

SPECIFICATION FOR APPROVAL

<p>CUSTOMER'S APPROVAL CHOP</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: _____

EFD15

Semitel'S MODEL NO. : _____

EFD15-143

VERSION: _____

A

DATE: _____

2020/8/3

Attachments:

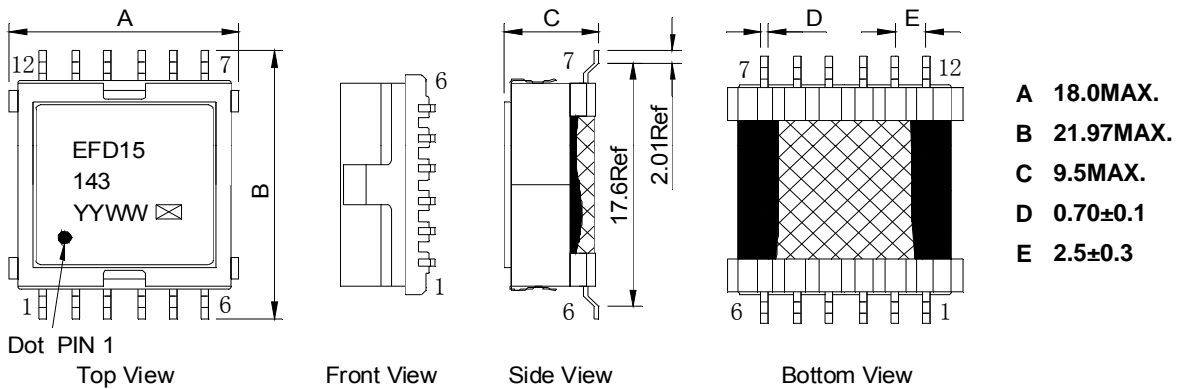
- Product specification
- Sample Qty.:
- Test data

Prepared By	Checked By	Approved By
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Product Specification

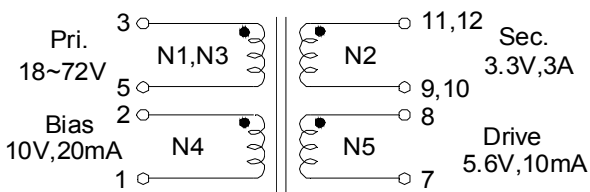
1. Physical Dimensions (Unit:mm)



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 0.10mm

2. Connection

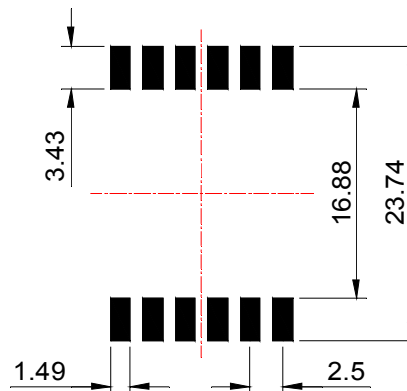


" • "Start of winding

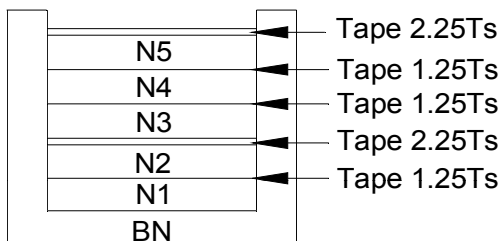
*Customer to tie terminals 9&10 and 11&12 on PC board.

*Application of the transformer allows for the leadwires between terminals 9&10 and 11&12 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--5	52 Ts	ø0.15mm*1P P180
N2	11,12--9,10	8 Ts	ø0.26mm*6P P180
N3	3--5	52 Ts	ø0.15mm*1P P180
N4	2--1	26 Ts	ø0.15mm*1P P180
N5	8--7	14 Ts	ø0.15mm*2P 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(3-5)	166.5uH±10%	at 100kHz,0.1VAC
Inductance	L(3-5)	150uH MIN.	at 100kHz,0.1VAC @1.2A
LK-Inductance	LK(3-5) Tie other	2.5uH MAX.	at 100kHz,0.1VAC
DCR	R(3-5)	770mΩ MAX.	at 25°C
	R(2-1)	1.12Ω MAX.	
	R(12,11-9,10)	20mΩ MAX.	
	R(8-7)	523mΩ MAX.	
Turns Ratio	(3-5):(2-1):(11,12-9,10):(8-7)	52:26:8:14;±3%	at 20kHz,1VAC
Hi-Pot	Pri. To Sec.	1500VAC	3mA.60SEC
	Pri.To Aux	1500VAC	3mA.60SEC
	Win.To Core	500VAC	3mA.60SEC

7.Bill of Material

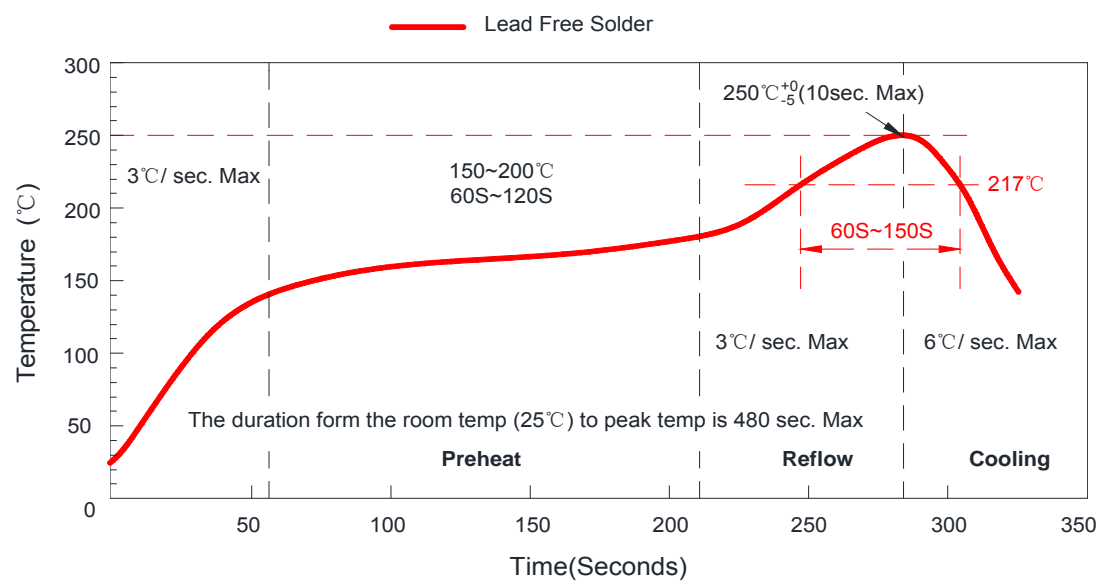
No	Items	Material name	Manufacturer	UL File No	SGS File No
1	Core	FERRITE CORE JCP-95	FCRI or Equivalent	NIL	CANEC1913430901
2	Bobbin	PM-9630	SUMITOMO (SumiDurez) or Equivalent	E41429	SHAEC2002442505
3	Clip	SUS301	TONG FENG or Equivalent	NIL	SZXEC1901434601
4	Copper Wire	Polyurethane wire P180	ELEKTRISOLA or Equivalent	E258243	CE/2019/37143
5	Polyimide Tape	Brown adhesive plastic HN NC 0.025mm V-0	RUNSEA (RAYITEK)or Equivalent	E339977	SZXEC1900617511
6	EPOXY	EB-360	CHANGFENG or Equivalent	NIL	SHAEC1925290501
7	EPOXY	TH320	TIAN HUAN or Equivalent	E257593	SZXEC1902353001
8	Varnish	ZS-NJ-D938XX	ZHAOSHUN or Equivalent	E329120	CANEC1903703503
9	Solder	Lead free solder	HONGTAIZHOU or Equivalent	NIL	SZXEC2001415205

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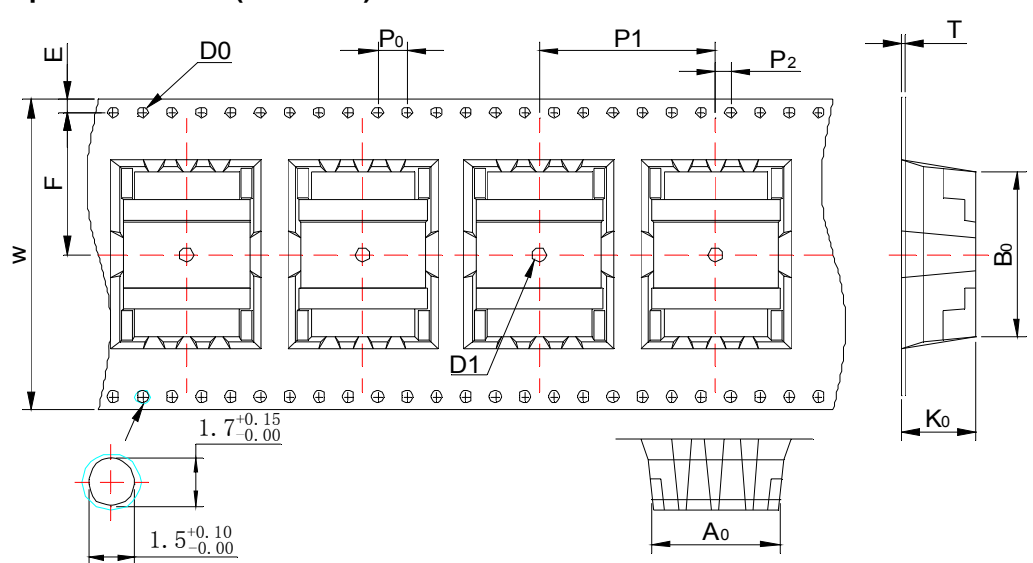
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8.Recommended Temperature Conditions of Air Reflow Soldering

Test Solderability Temperature Profile



9.Tape Dimensions (Unit: mm)



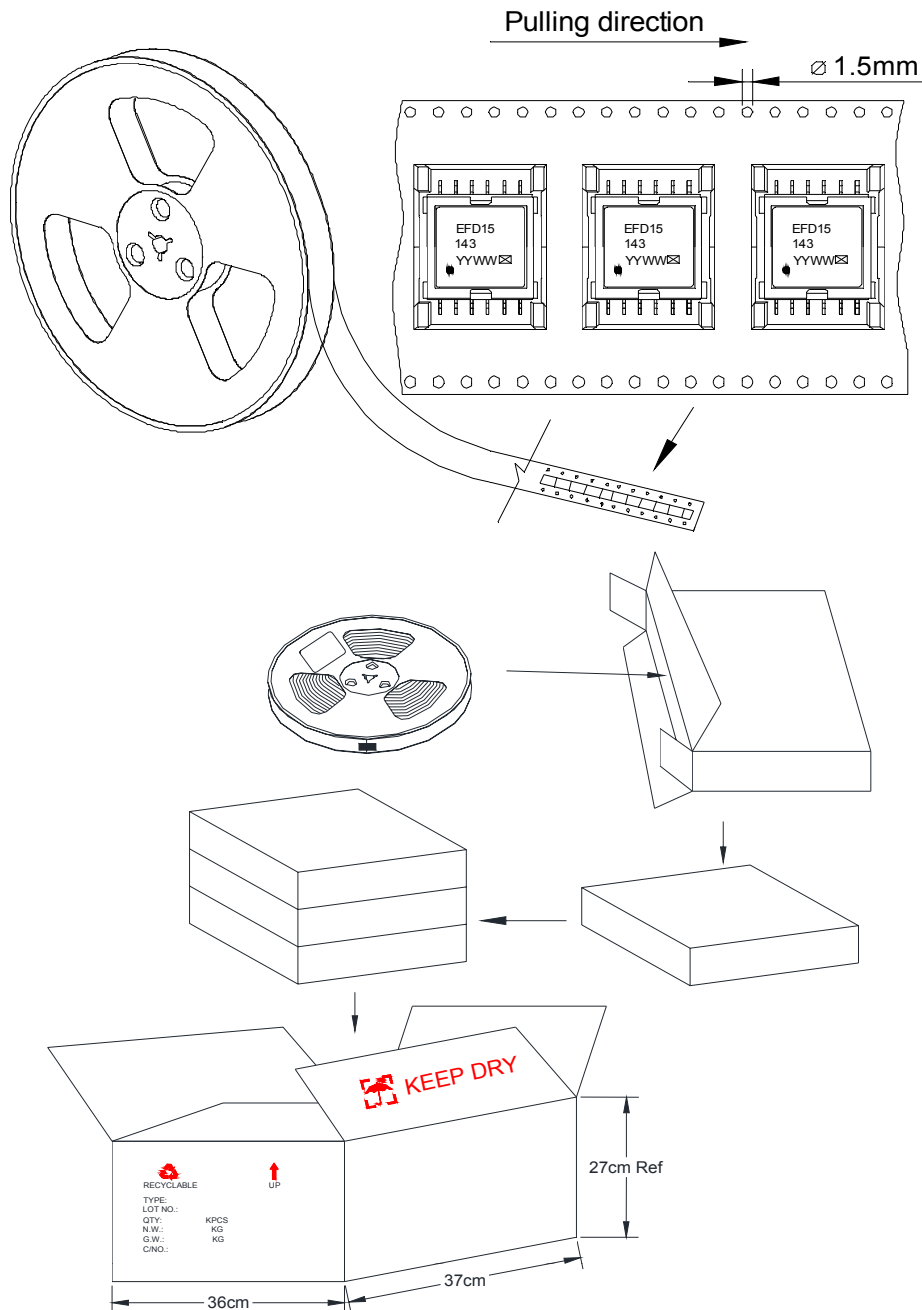
Symbol	A0	B0	K0	P0	P1	P2
DIM	17.3±0.3	23.5±0.3	10.1±0.3	4.0±0.1	24.0±0.1	2.0±0.1
Symbol	W	T	E	F	D0	D1
DIM	44±0.3	0.5±0.1	1.75±0.1	20.2±0.1	∅ 1.5±0.1	∅ 2.0±0.1

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10.Packing Request

- (1), Every roll of the carrier tape can contain 250pcs products.
- (2), Every small packing box contains one rolls of carrier tape. Total quantity: 250pcs.
- (3), Every carton box contains 3 small packing boxes. Total quantity: 750pcs.



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Test Report

Test Instruments											
HP4284A		HP4284A	DCR METER 131				HP4284A	CS2670A			
NO	Inductance		LK-Inductance	DCR				Turns Ratio	Hi-Pot		
	at 100kHz,0.1VAC	at 100kHz,0.1VAC @1.2A	at 100kHz,0.1VAC	at 25°C				at 20kHz,1VAC	3mA.60SEC		
	L(3-5)	L(3-5)	LK(3-5) Tie other	R(3-5)	R(2-1)	R(12,11- 9,10)	R(8-7)	(3-5):(2- 1):(11,12- 9,10):(8-7)	Pri. To Sec.	Pri.To Aux	Win.To Core
	166.5uH±10%	150uH MIN.	2.5uH MAX.	770mΩ MAX.	1.12Ω MAX.	20mΩ MAX.	523mΩ MAX.	52:26:8:14;± 3%	1500VAC	1500VAC	500VAC
1	166.00	157.00	1.70	646.00	0.80	11.30	237.00	Passed	Passed	Passed	Passed
2											
3											
4											
5											

MIN.	166.00	157.00	1.70	646.00	0.80	11.30	237.00				
MAX.	166.00	157.00	1.70	646.00	0.80	11.30	237.00				
AVG.	166.00	157.00	1.70	646.00	0.80	11.30	237.00				
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						
	18.0MAX.	21.97MAX.	9.5MAX.	0.70±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						

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