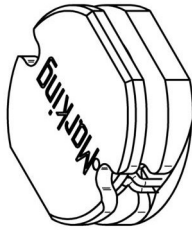
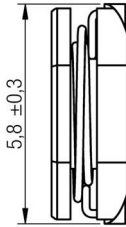
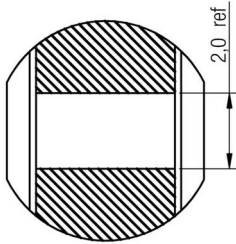


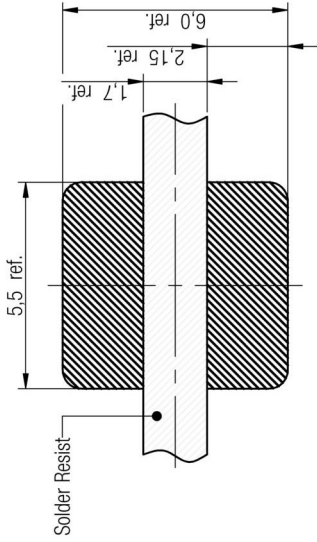
A Dimensions: [mm]



Scale - 5:1

Reference on drawing	Description
•	Start of winding
Marking	R12 (Inductance Code)

B Recommended land pattern: [mm]



Scale - 5:1

C Schematic:



D Electrical Properties:

Properties	Test conditions	Value	Unit
Inductance	100 kHz/ 10 mA	L	µH
Rated current	ΔT = 40 K	I _R	A
Saturation current	IΔL/L < 10%	I _{sat}	A
DC Resistance	@ 20°C	R _{DC}	Ω
DC Resistance	@ 20°C	R _{DC}	Ω
Self resonant frequency		f _{res}	MHz

E General information:

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

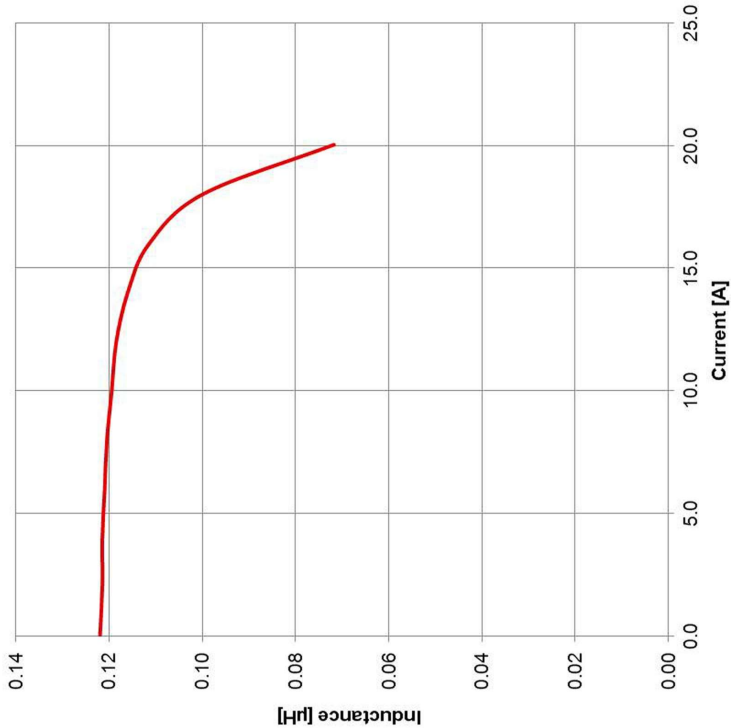
- ▲ Ambient temperature: -40°C to +85°C (referring to I_p)
- Operating temperature: -40°C to +125°C
- Storage temperature (on tape & reel): -20°C to +40°C; 75% RH max.
- ▲ Test conditions of Electrical Properties: 20°C, 33% RH if not specified differently

DESCRIPTION	
WE-PD2 SMD Power Inductor	
Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Walenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	
Order - No.	74477450012
	
Size: 5820	

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 the use of this product. 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 use in 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.



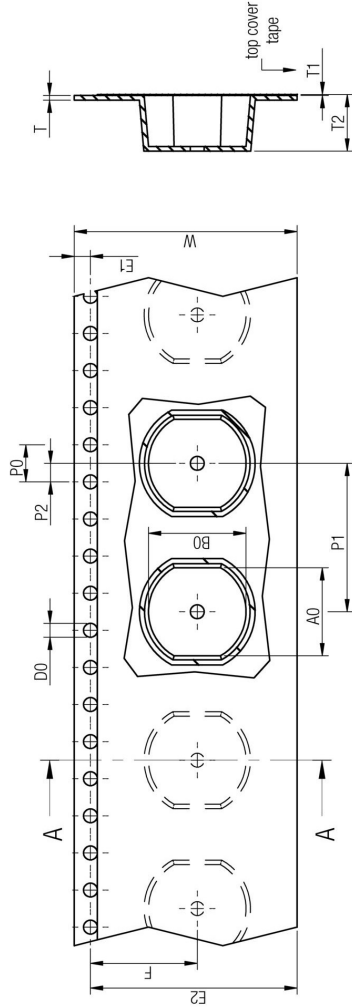
F1 Typical Inductance vs. Current Characteristics:



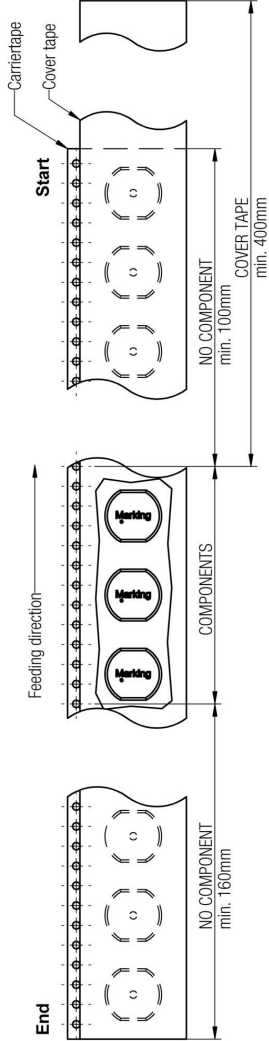
DESCRIPTION		Projection	
WE-PD2 SMD Power Inductor			
Order - No.		Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Walzenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	
74477450012		2.3 2014-06-23 SST SST	
Size: 5820		2.2 2014-03-26 SST SST	
		2.1 2013-04-18 SST ALa	
		2.0 2009-05-19 ME	
		REV	CHECKED

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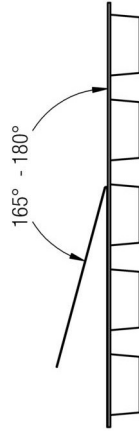
G Packaging Specification - Tape and Reel [mm]:



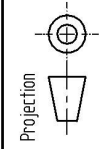
		A0	B0	W	P1	T	T1	T2	D0	E1	E2	F	P0	P2	VPE / packaging unit
tolerance		typ.	typ.	+0,3 -0,1	± 0,1	± 0,1	max.	typ.	+0,3 -0,1	± 0,1	min.	± 0,05	± 0,1	± 0,05	
size	4532	4,50	5,50	16,00	8,00	0,35	0,10	4,00	1,50	1,75	14,25	7,50	4,00	2,00	1500
	5820	5,50	6,50	12,00	8,00	0,45	0,10	3,00	1,50	1,75	10,25	5,50	4,00	2,00	2000
	5848	5,50	6,50	16,00	8,00	0,35	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	0,35	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	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



		Pull-of force	
Tape width	12 mm	0,1 N - 1,0 N	
	16 mm	0,1 N - 1,3 N	
	24 mm	0,1 N - 1,3 N	



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EMC & Inductive Solutions
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74638 Walzenburg
Germany
Tel. +49 (0) 79 42 945 - 0
www.we-online.com
eiSos@we-online.com

DESCRIPTION

WE-PD2 SMD Power Inductor

Order - No.

74477450012

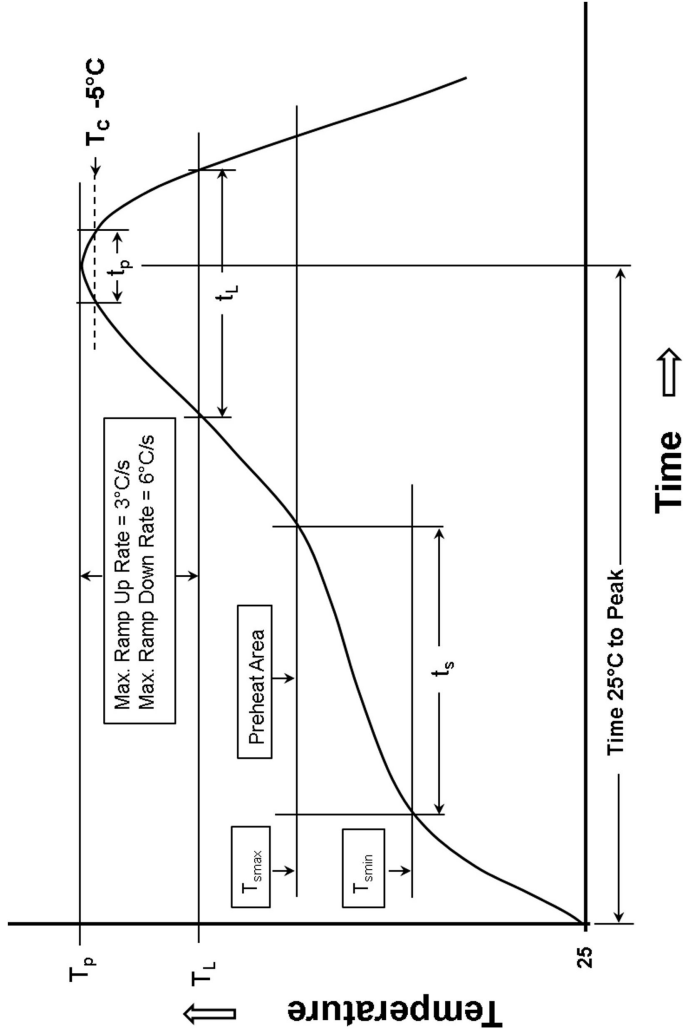
Size: 5820



H Soldering Specifications:



H1: Classification Reflow Profile for SMT components:



H2: Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Preheat	
- Temperature Min (T_{smin})	150°C
- Temperature Max (T_{smax})	200°C
- Time (t_s) from (T_{smin} to T_{smax})	60-120 seconds
Ramp-up rate (T_L to T_p)	3°C/ second max.
Liquidous temperature (T_L)	217°C
Time (t_L) maintained above T_L	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 mm ³	Volume mm ³	Volume mm ³
PB-Free Assembly	< 1,6 mm	<350	350 - 2000	>2000
PB-Free Assembly	1,6 - 2,5 mm	260°C	260°C	260°C
PB-Free Assembly	≥ 2,5 mm	260°C	250°C	245°C
PB-Free Assembly		250°C	245°C	245°C

refer to IPC/JEDEC J-STD-020D

Projection		DESCRIPTION	
		WE-PD2 SMD Power Inductor	
Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waltenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		Order - No.	74477450012
		Size: 5820	

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The following conditions apply to all goods within the product series of WE-PD2 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 allow 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. 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.

Cleaning agents that are used to clean the customer 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 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.

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.

[illegible]

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The design-in stage in addition, sufficient liability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require full safety and reliability functions or performance.

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, medical, public information network etc., Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such use.

	Projection
	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	 COMPLIANT RoHS REACH WURTH ELEKTRONIK
	Order - No. 74477450012
	Size: 5820

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