# FQ 2,54D/ 80-SV-1020-1-BT - Female strip

1156893

https://www.phoenixcontact.com/us/products/1156893

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SMD socket, nominal current: 3 A, test voltage: 500 V AC, number of positions: 80, pitch: 2.54 mm, color: black, contact surface: Au, contact connection type: Socket, mounting: SMD soldering



## 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

## Commercial data

| | |
|---|---|
| Item number | 1156893 |
| Packing unit | 40 pc |
| Minimum order quantity | 40 pc |
| Sales key | AA24 |
| Product key | AAXABB |
| GTIN | 4063151159870 |
| Weight per piece (including packing) | 11.94 g |
| Weight per piece (excluding packing) | 11 g |
| Customs tariff number | 85366930 |
| Country of origin | CN |

## Technical data

### Notes

| | |
|---|---|
| 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. |

### Product properties

| | |
|---|---|
| Product type | SMD socket |
| Product family | FQ 2,54D/...-SV |
| Number of positions | 80 |
| Pitch | 2.54 mm |
| Number of rows | 2 |
| Pin layout | Linear pad geometry |

Fitting of components

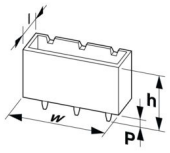
| | |
|---|---|
| Partial assembly | No |

### Electrical properties

Properties

| | |
|---|---|
| Nominal current $I_N$ | 3 A (at 20°C 80-pos.) |
| Contact resistance | 20 mΩ |
| Test voltage | 500 V AC IEC 60512-4-1:2003-05 |

### Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Pitch | 2.54 mm |
| Width [w] | 102 mm |
| Height [h] | 11.2 mm |
| Length [l] | 7.9 mm |
| Installed height | 9.8 mm |

Application

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

PCB design

| | |
|---|---|
| Pad geometry | 1.04 x 3.38 mm |

## Material specifications

Material data - contact

| | |
|---|---|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Surface characteristics | Selective coating |
| Metal surface contact area (top layer) | Gold (Au) |
| Metal surface contact area (middle layer) | Nickel (Ni) |
| Metal surface soldering area (top layer) | Tin (Sn) |

Material data - housing

| | |
|---|---|
| Color (Housing) | black (9005) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |

## Connector

Connection 1

| | |
|---|---|
| Insulating material | PA |
| CTI according to IEC 60112 | 600 |

## Electrical tests

Thermal test | Test group C

| | |
|---|---|
| Specification | IEC 60512-5-2:2002-02 |
| Tested number of positions | 80 |

Insulation resistance

| | |
|---|---|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 1 GΩ |

Air clearances and creepage distances |

| | |
|---|---|
| Insulating material group | I |
| Minimum value for clearance and creepage distance | 0.4 mm |

## Mechanical tests

Insertion and withdrawal forces

| | |
|---|---|
| Result | Test passed |
| No. of cycles | 100 |
| Insertion strength per pos. approx. | 2.9 N |
| Withdraw strength per pos. approx. | 2.9 N |

Visual inspection

| | |
|---|---|
| Specification | IEC 60512-1-1:2002-02 |

| | |
|---|---|
| Result | Test passed |

Dimension check

| | |
|---|---|
| Specification | IEC 60512-1-2:2002-02 |
| Result | Test passed |

## Environmental and real-life conditions

Durability test

| | |
|---|---|
| Specification | IEC 60512-9-1:2010-03 (following) |
| Contact resistance $R_1$ | 20 mΩ |
| Contact resistance $R_2$ | 30 mΩ |
| Insertion/withdrawal cycles | 100 |
| Insulation resistance, neighboring positions | > 1 GΩ |

Vibration test

| | |
|---|---|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency | 10 - 55 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 1.52 mm |
| Acceleration | 181 m/s² |
| Test duration per axis | 2 h |
| Test directions | X-, Y- and Z-axis |

Ambient conditions

| | |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 125 °C |

Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 125 °C |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

## Mounting

| | |
|---|---|
| Mounting type | SMD soldering |
| Pin layout | Linear pad geometry |

Processing notes

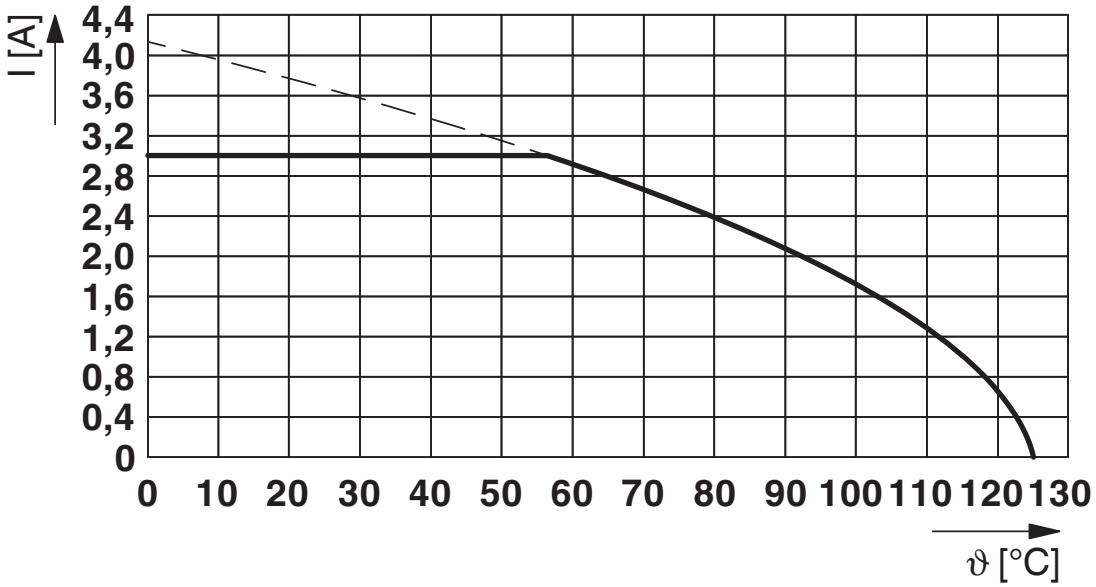
| | |
|---|---|
| Process | Reflow soldering |
| Moisture Sensitive Level | MSL 1 |
| Classification temperature $T_c$ | 260 °C |

## Packaging specifications

| | |
|---|---|
| Type of packaging | Tube magazine |

## Drawings

Diagram




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

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1156893

**cULus Recognized**
Approval ID: E118976

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 30 V | 3 A | - | - |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27460201 |
| ECLASS-15.0 | 27460201 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002637 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121400 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 0.829 kg CO2e |


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