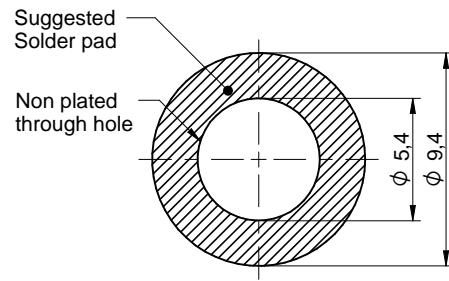
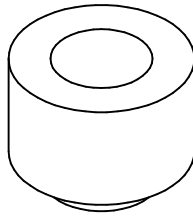
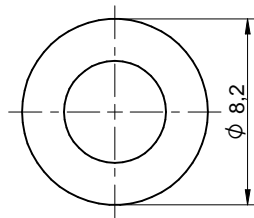
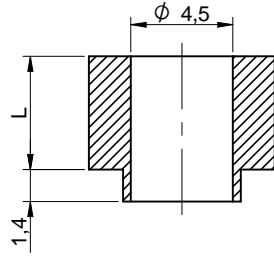
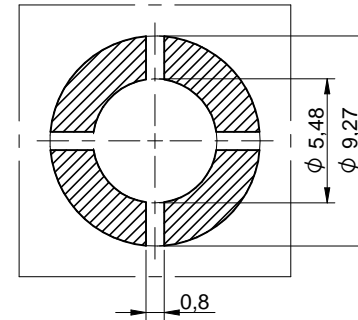


sectional drawing A-A



Scale - 3:1

**Stencil Suggestion:**



Scale - 3:1

<b>Outer Diameter</b>	Ø OD	8.2
<b>Hole Diameter</b>	Ø f	4.5
<b>Material</b>		Steel
<b>Surface</b>		Tin
<b>Solder Cream Thickness</b>		150

**Packaging Properties:**

<b>Packaging</b>	Tape and Reel	
<b>Packaging Unit (Qty.)</b>	Qty.	500
In Tape & Reel packaging a kapton-film is fixed on the top of the spacer for au		
During the programming of the Pick and Place machine and the AOI, please cor kapton-film.		

**Article Properties:**

Properties		Value	Unit
<b>Length</b>	L	6	mm

Würth Elektronik eiSos GmbH & Co. KG  
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eiSos@we-online.com



CREATED DaSc	CHECKED JuSa	GENERAL TOLERANCE DIN ISO 2768-1m	PROJECTION METHOD
DESCRIPTION <b>WA-SMST SMD Steel Spacer with through hole Ø4.5</b>			ORDER CODE <b>9774060982R</b>
REVISION 001.001	STATUS Valid	DATE (YYYY-MM-DD) 2017-11-23	BUSINESS UNIT eiCan

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. Moreo  
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
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2 mm	9774020982
	9774020982R
3 mm	9774030982
	9774030982R
4 mm	9774040982
	9774040982R
5 mm	9774050982
	9774050982R
6 mm	9774060982R
	9774060982
7 mm	9774070982
	9774070982R
8 mm	9774080982
	9774080982R
9 mm	9774090982
	9774090982R
10 mm	9774100982R
	9774100982

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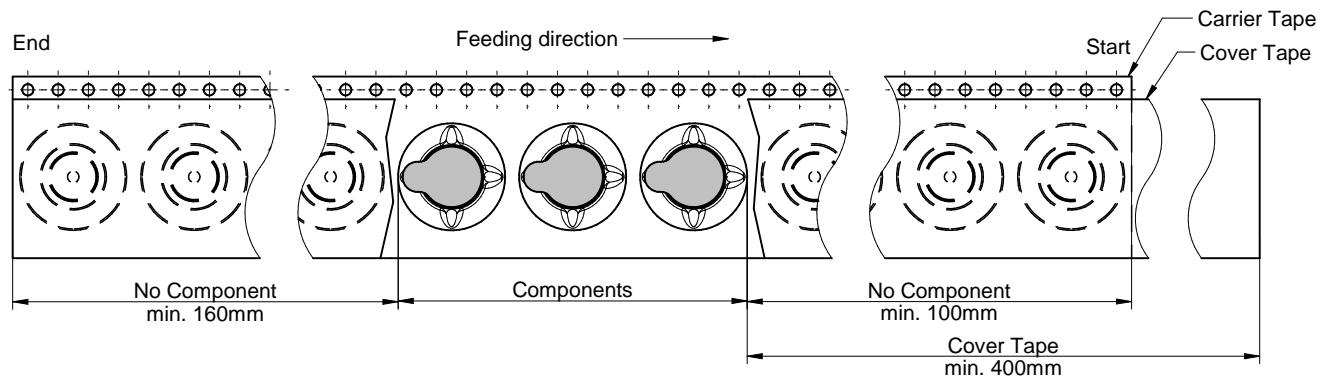
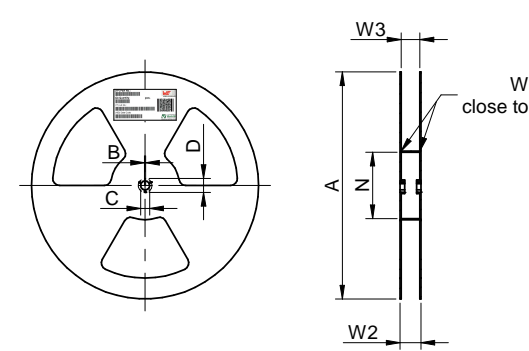
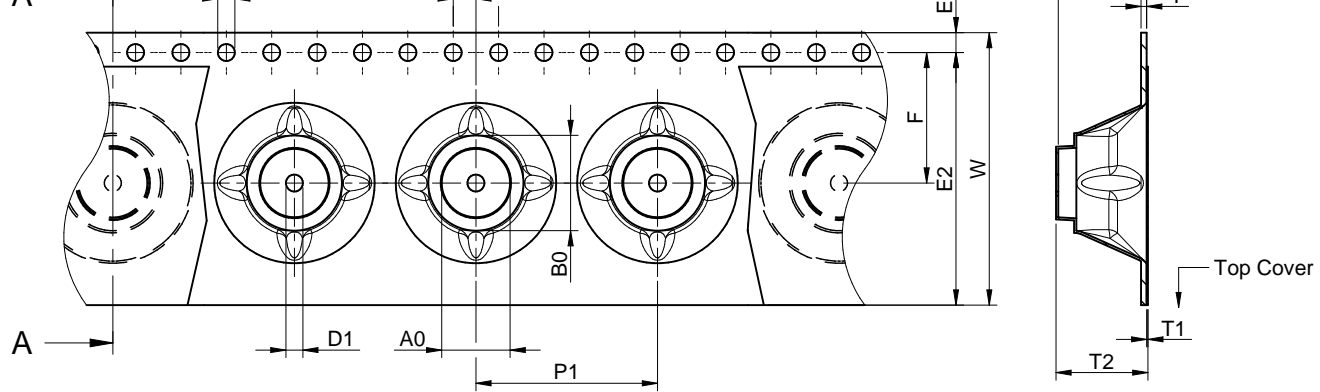
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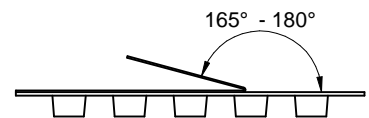
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Packaging is referred to the international standard **IEC 60286-3:2013**

	A0	B0	W	T	T1	T2	K0	P0	P1	P2	D0	D1	E1	E2	F	Tape Type	VPE / packaging unit
<b>Tolerance</b>	typ.	typ.	+0,3/-0,1	max.	max.	typ.	typ.	±0,1	±0,1	±0,1	+0,1/-0,0	min.	±0,1	min.	±0,1		pcs.
<b>Part Number</b>	9774060982R	6,10	8,40	24,00	0,30	0,10	8,20	7,80	4,00	16,00	2,00	1,50	1,75	22,25	11,50	Polystyrene	500

	A	B	C	D	N	W1	W2
<b>Tolerance</b>	± 2,0	min.	min.	min.	± 2,0	+ 2	max.
<b>Tape width</b>	24mm	330,00	1,50	12,80	20,20	60,00	24,40 30,40



	Pull-of force
<b>Tape width</b>	24 mm
	0,1 N - 1,3 N

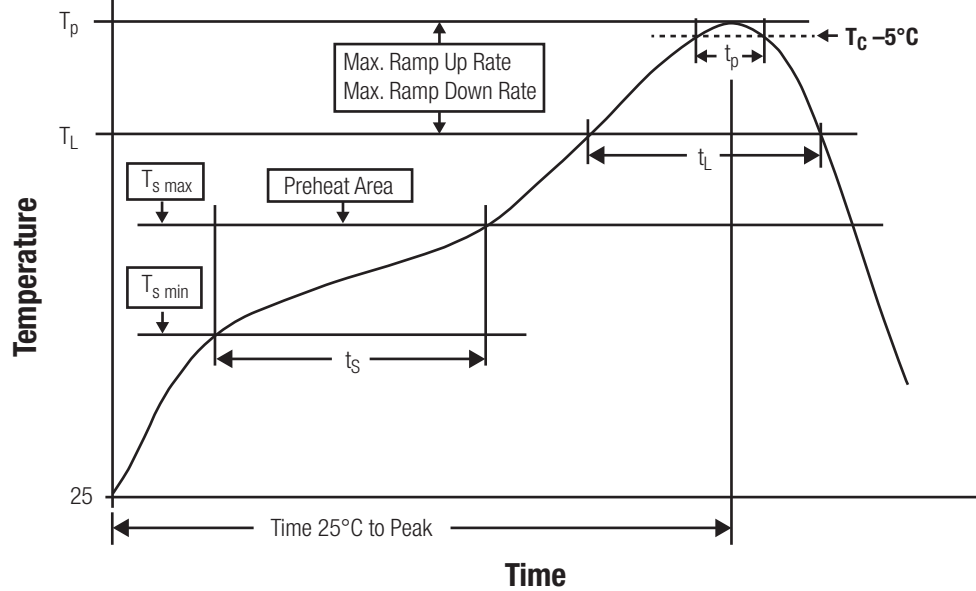
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<b>Preheat Temperature Max</b>	$T_{s \max}$	200 °C
<b>Preheat Time <math>t_s</math> from <math>T_{s \min}</math> to <math>T_{s \max}</math></b>	$t_s$	60 - 120 seconds
<b>Ramp-up Rate (<math>T_L</math> to <math>T_p</math>)</b>		3 °C/ second max.
<b>Liquidous Temperature</b>	$T_L$	217 °C
<b>Time <math>t_L</math> maintained above <math>T_L</math></b>	$t_L$	60 - 150 seconds
<b>Peak package body temperature</b>	$T_p$	see table
<b>Time within 5°C of actual peak temperature</b>	$t_p$	20 - 30 seconds
<b>Ramp-down Rate (<math>T_L</math> to <math>T_p</math>)</b>		6 °C/ second max.
<b>Time 25°C to peak temperature</b>		8 minutes max.

<sup>1)</sup> refer to IPC/JEDEC J-STD-020D  
refer to IPC/ JEDEC J-STD-020E

### Package Classification Reflow Temperature:

Properties	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350-2000	Volume mm <sup>3</sup> >2000
<b>PB-Free Assembly   Package Thickness &lt; 1.6 mm <sup>1)</sup></b>	260 °C	260 °C	260 °C
<b>PB-Free Assembly   Package Thickness 1.6 mm - 2.5 mm</b>	260 °C	250 °C	245 °C
<b>PB-Free Assembly   Package Thickness ≥ 2.5 mm</b>	250 °C	245 °C	245 °C

<sup>1)</sup> refer to IPC/JEDEC J-STD-020D  
refer to IPC/ JEDEC J-STD-020E

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## General:



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

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.

## Product Specific:

Follow all instructions 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. Surface discoloration due to reflow processing is permitted.
- Wave soldering is not applicable. Reflow soldering is recommended.
- All products shall be used before the end of the period of 24 months based on the product date-code, if not a 100% solderability can't be ensured.
- The maximum permissible torques must be complied with to prevent mechanical destruction of the elements and PCB.

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  	CREATED DaSc	CHECKED JuSa	GENERAL TOLERANCE DIN ISO 2768-1m	PROJECTION METHOD 
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## 1. General Customer Responsibility

Some goods within the product range of Würth Elektronik eiSos GmbH & Co. KG contain statements regarding general suitability for certain application areas. These statements about suitability are based on our knowledge and experience of typical requirements concerning the areas, serve as general guidance and cannot be estimated as binding statements about the suitability for a customer application. The responsibility for the applicability and use in a particular customer design is always solely within the authority of the customer. Due to this fact it is up to the customer to evaluate, where appropriate to investigate and decide whether the device with the specific product characteristics described in the product specification is valid and suitable for the respective customer application or not.

## 2. Customer Responsibility related to Specific, in particular Safety-Relevant Applications

It has to be clearly pointed out that the possibility of a malfunction of electronic components or failure before the end of the usual lifetime cannot be completely eliminated in the current state of the art, even if the products are operated within the range of the specifications. In certain customer applications requiring a very high level of safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health it must be ensured by most advanced technological aid of suitable design of the customer application that no injury or damage is caused to third parties in the event of malfunction or failure of an electronic component. Therefore, customer is cautioned to verify that data sheets are current before placing orders. The current data sheets can be downloaded at [www.we-online.com](http://www.we-online.com).

## 3. Best Care and Attention

Any product-specific notes, cautions and warnings must be strictly observed. Any disregard will result in the loss of warranty.

## 4. Customer Support for Product Specifications

Some products within the product range may contain substances which are subject to restrictions in certain jurisdictions in order to serve specific technical requirements. Necessary information is available on request. In this case the field sales engineer or the internal sales person in charge should be contacted who will be happy to support in this matter.

## 5. Product R&D

Due to constant product improvement product specifications may change from time to time. As a standard reporting procedure of the Product Change Notification (PCN) according to the JEDEC-Standard inform about minor and major changes. In case of further queries regarding the PCN, the field sales engineer or the internal sales person in charge should be contacted. The basic responsibility of the customer as per Section 1 and 2 remains unaffected.



available. Therefore it needs to be verified with the field sales engineer or the internal sales person in charge about the availability expectancy before or when the product for application design-in disposal is considered. The approach name apply in the case of individual agreements deviating from the foregoing for customer-specific products.

## 7. Property Rights

All the rights for contractual products produced by Würth Elektronik eiSos GmbH & Co. KG on the basis of ideas, development as well as models or templates that are subject to copyright, patent or commercial protection supplied to the customer will be reserved by Würth Elektronik eiSos GmbH & Co. KG. Würth Elektronik eiSos GmbH & Co. KG does not warrant or represent that any license, implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any application, or process in which Würth Elektronik eiSos GmbH & Co. KG components or services are used.

## 8. General Terms and Conditions

Unless otherwise agreed in individual contracts, all orders are subject to the current version of the "General Terms and Conditions of Würth Elektronik eiSos Group", last version available at [www.we-online.com](http://www.we-online.com).

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