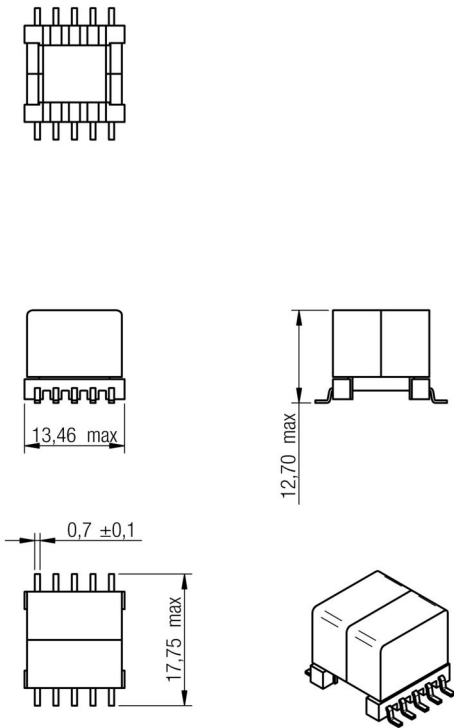
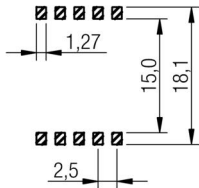


A Dimensions: [mm]

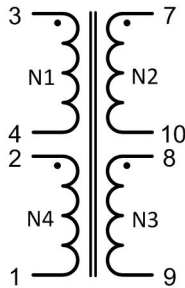


B Recommended land pattern: [mm]



Scale - 1:1

C Schematic:



Scale - 1:1



D Electrical Properties:

Properties	Test conditions		Value	Unit	Tol.
Inductance	100 kHz/ 100 mV	L	127	μH	±10%
Turns ratio		n	1:0.08:0.08:0.21		±3%
Saturation current	$I_{\Delta L/L} < 20\%$	$I_{sat}$	2.3	A	typ.
DC Resistance 1	@ 20°C	$R_{DC1}$	440	mΩ	max.
DC Resistance 2	@ 20°C	$R_{DC2}$	15	mΩ	max.
DC Resistance 3	@ 20°C	$R_{DC3}$	15	mΩ	max.
DC Resistance 4	@ 20°C	$R_{DC4}$	110	mΩ	max.
Leakage inductance	100 kHz/ 100 mV	$L_S$	3.5	μH	max.
Insulation test voltage	N1,4 => N2,3	$U_T$	1500	V (AC)	

E General information:

It is recommended that the temperature of the part does not exceed +125°C under worst case conditions.

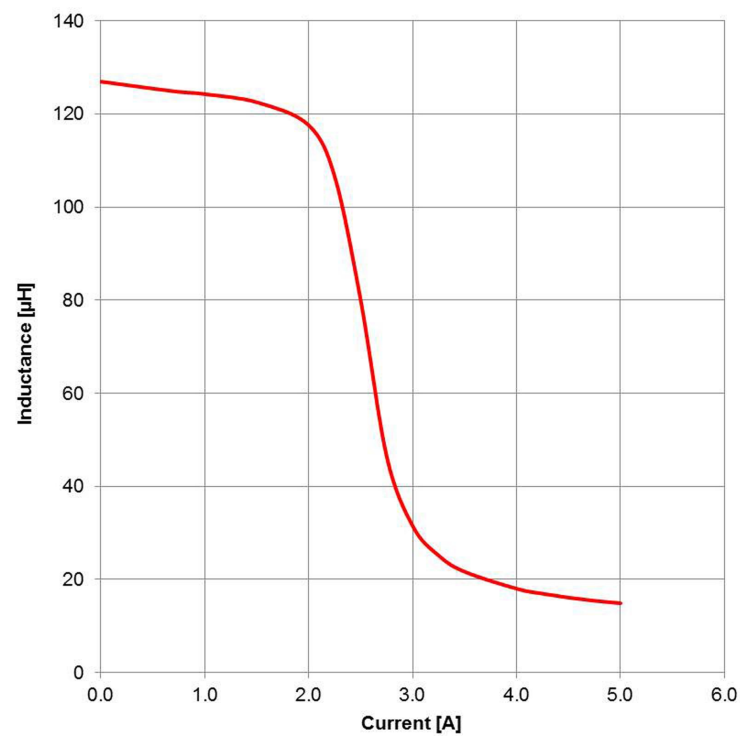
- Storage Temperature: -20°C to 60°C
- Operating Temperature: -40°C to 125°C
- Test conditions of Electrical Properties: 20°C, 33% RH if not specified differently



D2 Application Properties:

Properties		Value	Unit
Input voltage (N1)	$U_i$	36-57	V (DC)
Output voltage 1 (N2)	$U_{O1}$	3.3	V
Output current 1 (N2)	$I_{O1}$	2.0	A
Output voltage 2 (N3)	$U_{O2}$	3.3	V
Output current 2 (N3)	$I_{O2}$	2.0	A
Auxiliary voltage (N4)	$U_{aux}$	12	V
Switching frequency	$f_{switch}$	200-500	kHz

F Typical Inductance vs. Current Characteristics:



				Projection 		DESCRIPTION
						<b>WE-PoE Power over Ethernet Transformer</b>
					Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	Order.- No. <b>7491199331</b> Size: EP13
3.0	2013-09-24	SSt	TBr			<div>SIZE A4</div>
2.0	2006-11-20	TBr	-			
REV	DATE	BY	CHECKED			

This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik eiSos GmbH & Co KG products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc.. Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.

H Soldering Specifications:



H1: Classification Reflow Profile for SMT components:



H2: Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Preheat <ul style="list-style-type: none"><li>- Temperature Min (<math>T_{smin}</math>)</li><li>- Temperature Max (<math>T_{smax}</math>)</li><li>- Time (<math>t_s</math>) from (<math>T_{smin}</math> to <math>T_{smax}</math>)</li></ul>	150°C 200°C 60-120 seconds
Ramp-up rate ( $T_L$ to $T_p$ )	3°C/ second max.
Liquidous temperature ( $T_L$ ) Time ( $t_L$ ) maintained above $T_L$	217°C 60-150 seconds
Peak package body temperature ( $T_p$ )	See Table H3
Time within 5°C of actual peak temperature ( $t_p$ )	20-30 seconds
Ramp-down rate ( $T_p$ to $T_L$ )	6°C/ second max.
Time 25°C to peak temperature	8 minutes max.

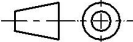

refer to IPC/JEDEC J-STD-020D

H3: Package Classification Reflow Temperature

	Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
PB-Free Assembly	< 1.6 mm	260°C	260°C	260°C
PB-Free Assembly	1.6 - 2.5 mm	260°C	250°C	245°C
PB-Free Assembly	≥ 2.5 mm	250°C	245°C	245°C

refer to IPC/JEDEC J-STD-020D

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					<div>Würth Elektronik eiSos GmbH &amp; Co. KG</div> <div>EMC &amp; Inductive Solutions</div> <div>Max-Eyth-Str. 1</div> <div>74638 Waldenburg</div> <div>Germany</div> <div>Tel. +49 (0) 79 42 945 - 0</div> <div>www.we-online.com</div> <div>eiSos@we-online.com</div>		Order.- No.	 <div>COMPLIANT</div> <div>RoHS&amp;REACH</div> <div>WÜRTH ELEKTRONIK</div>	SIZE
3.0	2013-09-24	SSt	TBr				<div>7491199331</div>		A4
2.0	2006-11-20	TBr	-						
REV	DATE	BY	CHECKED					Size: EP13	

# I Cautions and Warnings:

The following conditions apply to all goods within the product series of **WE-PoE** of Würth Elektronik eiSos GmbH & Co. KG:

## General:

All recommendations according to the general technical specifications of the data-sheet have to be complied with.

The disposal and operation of the product within ambient conditions which probably alloy or harm the wire isolation has to be avoided.

If the product is potted in customer applications, the potting material might shrink during and after hardening. Accordingly to this the product is exposed to the pressure of the potting material with the effect that the core, wire and termination is possibly damaged by this pressure and so the electrical as well as the mechanical characteristics are endanger to be affected. After the potting material is cured, the core, wire and termination of the product have to be checked if any reduced electrical or mechanical functions or destructions have occurred.

The responsibility for the applicability of customer specific products and use in a particular customer design is always within the authority of the customer. All technical specifications for standard products do also apply for customer specific products.

Cleaning agents that are used to clean application might damage or change the characteristics of the component, body, pins or termination.

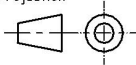

Direct mechanical impact to the product shall be prevented as the core material could flake or in the worst case could break.

## Product specific:

Follow all instructions mentioned in the datasheet, especially:

- The solder profile has to be complied with according to the technical reflow soldering specification, otherwise no warranty will be sustained.
- All products shall be used before the end of the period of 12 months based on the product date-code, if not a 100% solderability can't be warranted.
- Violation of the technical product specifications such as exceeding the nominal rated current will result in the loss of warranty.



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