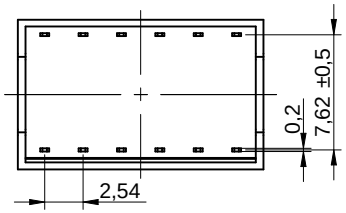
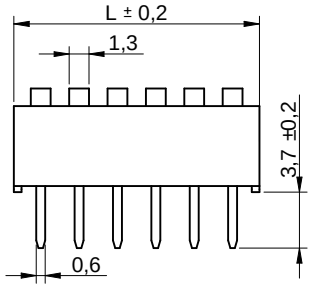
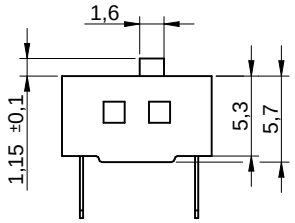
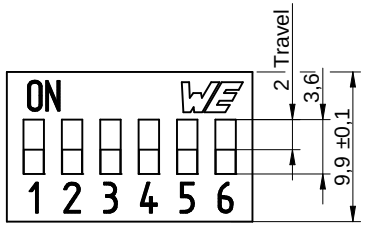
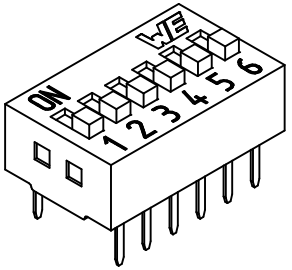
Dimensions: [mm]



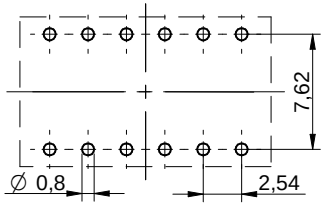






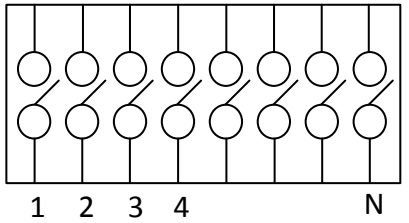


Recommended Hole Pattern: [mm]



Scale - 2:1

Schematic:



Dimensions:

Properties		Value	Unit
Pins		6	
Length	L	16.24	mm

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

WÜRTH ELEKTRONIK

CREATED	CHECKED	GENERAL TOLERANCE	PROJECTION METHOD
DaSc	MTH	DIN ISO 2768-1m	

DESCRIPTION
2.54mm compact THT with raised actuator WS-DITV

ORDER CODE
418117270906

REVISION	STATUS	DATE (YYYY-MM-DD)	BUSINESS UNIT	PAGE
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Dimensions:

Pins	L	Order Code
1	3.84 mm	418117270901
2	6.08 mm	418117270902
3	8.92 mm	418117270903
4	11.16 mm	418117270904
5	13.70 mm	418117270905
6	16.24 mm	418117270906
7	19.08 mm	418117270907
8	21.32 mm	418117270908
9	24.16 mm	418117270909
10	26.40 mm	418117270910
12	31.48 mm	418117270912

Material Properties:

Cover Material	PBT
Cover Flammability Rating	UL94 V-0
Cover Color	Red
Base Material	PBT
Base Flammability Rating	UL94 V-0
Base Color	Black
Actuator Material	PBT
Actuator Flammability Rating	UL94 V-0
Actuator Color	White
Contact Material	Copper Alloy
Contact Plating	Gold
Terminal Material	Copper Alloy
Terminal Plating	Gold

Electrical Properties:

Properties	Test conditions		Value	Unit	Tol.
Rated Current Switching		I_R	25	mA	
Rated Voltage Switching		U_R	24	V (DC)	
Rated Current Non-Switching		I_R	100	mA	
Rated Voltage Non-Switching		U_R	50	V (DC)	
Contact Resistance Initial		R	50	mΩ	max.
Contact Resistance After Life Test		R	100	mΩ	max.
Insulation Resistance	500 V (DC)	R_{ISO}	100	MΩ	min.
Withstanding Voltage	1 min		500	V (AC)	

Mechanical Properties:

Properties	Test conditions	Value	Unit	Tol.
Operation Force		800	g	max.
Electrical Life	25 mA / 24 V (DC)	2000	Cycles	
Mechanical Life		5000	Cycles	min.
Actuator Type	Raise Type			

General Information:

Operating Temperature	-40 °C up to +85 °C
Storage Temperature (in original packaging)	-40 °C up to +85 °C

Packaging Properties:

Packaging	Tube

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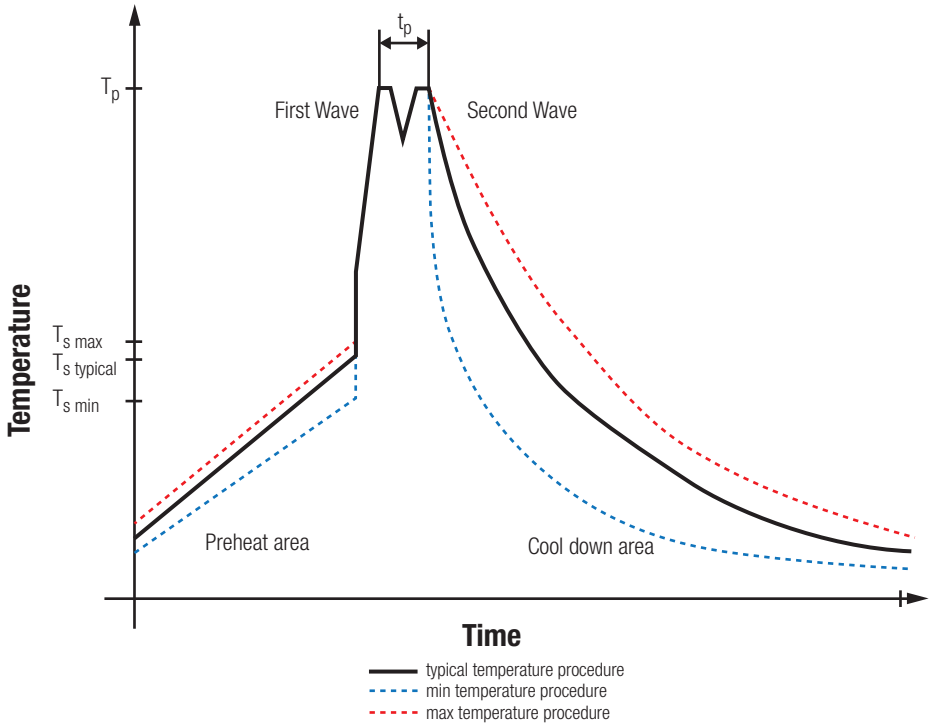
Classification Wave Soldering Profile:



Classification Wave Soldering Profile:

Profile Feature		Pb-Free Assembly	Sn-Pb Assembly
Preheat Temperature Min [1)]	$T_{s\ min}$	100 °C	100 °C
Preheat Temperature Typical	$T_{s\ typical}$	120 °C	120 °C
Preheat Temperature Max	$T_{s\ max}$	130 °C	130 °C
Preheat Time t_s from $T_{s\ min}$ to $T_{s\ max}$	t_s	70 seconds	70 seconds
Ramp-up Rate	ΔT	150 °C max.	150 °C max.
Peak temperature	T_p	250 °C - 260 °C	235 °C - 260 °C
Time of actual peak temperature	t_p	max. 10 seconds max. 5 seconds each wave	max. 10 seconds max. 5 seconds each wave
Ramp-down Rate, Min		~ 2 K/ second	~ 2 K/ second
Ramp-down Rate, Typical		~ 3.5 K/ second	~ 3.5 K/ second
Ramp-down Rate, Max		~ 5 K/ second	~ 5 K/ second
Time 25°C to 25°C		4 minutes	4 minutes

[1)] refer to EN61760-1:2006
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Cautions and Warnings:

The following conditions apply to all DIP Switches (hereinafter referred as to “switch” or “DIP switch”) of Würth Elektronik eiSos GmbH & Co. KG:

General:

- This switch is designed and developed with the intention for use in general electronics equipment.
- Before incorporating the switch into any equipment in the field such as aerospace, aviation, nuclear control, submarine, transportation, (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc. where higher safety and reliability are especially required or if there is possibility of direct damage or injury to human body, Würth Elektronik must be asked for a written approval.
- In addition, even switches in general electronic equipment, when used in electrical circuits that require high safety, reliability functions or performance, the sufficient reliability evaluation-check for the safety must be performed by the user before usage.
- The switch is designed and manufactured to be used within the datasheet specified values.
- Do not use the switch outside the datasheet specifications.
- Prevent any damage or scratches on the switch, especially on the actuator.
- Direct mechanical impact to the switch shall be prevented (e.g. overlapping of the PCB´s).
- The responsibility for the applicability of the customer specific products and use in a particular customer design is always within the authority of the customer. All technical specification for standard products do also apply to customer specific products.

Product Specific:

Soldering:

- The solder profile must comply with the WE technical soldering specification; otherwise, the warranty will be void.
- For reflow soldering limitation of two times is recommended. Hand soldering max. 350°C for 3 sec max..
- Other soldering methods (e.g. vapor phase) are not verified and have to be validated by the customer on his own risk.

Cleaning and Washing:

- Non-washable series are parts without ‘washable’ label in the catalog:The switch is not constructed for washing, so washing can cause malfunction afterwards.
- ‘Washable’ series are those with ‘washable’ label in the catalog: Cleaning agents that are used to clean the customer applications might damage or change the characteristics of the switch, body, pins and termination.
- Please do not submerse our washable products into water or cleaning agents or put them in locations exposed to water completely.
- Do not clean washable series immediately after soldering. The cleaning agent may be absorbed into the switch through respiration while the switch cools.
- When cleaning by hand (brushing), please do not use excessive force on our switch to avoid malfunction afterwards, otherwise relevant areas for the function of the switch might get deformed.

Potting and Coating:

- If the switch is potted or coated in customer applications, the potting or coating material might shrink during and after hardening; thus the switch is exposed to the pressure of the potting material with the effect that the switch possibly might get damaged by this pressure with the outcome that the electrical as well as the mechanical characteristics are in danger of being affected. After the potting or coating material is cured, the switch needs to be checked if any malfunction or destructions on the switch has occurred.

Handling of Product:

- Please keep our switch at “off” position before and during the soldering process.
- For series with top tape, please remove the tape after your manufacturing process is completed.
- A ball pen or plastic tweezers with flat and smooth surface (the latter is recommended to be used to switch the actuator position). Please do not apply excessive force as it could damage or deform the contacts inside the switch and this may lead to malfunction of the switch.
- Do not use sharp headed tools to operate the switch. Sharp headed tools may damage the switch surface and might result in malfunction of the switch.

Correct setting steps:

1. For the top-tapped DIP switches, do not remove the tape until the soldering process is completed.
2. Use one side of the tweezer’s lever to touch the cover of the switch, the other side of the tweezer’s lever touches the opposite side of the moveable actuator, then clip vertically to move the actuator to the switch’s cover side.
3. Use clamping force to switch the actuator.

- Please follow the aforementioned ‘Correct setting steps’ and do not use the closed-lever tweezer to push or poke the actuator. Extensive and unbalanced force may damage or deform the contacts and/or the slide window, thus undesirable failures may occur.
- Please do not switch the setting to ‘On’ or ‘Off’ until the PCB is fully cooled down.
- Design the right angle part with consideration of the wave soldering process so that the parts will not touch the soldering wave during the soldering process or protect the switch part with cover fixture. Melt of the switch might cause malfunction.

Operation and Storage conditions:

- -40°C ~ +85°C
- In case a switch requires particular handling precautions in addition to the general recommendations mentioned here before, these will appear on the product datasheet.
- The switch shall be used before the end of the period of 12 months based on the product date code; otherwise, 100% solderability cannot be warranted.

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CREATED	CHECKED	GENERAL TOLERANCE	PROJECTION METHOD
DaSc	MTH	DIN ISO 2768-1m	

DESCRIPTION
2.54mm compact THT with raised actuator WS-DITV

ORDER CODE
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Important Notes

The following conditions apply to all goods within the product range of Würth Elektronik eiSos GmbH & Co. KG:

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.

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.

6. Product Life Cycle

Due to technical progress and economical evaluation we also reserve the right to discontinue production and delivery of products. As a standard reporting procedure of the Product Termination Notification (PTN) according to the JEDEC-Standard we will inform at an early stage about inevitable product discontinuance. According to this we cannot guarantee that all products within our product range will always be available. Therefore it needs to be verified with the field sales engineer or the internal sales person in charge about the current product availability expectancy before or when the product for application design-in disposal is considered. The approach named above does not 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 contracts as well as models or templates that are subject to copyright, patent or commercial protection supplied to the customer will remain with Würth Elektronik eiSos GmbH & Co. KG. Würth Elektronik eiSos GmbH & Co. KG does not warrant or represent that any license, either expressed or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, 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.

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