

# knitter-switch

## Product-Discontinuation Notice

Affected products: DSS 502, DSS 504, DSS 506, DSS 508, DSS 510

Effective date: after current stock is sold out

### Details:

The production of these switches stopped because of supplier problems.


For replacement, we recommend the following through-hole components:

DBS 5002 G, DBS 5004 G, DBS 5006 G, DBS 5008 G, DBS 5010 G,

alternatively, the following SMT switches:

SMS 502, SMS 504, SMS 506, SMS 508, SMS 510.

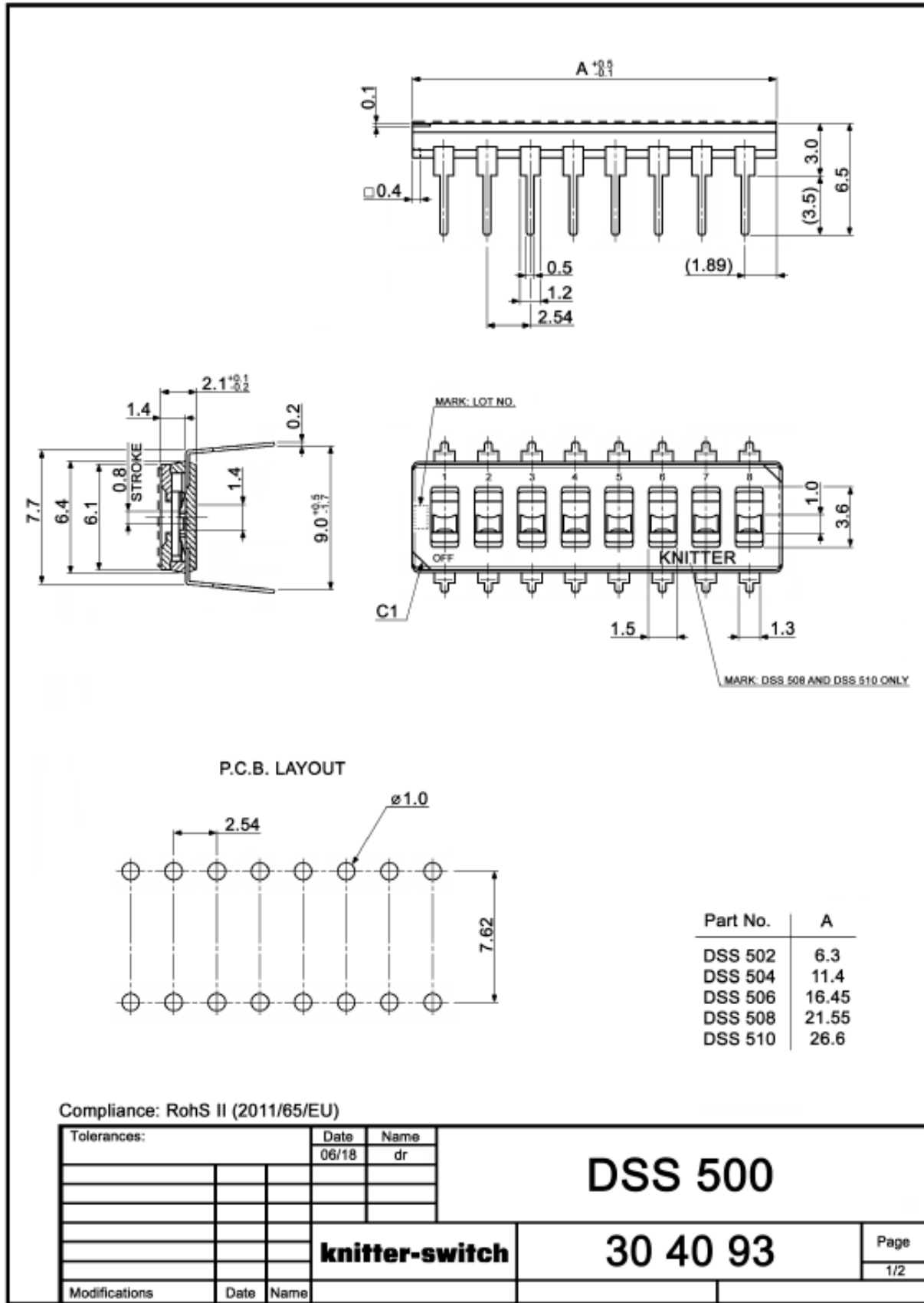
knitter-switch, June 2021



Oliver Kluj

Technical Director

# knitter-switch



# knitter-switch

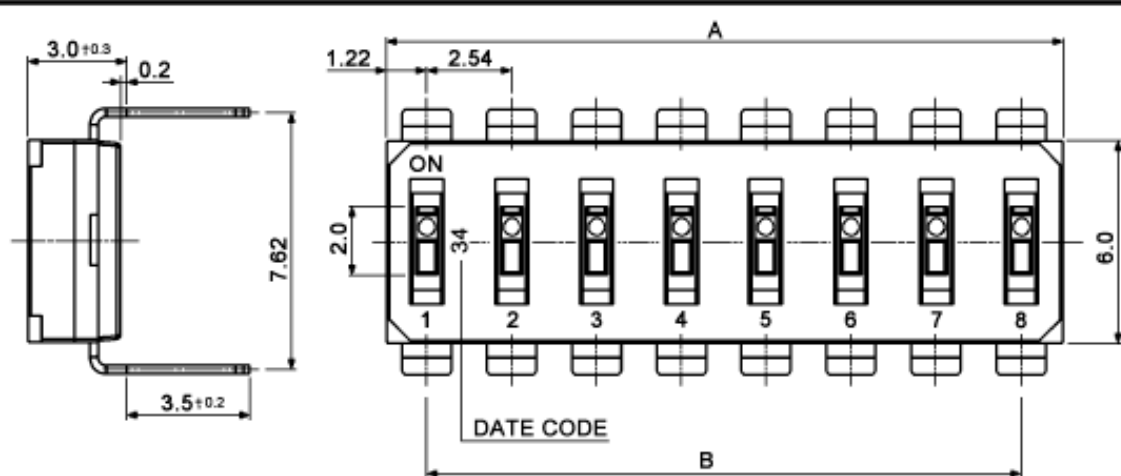
## Specifications:

Contact rating:	100mA, 50V DC
Contact resistance:	50mOhm max.
Insulation resistance:	1 000MOhm min. at 100V DC
Dielectric strength:	500V, 50Hz for the duration of 1 minute
Capacity:	max. 5pF between 2 poles
Operating temperature:	-25°C to +80°C
Mechanical life:	min. 1 000 cycles
Shock resistance:	contact interruption <10µsec. with triple shock in all 6 direction shock conditions: 20G, 11msec. duration (sine half wave)
Vibration:	contact interruption: <10µsec. at vibration test in accordance with MIL-STD-202 D, method 204, condition C
Construction:	case sealed, slide recessed, sealed with protective tape
Mounting:	on pc-board
Slide position:	off
Soldering conditions:	pre-heat max. 100°C, max. 60 sec. wave soldering max. 260°C, max. 5 sec.
Material:	Contacts: beryllium copper, plated 0.2µm Au over 0.2µm Ag over 0.5µm Ni Terminals: nickel silver, plated 0.1µm Au over 0.1µm Ni Slider: PA Case: PPS

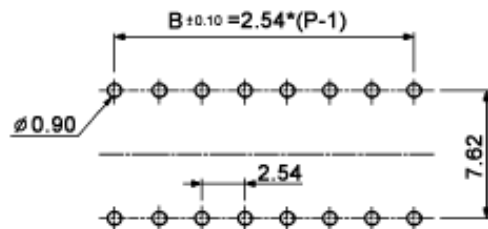
Compliance: RohS II (2011/65/EU)

Tolerances:		Date	Name	<b>DSS 500</b>
		06/18	dr	
			<b>knitter-switch</b>	<b>30 40 93</b>
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Modifications	Date	Name		

# knitter-switch



P.C.B. LAYOUT



xx	Poles	DIM. A	DIM. B
01	1	2.44	-
02	2	4.98	2.54
03	3	7.52	5.08
04	4	10.06	7.62
05	5	12.60	10.16
06	6	15.14	12.70
07	7	17.68	15.24
08	8	20.22	17.78
09	9	22.76	20.32
10	10	25.30	22.86
12	12	30.38	27.94

**Specifications:**

- Contact rating:** non-switching: 100mA, 50V DC  
switching: 25mA, 24V DC  
min.: 20mV AC/DC at 1µA
- Contact resistance:** 100mOhm max.
- Insulation resistance:** 100MOhm min. at 500V DC for 1 minute +/-5sec.
- Dielectric strength:** 500V AC (50/60Hz) for 1 minute
- Shock resistance:** MIL STD 202F, method 213B, cond. A, contact interruption <10µsec.
- Vibration resistance:** MIL STD 202F, method 204, cond. C, contact interruption <10µsec.
- Operating temperature:** -40°C to +85°C
- Storage temperature:** -40°C to +85°C
- Mechanical life:** 5 000 cycles
- Operating force:** 1 000gf max.
- Soldering conditions:** 260°C max., 10sec. max.
- Sealing:** by protective tape, washable by aqueous detergents and isopropyl alcohol
- Material:** Cover / base: high-temp. thermoplastic PA-9T UL94V-0, molded black  
Contact: copper, 0.3µm gold plated over 0.5µm nickel  
Terminal: brass, 0.3µm gold plated over 0.5µm nickel  
Actuator: thermoplastic LCP UL94V-0, molded white  
Tape: kapton

SCHMATIC (TYP.)



Tolerances: ±0.2mm	Date	Name
	07/10	dr
Rename	02/14	dr
Sealing	11/13	dr
Specifications	05/11	dr
Number of poles	11/10	dr
Modifications	Date	Name

**DBS 50xx G**

**30 21 44**

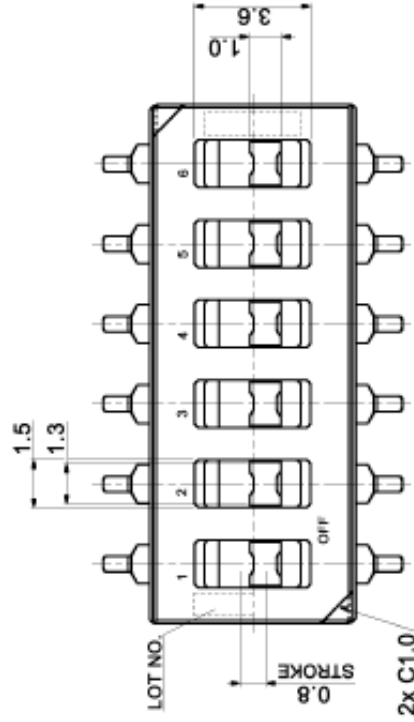
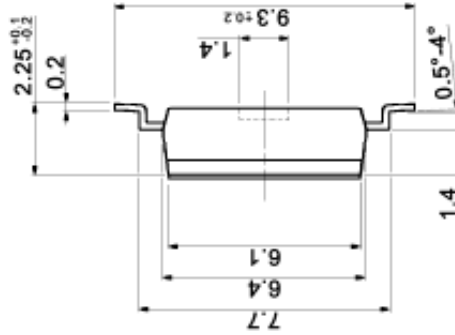
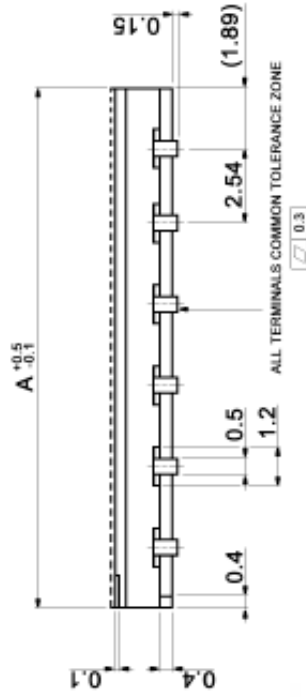
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**knitter-switch**

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Part No.	Poles	A
SMS 502	2	6.3
SMS 504	4	11.4
SMS 506	6	16.5
SMS 508	8	21.55
SMS 510	10	26.65



Compliance: RoHS III (2015/863/EU)

Tolerances:	<3: ±0.2mm	>3: ±0.3mm
Coplanarity		
Operating temperature	06/20	dr
Tolerances	05/12	dr
Operating temperature	03/11	dr
Soldering conditions	02/10	dr
Modifications	Date	Name

x Packaging

empty tube packaging  
T tape and reel

SMS 500 x

knitter-switch

30 19 53

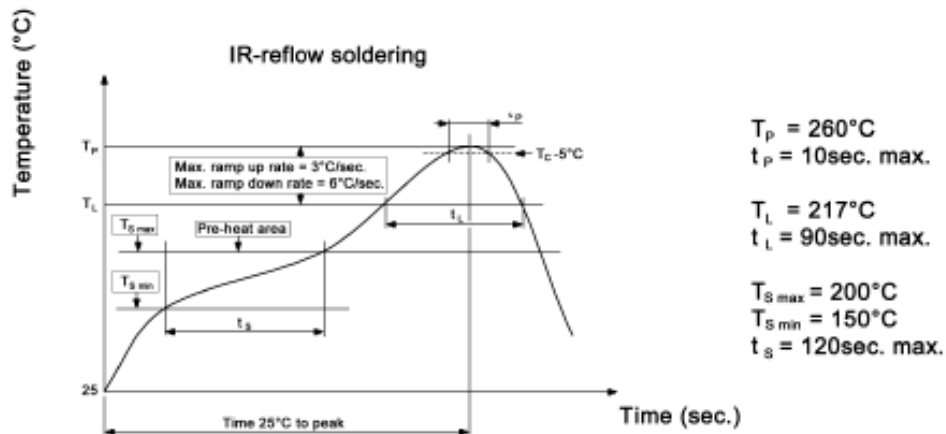
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## Specifications:

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Vibration:	contact interruption: <10µsec. at vibration test in accordance with MIL-STD-202 D, method 204, condition C
Construction:	case sealed, slide recessed, sealed with protective tape
Mounting:	on pc-board - SMD
Slide position:	off
Material:	Contacts: beryllium copper, plated 0.3µm gold over 2µm nickel Terminals: nickel silver, plated 0.3µm gold over 2µm nickel Case / slide: PA

## Soldering conditions:



Compliance: RohS III (2015/863/EU)

Tolerances: <3: ±0.2mm >3: ±0.3mm	Date	Name	<b>SMS 500 x</b>
	11/09	dr	
Coplanarity	06/20	dr	
Operating temperature	06/15	dr	
Tolerances	05/12	dr	<b>30 19 53</b>
Operating temperature	03/11	dr	
Soldering conditions	02/10	dr	
Modifications	Date	Name	<b>knitter-switch</b>
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