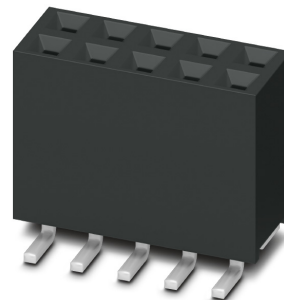


Data sheet

Order No.: 1156888

Type: FQ 2,54D/ 20-SV-1020-1-BT

SMD socket, Reflow soldering



The figure shows the 10-pos. version

1 Main features



• No. of pos.	20	• Nominal current	3 A
• Test voltage	500 V AC	• Mounting type	SMD soldering
• Color	black (9005)	• Connection direction	90 °
• Pitch	2.54 mm	• Type of packaging	Tube magazine

2 Your advantages

- ✓ Reliable mechanical and electrical connections thanks to the double-sided contact system
- ✓ Designed for integration into the SMT soldering process
- ✓ Clear and cost-optimized design
- ✓ Suitable for a multitude of applications
- ✓ Stacked, coplanar or orthogonal PCB connections enable maximum flexibility in the device



Make sure you always use the latest documentation.

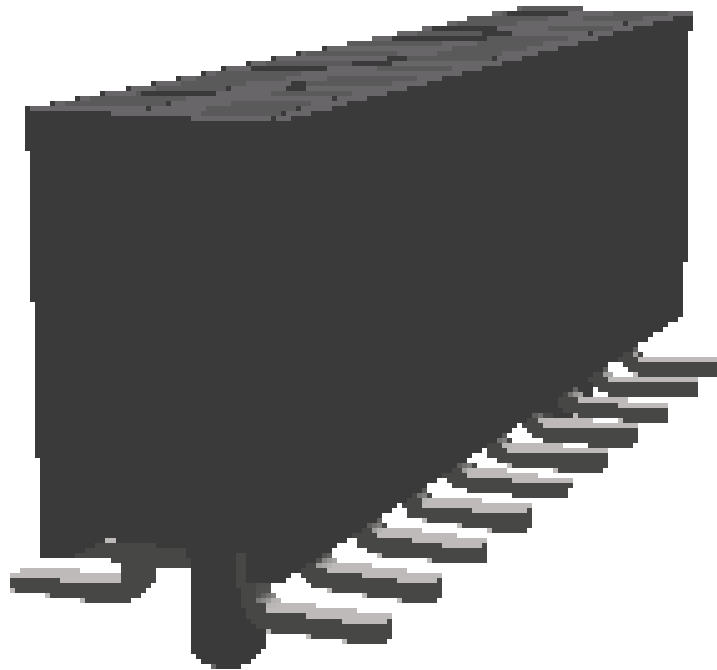
It can be downloaded at: phoenixcontact.net/product/1156888

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1156888 FQ 2,54D/ 20-SV-1020-1-BT

4 3D model in PDF can be activated (Acrobat Reader only)



1156888 FQ 2,54D/ 20-SV-1020-1-BT**5 General Technical Data****5.1 item properties**

Order No.	1156888
Type	FQ 2,54D/ 20-SV-1020-1-BT
Connector system	FINEPITCH FQ 2,54
Product type	SMD socket
Type of contact	Female connector
Range of articles	FQ 2,54D/...-SV
Pitch	2.54 mm
Number of positions	20
Number of levels	2
Type of locking	without
Mounting type	SMD soldering
Connection direction of the connector to the PCB	90 °
Pin layout	Linear pad geometry

1156888 FQ 2,54D/ 20-SV-1020-1-BT**6 Mounting****6.1 Flange mounting**

Type of locking	without
-----------------	---------

6.2 Material of metal parts

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface contact area	Nickel (Ni) , Gold (Au)
Soldering area surface	Tin (Sn)
Surface characteristics	Selective coating
Insulating material data	Housing
Color	black (9005)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

1156888 FQ 2,54D/ 20-SV-1020-1-BT**7 Dimensions****7.1 Dimensions for the product**

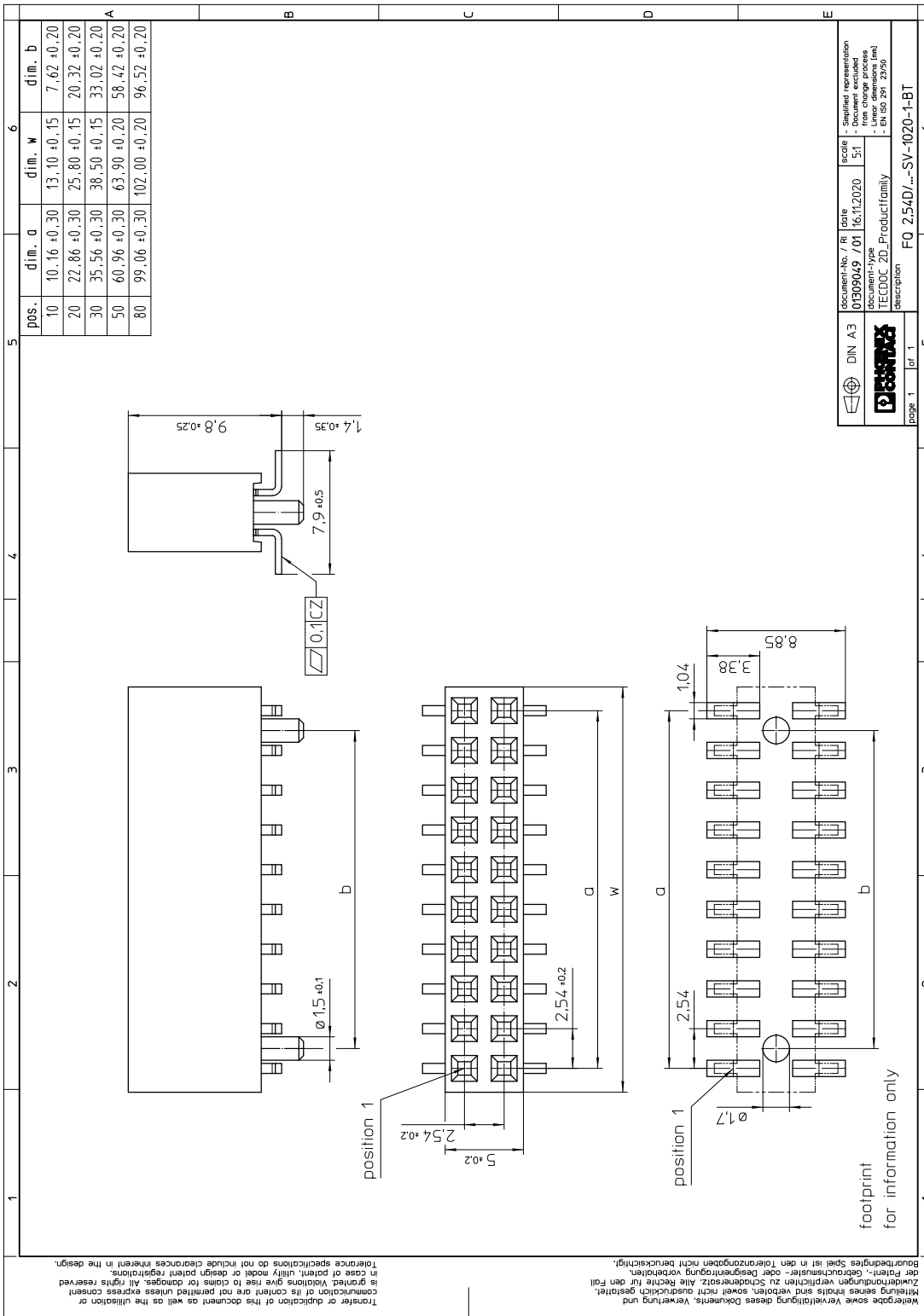
Length	7.9 mm
Width	25.8 mm
Total height	11.2 mm
Installed height	9.8 mm
Coplanarity	≤ 0.1 mm

7.2 Dimensions for the application

Contact cover	0.4 mm
Overlap length	1.3 mm
Stacking height	13.6 mm Tolerance: +1.3 mm (in combination with Range of articles:FQ 2,54D/ ...-PV)

1156888 FQ 2,54D/ 20-SV-1020-1-BT

8 Series drawing



9 Product notes

9.1 General information

Notes on operation

The permissible voltage during operation depends on the application, taking into consideration the air clearances and creepage distances within the scope of insulation requirements in accordance with IEC 60664-1.

10 Packaging information

Type of packaging

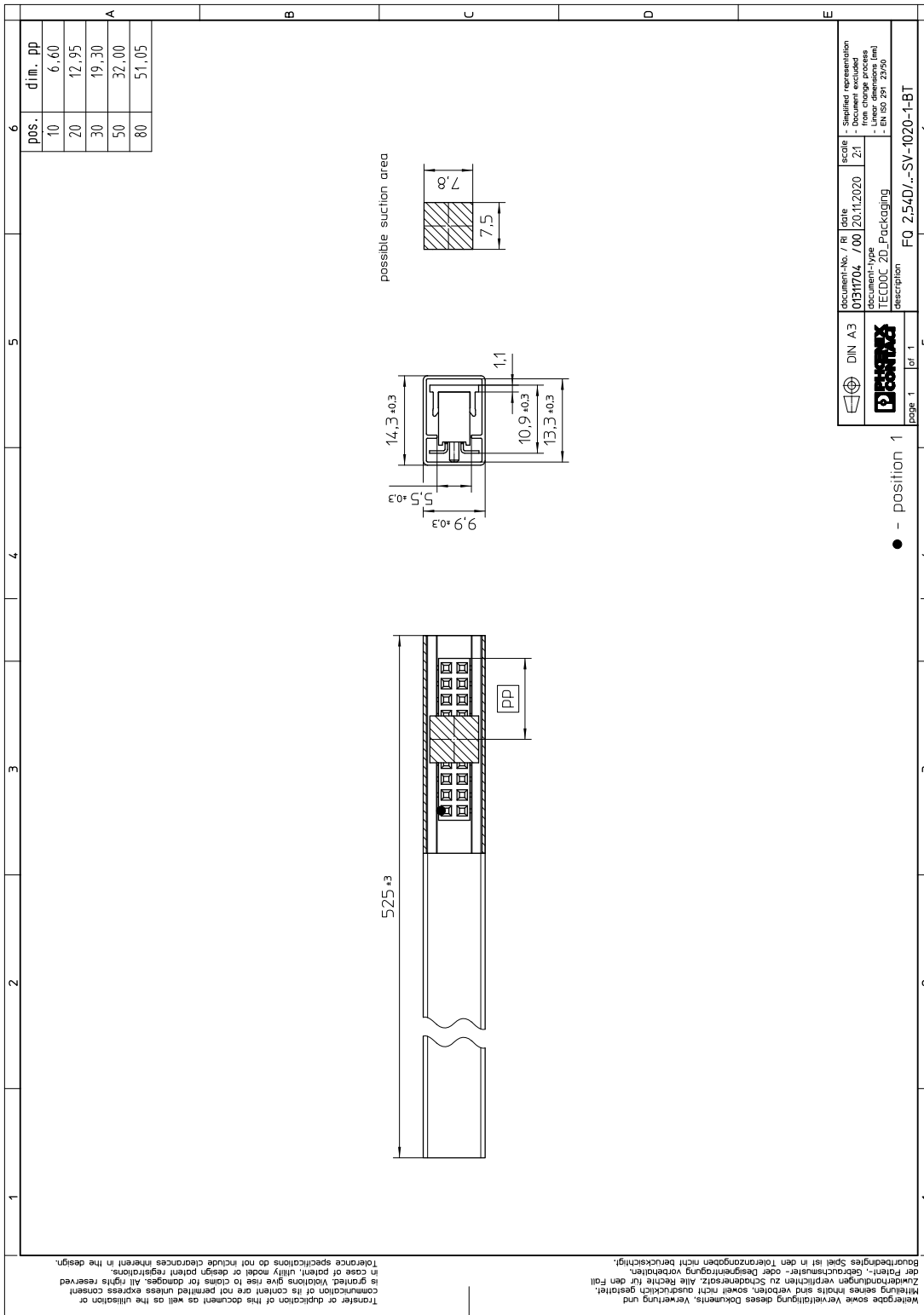
Tube magazine

Pieces per package

190

1156888 FQ 2,54D/ 20-SV-1020-1-BT

11 Blister drawing



12 Application

12.1 Temperature limit values

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 125 °C

1156888 FQ 2,54D/ 20-SV-1020-1-BT

13 General tests

13.1 Specification

Board-to-board connectors	
Brief description	

14 Mechanical tests

14.1 Insertion and withdrawal force per contact

Insertion and withdrawal force per contact	≤ 2.9 N
Specification	IEC 60512-9-1:2010-03 (following) 100 Insertion/withdrawal cycles

1156888 FQ 2,54D/ 20-SV-1020-1-BT**15 Electrical tests**

Nominal current at 20 °C	3 A IEC 60512-5-2:2002-02 (80-pos.)
Test voltage	500 V AC IEC 60512-4-1:2003

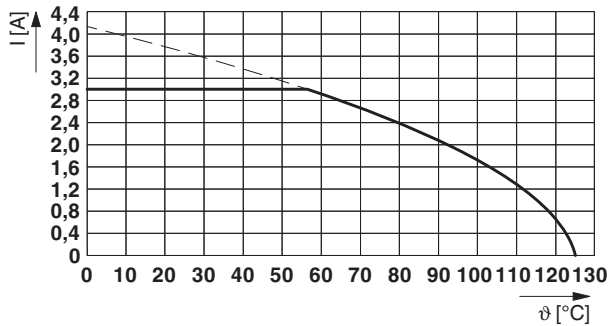
15.1 Air and creepage distances

Minimum value for clearance and creepage distance	0.4 mm
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1156888 FQ 2,54D/ 20-SV-1020-1-BT**16 Current carrying capacity/derating curves**

Specification	IEC 60512-5-2:2002-02
Note	max. 3 A at 20°C (80-pos.)
Reduction factor	0.8

Type: FQ 2,54D/...-SV-1020-1-BT with FQ 2,54D/...-PV- 380-1-BT

**16.1 Insulation resistance**

Insulation resistance	> 1 G Ω , (IEC 60512-3-1:2002-02)
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16.2 forward resistance

Contact resistance	≤ 30 m Ω , (IEC 60512-2-1:2002-02)
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16.3 Vibration test

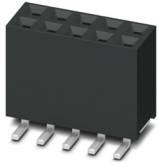
Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 55 - 10 Hz
Sweep speed	1 octave/min
Amplitude	1.52 mm
Acceleration	181 m/s ²
Test duration per axis	2 h
Test directions	X-, Y- and Z-axis
Note	

1156888 FQ 2,54D/ 20-SV-1020-1-BT**17 Commercial Data**

Order No.	1156888
Type	FQ 2,54D/ 20-SV-1020-1-BT
Pieces per package	190
Net weight	2.22 g
GTIN	4063151159184
	Information that applies locally, see link on page 1

1156888 FQ 2,54D/ 20-SV-1020-1-BT

18 Combination tests

**FQ 2,54D/...-SV****FQ 2,54D/...-PV****Mechanical tests**

Insertion/withdrawal force per position

approx. 2.9 N / 2.9 N

Durability testsContact resistance R_1 20 m Ω

Insertion/withdrawal cycles

100

Contact resistance R_2 30 m Ω

Test voltage

500 V AC

Insulation resistance
Requirements > 5 M Ω > 1 G Ω **Thermal tests**

Tested number of positions

80

Test current

3 A