensions Test					Measurement Tools: Caliper (Unit:mm)				
NO	A	B	C	D	E				
	29.0MAX.	33.0MAX.	15.0MAX.	1.0±0.1	5.0±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				

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