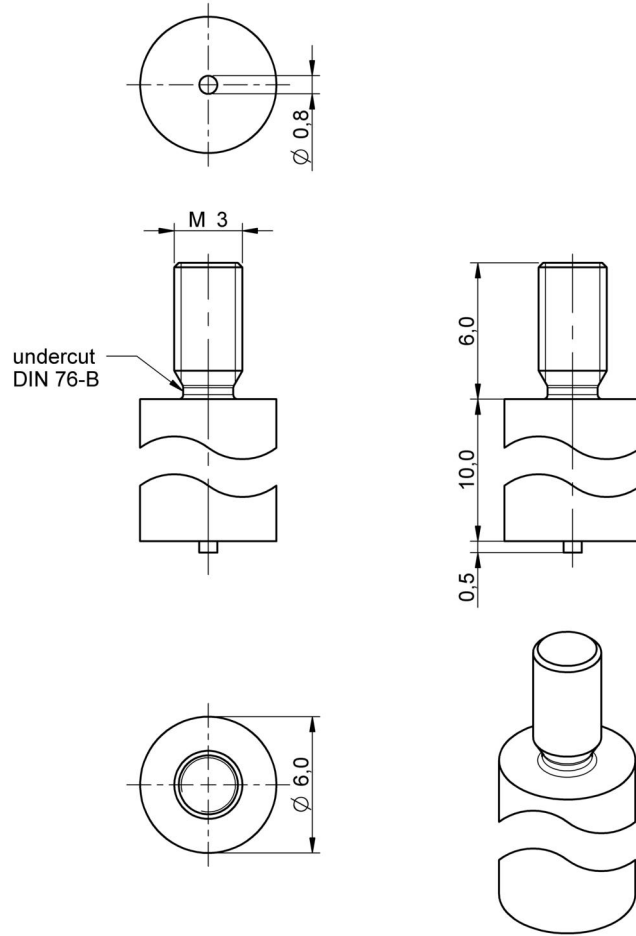


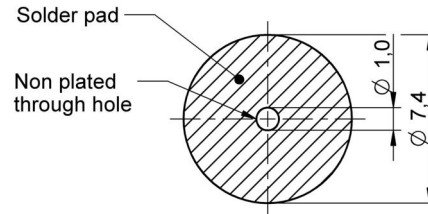


**A Dimensions: [mm]**



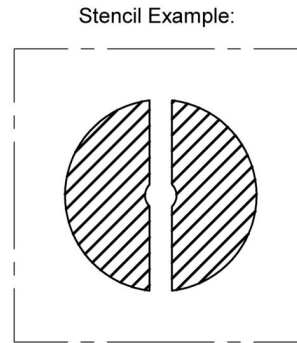
Scale - 3:1

**B Recommended land pattern: [mm]**



Scale - 3:1

**C Stencil suggestion:**



Scale - 3:1

**D Properties:**

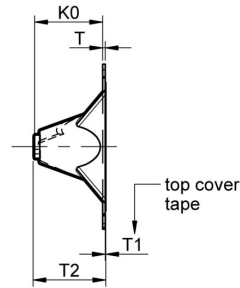
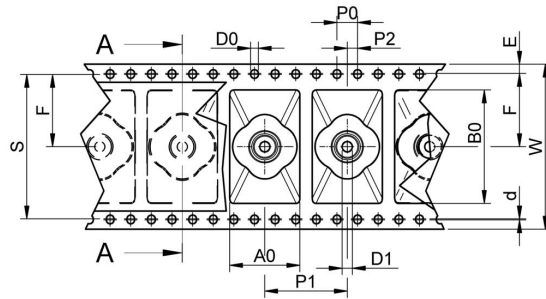
Properties	Value
Surface	Tin plated
Material	11SMnPB30
Thread	M3
Tightening torque	0.5 Nm
Solder Cream Thickness	150 µm
Packaging	Reel

**E General information:**

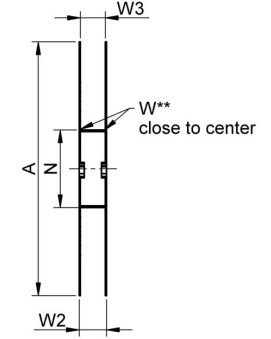
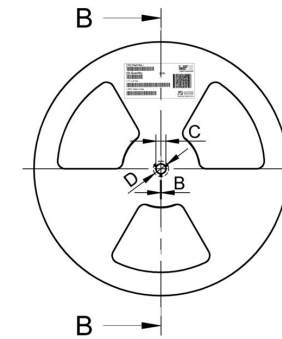
Technical Tolerances according to DIN ISO 2768m

In tape & reel packaging a cap is fixed to the product to realize automatic assembly

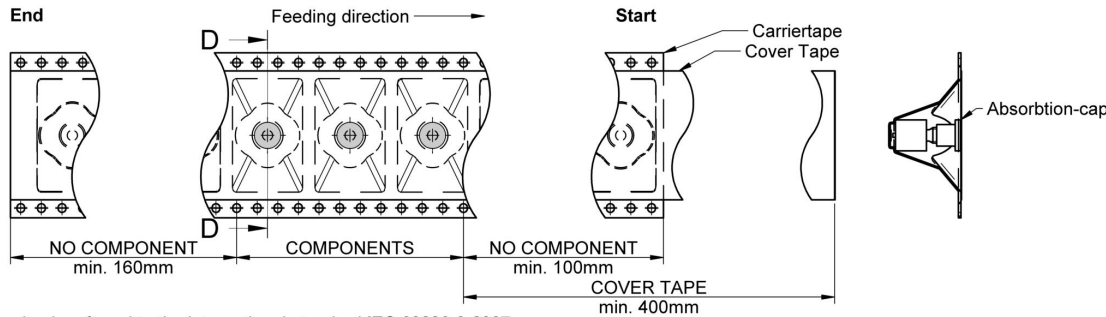
				Projection	DESCRIPTION  <b>WA-SMSE SMD Steel Spacer, M3 Thread External</b>
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	Order.- No.  <b>9771100360R</b>
1.0	2013-12-13	SSt	SKI		COMPLIANT RoHS&REACH WÜRTH ELEKTRONIK
REV	DATE	BY	CHECKED		SIZE A4



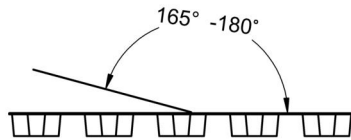
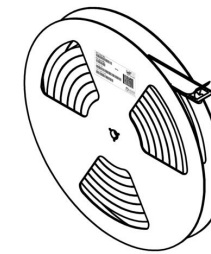
tolerance	A0	B0	W	P1	T	T1	T2	K0	D0	d	D1	E	S	F	P0	P2	Tape	VPE / packaging unit
	typ.	typ.	±0,3	±0,1	max.	max.	ref.	typ.	+0,1	±0,05	min.	±0,1	±0,1	±0,1	±0,1	±0,1		pcs.
9771050360	13,60	22,00	32,00	24,00	1,00	0,10	14,70	14,20	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	300
9771060360	13,60	22,00	32,00	24,00	1,00	0,10	14,70	14,20	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	300
9771070360	13,60	22,00	32,00	24,00	1,00	0,10	18,20	17,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	200
9771080360	13,60	22,00	32,00	24,00	1,00	0,10	18,20	17,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	200
9771090360	13,60	22,00	32,00	24,00	1,00	0,10	18,20	17,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	200
9771100360	13,60	22,00	32,00	24,00	1,00	0,10	18,20	17,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	200
9771110360	13,60	22,00	32,00	24,00	1,00	0,10	20,20	19,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	180
9771120360	13,60	22,00	32,00	24,00	1,00	0,10	20,20	19,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	180
9771130360	13,60	22,00	32,00	24,00	1,00	0,10	23,20	22,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	150
9771140360	13,60	22,00	32,00	24,00	1,00	0,10	23,20	22,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	150
9771150360	13,60	22,00	32,00	24,00	1,00	0,10	23,20	22,70	1,50	0,20	2,00	1,75	28,40	14,20	4,00	2,00	Polystyrene	150



tolerance	A	B	C	D	N	W1	W2	W3	W3
± 2,0	min.	± 0,8	min.	± 2,0	+ 2	max.	min.	max.	
Tape width 32 mm	330,00	1,50	13,00	20,20	80,00	32,40	38,40	31,90	35,40



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



Tape width	32 mm	Pull-of force	0,1 N - 1,3 N
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1.0	2013-12-13	SSt	SKI
REV	DATE	BY	CHECKED

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

**WA-SMSE SMD Steel Spacer, M3 Thread External**

Order.- No. **9771100360R**

COMPLIANT RoHS&REACH WÜRTH ELEKTRONIK

SIZE A4

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 - Temperature Min ( $T_{smin}$ ) - Temperature Max ( $T_{smax}$ ) - Time ( $t_s$ ) from ( $T_{smin}$ to $T_{smax}$ )	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 mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350 - 2000	Volume mm <sup>3</sup> >2000
<b>PB-Free Assembly</b>	< 1.6 mm	260°C	260°C	260°C
<b>PB-Free Assembly</b>	1.6 - 2.5 mm	260°C	250°C	245°C
<b>PB-Free Assembly</b>	≥ 2.5 mm	250°C	245°C	245°C

refer to IPC/JEDEC J-STD-020D

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## I Cautions and Warnings:

The following conditions apply to all goods within the product series of **WA-SMSE** 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 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 12 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.



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1.0	2013-12-13	SSt	SKI		Order.- No. <b>9771100360R</b>
REV	DATE	BY	CHECKED		 <b>COMPLIANT RoHS&amp;REACH</b> WÜRTH ELEKTRONIK
					SIZE A4

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