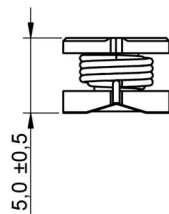
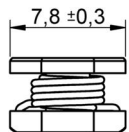
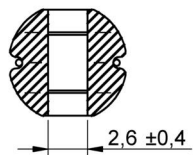


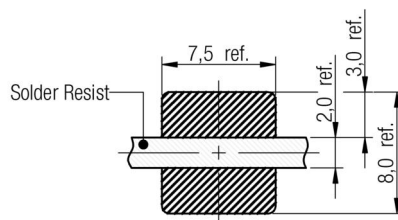
A Dimensions: [mm]



Scale - 2:1

Reference on drawing	Description
•	Start of winding
Marking	390 (Inductance Code)

B Recommended land pattern: [mm]



no vias and traces in restricted area

Scale - 2:1

C Schematic:



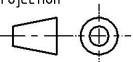
D Electrical Properties:

Properties	Test conditions		Value	Unit	Tol.
Inductance	10 KHz/ 100 mV	L	39	μH	±10%
Rated Current	ΔT = 40 K	I _R	1.25	A	max.
Saturation Current	ΔL/L < 10%	I _{sat}	1.33	A	typ.
DC Resistance	@ 20°C	R _{DC}	0.160	Ω	max.
DC Resistance	@ 20°C	R _{DC}	0.116	Ω	typ.
Self Resonant Freq.	@ 20°C	f _{res}	12	MHz	typ.
Rated Voltage	@ 20°C	U _R	80	V _{DC}	max.

E General information:

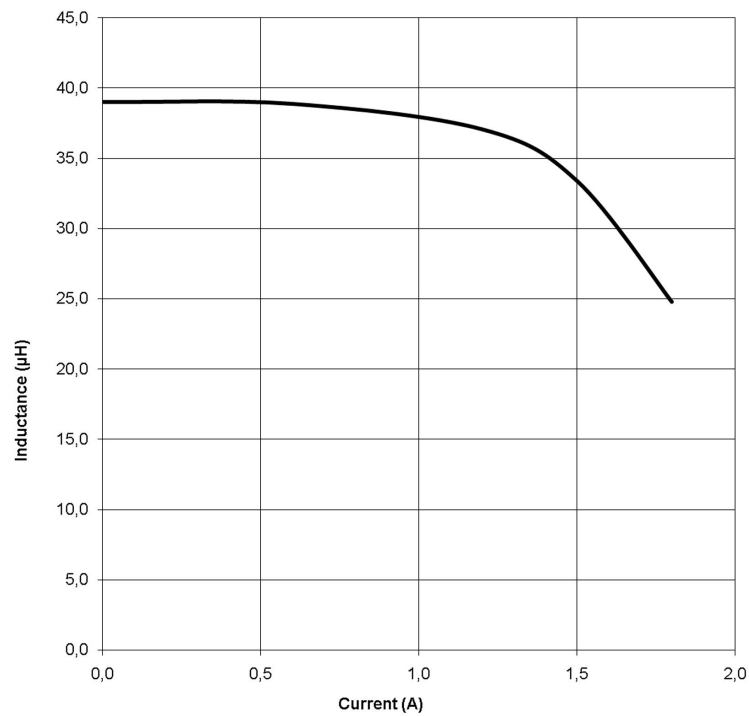
It is recommended that the temperature of the part does not exceed 125°C under worst case operating conditions.

- Ambient temperature: -40°C to +85°C (referring to I_R)
- Operating temperature: -40°C to +125°C
- Storage temperature (on tape & reel): -20°C to +40°C; 75% RH max.
- Coplanarity of the terminal pads: 120μm
- Test conditions of Electrical Properties: 20°C, 33% RH
- AEC-Q 200 qualified

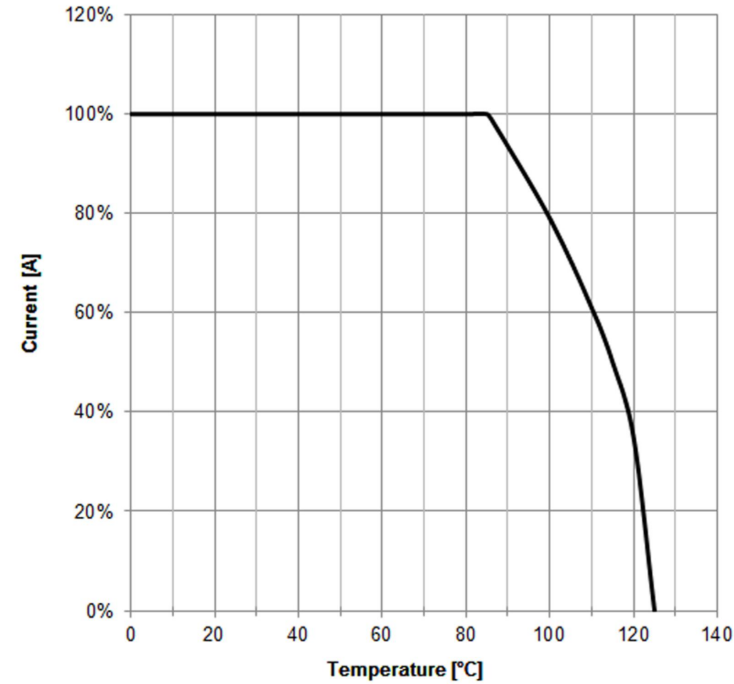
				Projection		DESCRIPTION		
2.3	2015-01-07	SSt	BMoe		Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	WE-PD2A SMD Power Inductor		
2.2	2014-05-19	SSt	BMoe					
2.1	2014-03-12	SSt	BMoe					
2.0	2014-02-03	SSt	BMoe					
1.7	2013-12-05	SSt	BMoe					
1.6	2013-10-10	SSt	BMoe					
1.5	2013-04-10	SSt	SSt					Order.- No.
REV	DATE	BY	CHECKED			784775139	A4	
						Size: 7850		

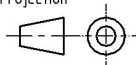


F1 Typical Inductance vs. Current Characteristics:



F2 Derating Curve:

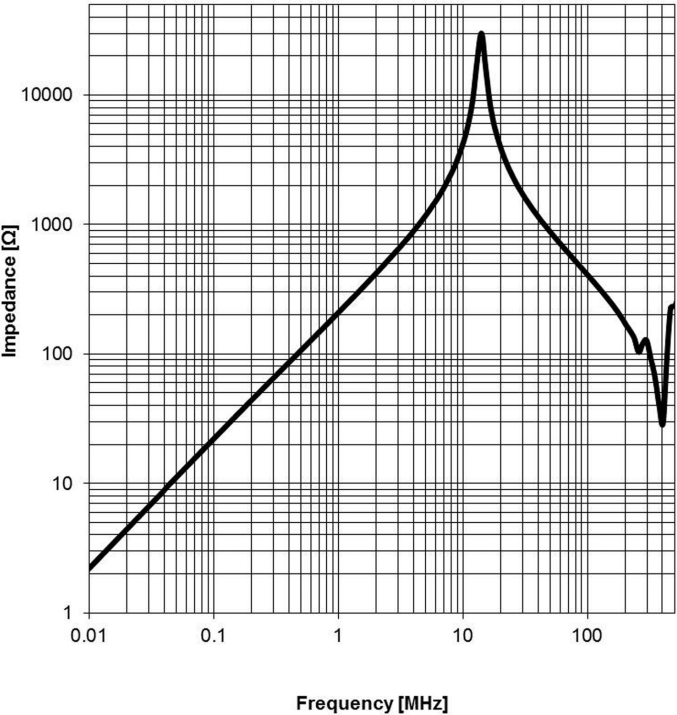


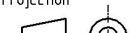
				Projection 		DESCRIPTION			
2.3	2015-01-07	SSt	BMoe			WE-PD2A SMD Power Inductor			
2.2	2014-05-19	SSt	BMoe						
2.1	2014-03-12	SSt	BMoe	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		Order.- No.		 COMPLIANT RoHS&REACH HALOGENFREE	SIZE
2.0	2014-02-03	SSt	BMoe			784775139			A4
1.7	2013-12-05	SSt	BMoe			Size: 7850			
1.6	2013-10-10	SSt	BMoe						
1.5	2013-04-10	SSt	SSt						
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.

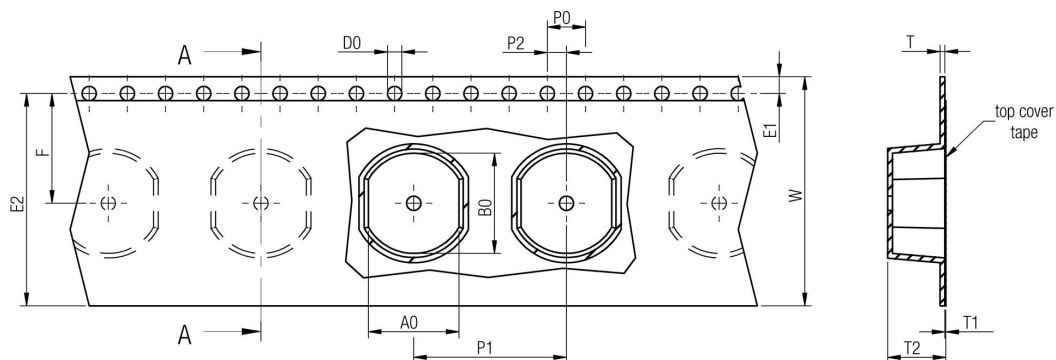


F3 Typical Impedance Characteristics:

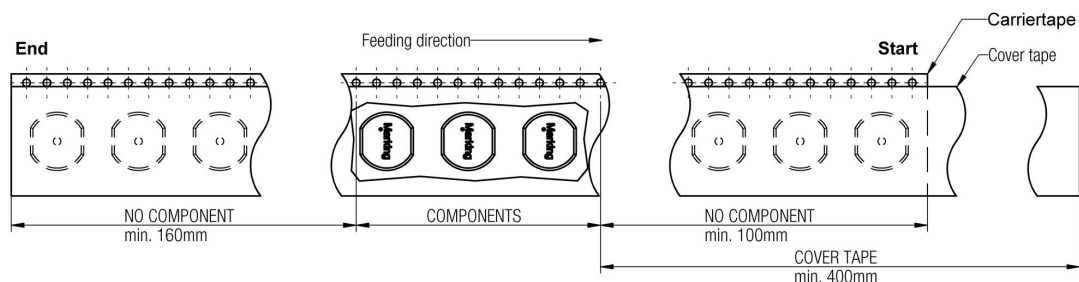


				Projection 		DESCRIPTION	
2.3	2015-01-07	SSt	BMoe			WE-PD2A SMD Power Inductor	
2.2	2014-05-19	SSt	BMoe				
2.1	2014-03-12	SSt	BMoe	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com			
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1.7	2013-12-05	SSt	BMoe				
1.6	2013-10-10	SSt	BMoe				
1.5	2013-04-10	SSt	SSt	Order.- No.  COMPLIANT RoHS&REACH HALOGENFREE SIZE			
REV	DATE	BY	CHECKED	784775139 Size: 7850 A4			

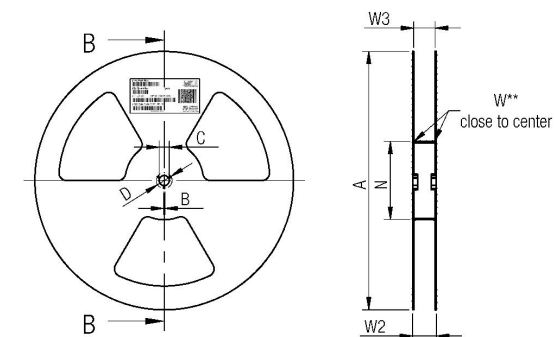
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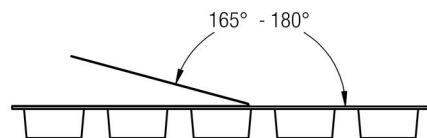
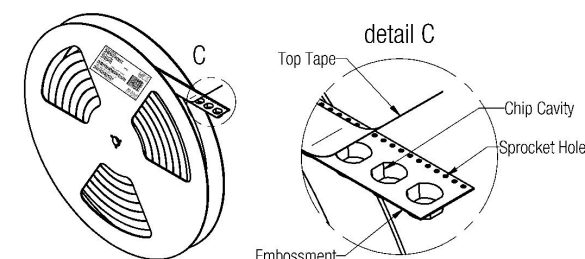
		A0	B0	W	P1	T	T1	T2	D0	E1	E2	F	P0	P2	VPE / packaging unit
tolerance		typ.	typ.	+0,3 -0,1	± 0,1	± 0,1	max.	typ.	+0,3 -0,1	± 0,1	min.	± 0,05	± 0,1	± 0,05	
size	4532	4,50	5,50	16,00	8,00	0,25	0,10	4,00	1,50	1,75	14,25	7,50	4,00	2,00	1500
	5848	5,50	6,50	16,00	8,00	0,25	0,10	5,50	1,50	1,75	14,25	7,50	4,00	2,00	1500
	7850	7,50	8,50	16,00	12,00	0,25	0,10	6,00	1,50	1,75	14,25	7,50	4,00	2,00	500
	1054	9,50	10,50	24,00	16,00	0,50	0,10	7,00	1,50	1,75	22,25	11,50	4,00	2,00	500



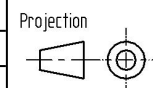
Packaging is referred to the international standard IEC 60286 -3:2007



		A	B	C	D	N	W1	W2	W3	W3
tolerance			min.	± 0.8	min.	min.	+ 1.5	max.	min.	max.
Tape width	16 mm	330,00	1,50	13,00	20,20	100,00	16,40	22,40	15,90	19,40
	24 mm	330,00	1,50	13,00	20,20	100,00	24,40	30,40	23,90	27,40



	Pull-of force
Tape width	
16 mm	0,1 N - 1,3 N
24 mm	0,1 N - 1,3 N



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

DESCRIPTION

WE-PD2A SMD Power Inductor

Order - No.

784775139

Size: 7850



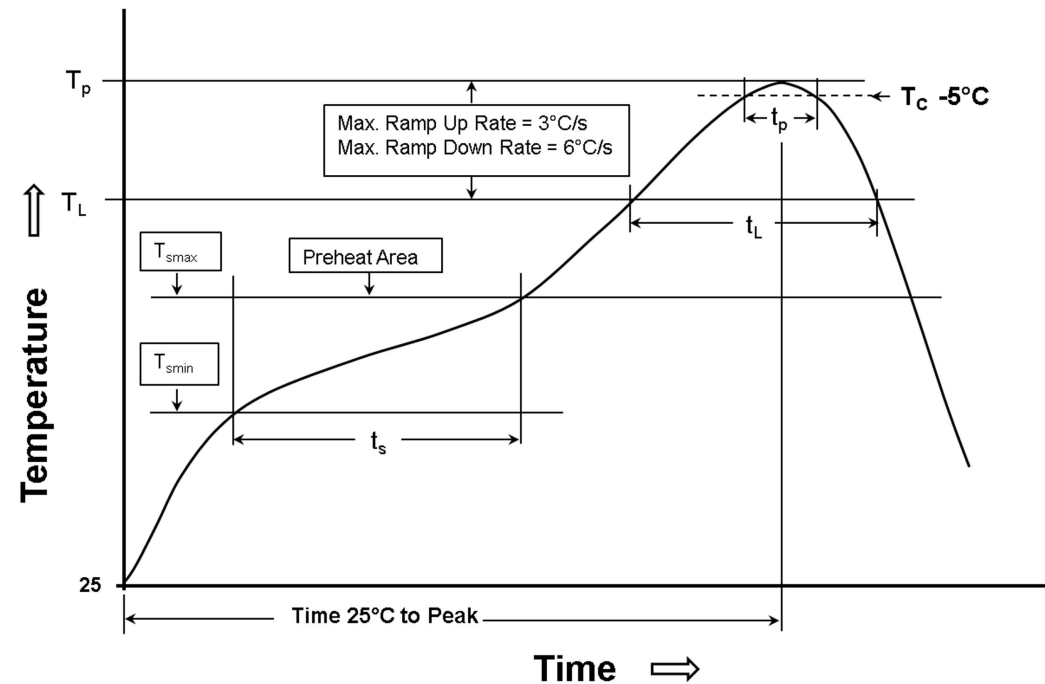
SIZE

A4

H Soldering Specifications:



H1: Classification Reflow Profile for SMT components:



H2: Classification Reflow Profiles

Profile Feature	Pb-Free Assembly	Sn-Pb Assembly
Preheat - Temperature Min (T_{smin}) - Temperature Max (T_{smax}) - Time (t_s) from (T_{smin} to T_{smax})	150°C 200°C 60-120 seconds	100°C 150°C 60-120 seconds
Ramp-up rate (T_L to T_p)	3°C/ second max.	3°C/ second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217°C 60-150 seconds	183°C 60-150 seconds
Peak package body temperature (T_p)	See Table H3	See table H3
Time within 5°C of actual peak temperature (t_p)	30 seconds	20 seconds
Ramp-down rate (T_p to T_L)	6°C/ second max.	6°C/ second max.
Time 25°C to peak temperature	8 minutes max.	6 minutes max.

refer to IPC/JEDEC J-STD-020D

H3: Package Classification Reflow Temperature

	Package Thickness	Volume mm³ <350	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
Sn-Pb Assembly	< 2.5 mm	235°C	220°C		
Sn-Pb Assembly	≥ 2.5 mm	220°C	220°C		

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I Cautions and Warnings:

The following conditions apply to all goods within the product series of WE-PD2A 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 usage 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 costumer applications, the potting material might shrink during and after hardening. 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 endangered 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 to customer specific products.

Washing varnish agent that is used during the production to clean the customer application might damage or change the characteristics of the wire insulation, the marking or the plating. The washing varnish agent could have a negative effect on the long term function of the product.

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

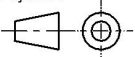
Product specific:

Follow all instructions mentioned in the data sheet, especially:

- The soldering profile has to be complied with according to the technical reflow soldering specification, otherwise this will void the warranty.
- 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 ensured.
- Violation of the technical product specifications such as exceeding the nominal rated current will void the warranty.
- Solvents may influence the product marking.

The general and product specific cautions comply with the state of the scientific and technical knowledge and are believed to be accurate and reliable; however, no responsibility is assumed for inaccuracies or incompleteness.



				Projection			DESCRIPTION	WE-PD2A SMD Power Inductor	
2.3	2015-01-07	SSt	BMoe						
2.2	2014-05-19	SSt	BMoe						
2.1	2014-03-12	SSt	BMoe	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					
2.0	2014-02-03	SSt	BMoe						
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1.6	2013-10-10	SSt	BMoe						
1.5	2013-04-10	SSt	SSt						
REV	DATE	BY	CHECKED				Order. - No.		SIZE
							784775139		A4
							Size: 7850		

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