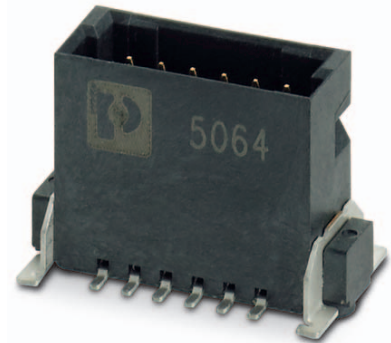


# Data sheet

Order No.: 1714927

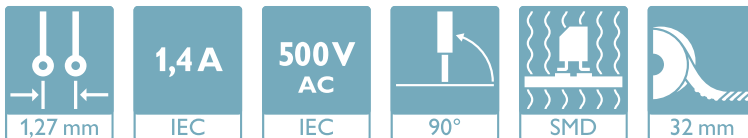
Type: FP 1,27/ 20-MV 3,25

SMD male connector, Reflow soldering



The figure shows a 12-pos. version with 12 contacts

## 1 Main features



• No. of pos.	20	• Nominal current	1.4 A
• Test voltage	500 V AC	• Mounting type	SMD soldering
• Color	black (9005)	• Connection direction	90 °
• Pitch	1.27 mm	• Type of packaging	32 mm wide tape

## 2 Your advantages

- ✓ Gold-plated contacts ensure transfer quality remains stable over the long term
- ✓ Compact, high-position board-to-board or wire-to-board connectors for space-saving device designs
- ✓ Stacked, coplanar or orthogonal PCB connections enable maximum flexibility in the device
- ✓ Male and female connectors of different height can be combined – for individual PCB spacing of 8 mm ... 13.8 mm



Make sure you always use the latest documentation.

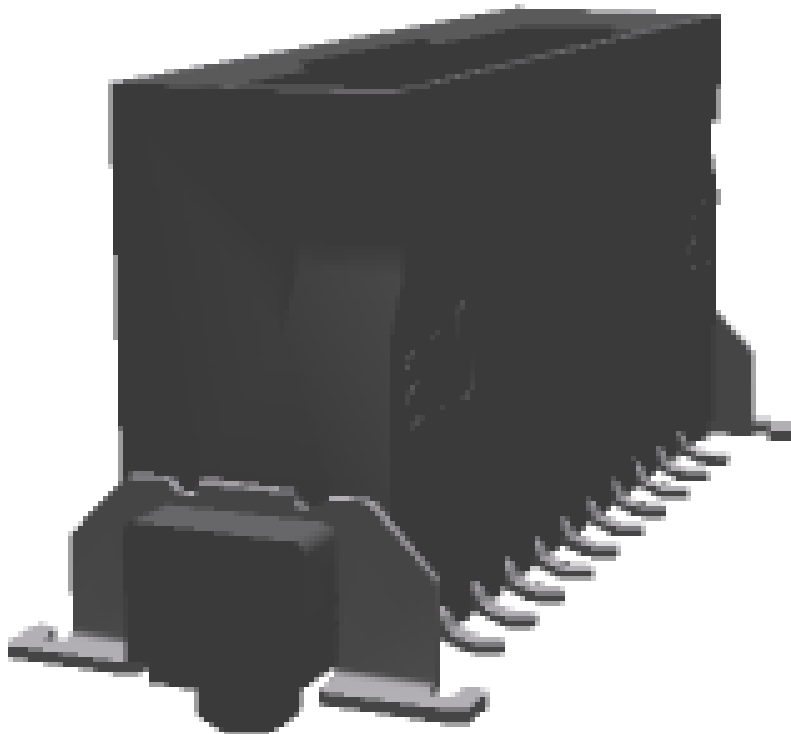
It can be downloaded at: [phoenixcontact.net/product/1714927](https://phoenixcontact.net/product/1714927)

**3 Table of contents**

1	Main features.....	1
2	Your advantages .....	1
3	Table of contents .....	2
4	3D model in PDF can be activated (Acrobat Reader only).....	3
5	General Technical Data .....	4
	5.1 item properties .....	4
	5.2 Material data .....	4
6	Dimensions.....	5
	6.1 Dimensions for the product .....	5
	6.2 Dimensions for the application .....	5
7	Series drawing.....	6
8	Packaging information .....	7
9	Blister drawing.....	8
10	Application.....	9
	10.1 Temperature limit values .....	9
11	General tests .....	10
	11.1 Specification.....	10
12	Mechanical tests.....	11
	12.1 Insertion and withdrawal force per contact .....	11
	12.2 Service life .....	11
13	Electrical tests .....	12
	13.1 Electrical data .....	12
	13.2 Air and creepage distances .....	12
14	Current carrying capacity/derating curves .....	13
	14.1 Insulation resistance.....	13
	14.2 forward resistance .....	14
	14.3 Vibration test .....	14
15	Approvals .....	14
16	Commercial Data.....	15
17	Combination tests.....	16

1714927 FP 1,27/ 20-MV 3,25

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



**1714927 FP 1,27/ 20-MV 3,25****5 General Technical Data****5.1 item properties**

Order No.	1714927
Type	FP 1,27/ 20-MV 3,25
Plug-in system	Fine Pitch 1,27 mm
Product type	SMD male connector
Type of contact	Male connector
Range of articles	FP 1,27/...-MV 3,25
Pitch	1.27 mm
Range of positions	12...80
Number of positions	20
Number of levels	2
Number of potentials	20
Type of locking	without
Mounting type	SMD soldering
Connection direction of the connector to the PCB	90 °
Pin layout	Linear pad geometry

**5.2 Material data**

<b>Material of metal parts</b>	
Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface contact area	Nickel (Ni), Palladium nickel (PdNi) , Gold (Au)
Surface characteristics	Selective coating
<b>Insulating material data</b>	
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0
Color	black (9005)

**1714927 FP 1,27/ 20-MV 3,25****6 Dimensions****6.1 Dimensions for the product**

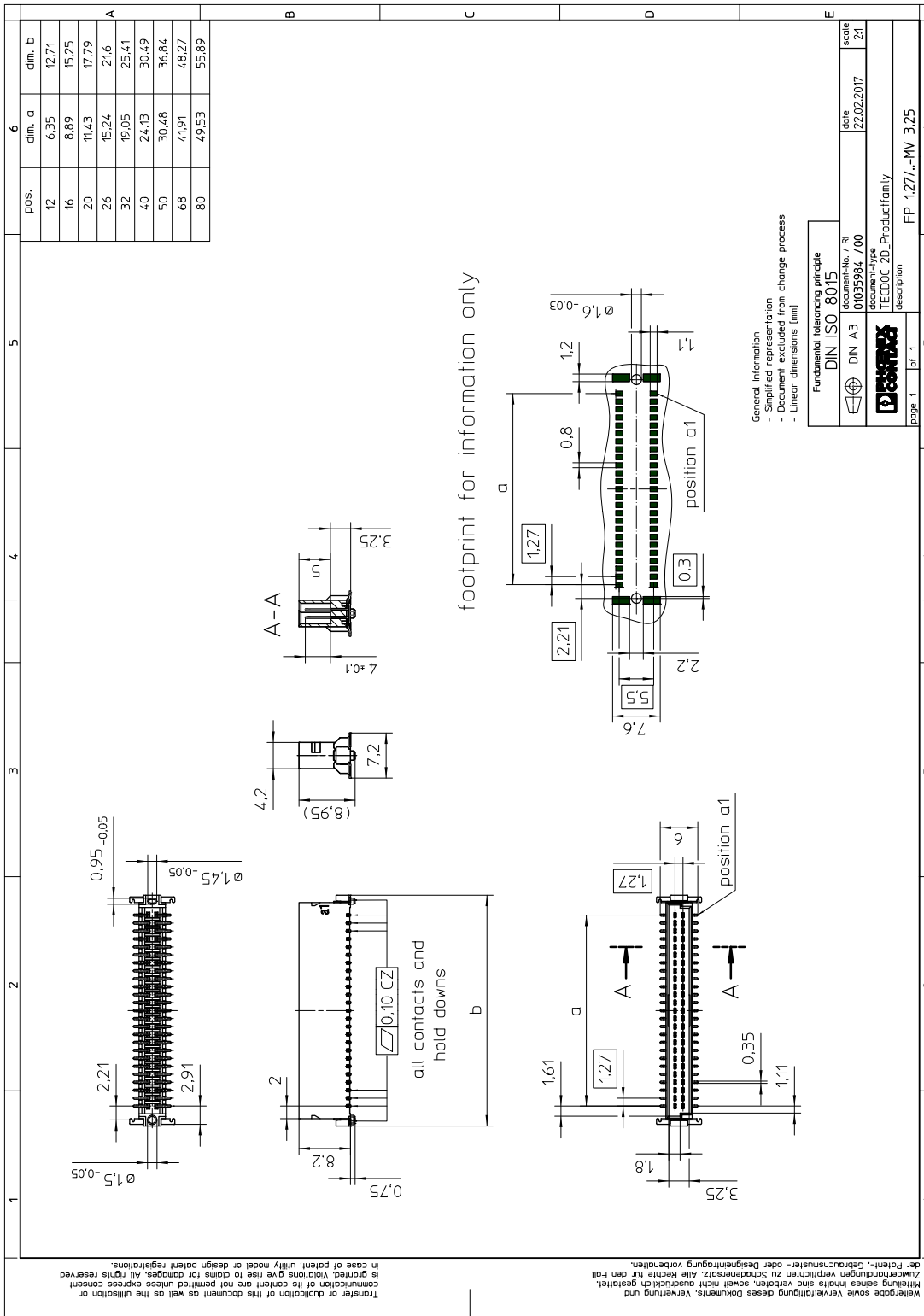
Length	7.2 mm
Width	17.79 mm
Total height	8.95 mm
Height	8.25 mm
Base height	3.25 mm
Positioning pin geometry	ø 1.5-0.05 mm, Length of positioning pin: 0.75 mm
Coplanarity	≤ 0.1 mm

**6.2 Dimensions for the application**

Contact cover	0.9 mm
Overlap length	1.5 mm
Medium offset	± 0.7 mm in longitudinal and transverse direction
Angular tolerance	± 4 ° in longitudinal direction
Angular tolerance	± 2 ° in transverse direction
Stacking height	9.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 1,27/...-FV 6,25)
Stacking height	12.3 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 1,27/...-FV 9,05)

1714927 FP 1,27/ 20-MV 3,25

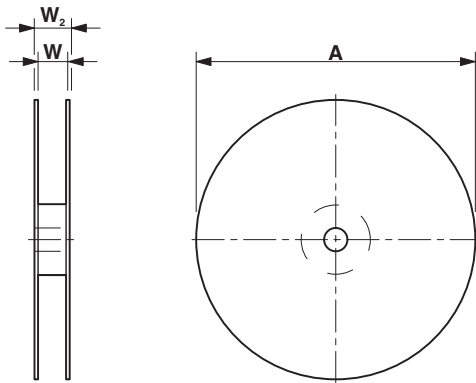
7 Series drawing



## 1714927 FP 1,27/ 20-MV 3,25

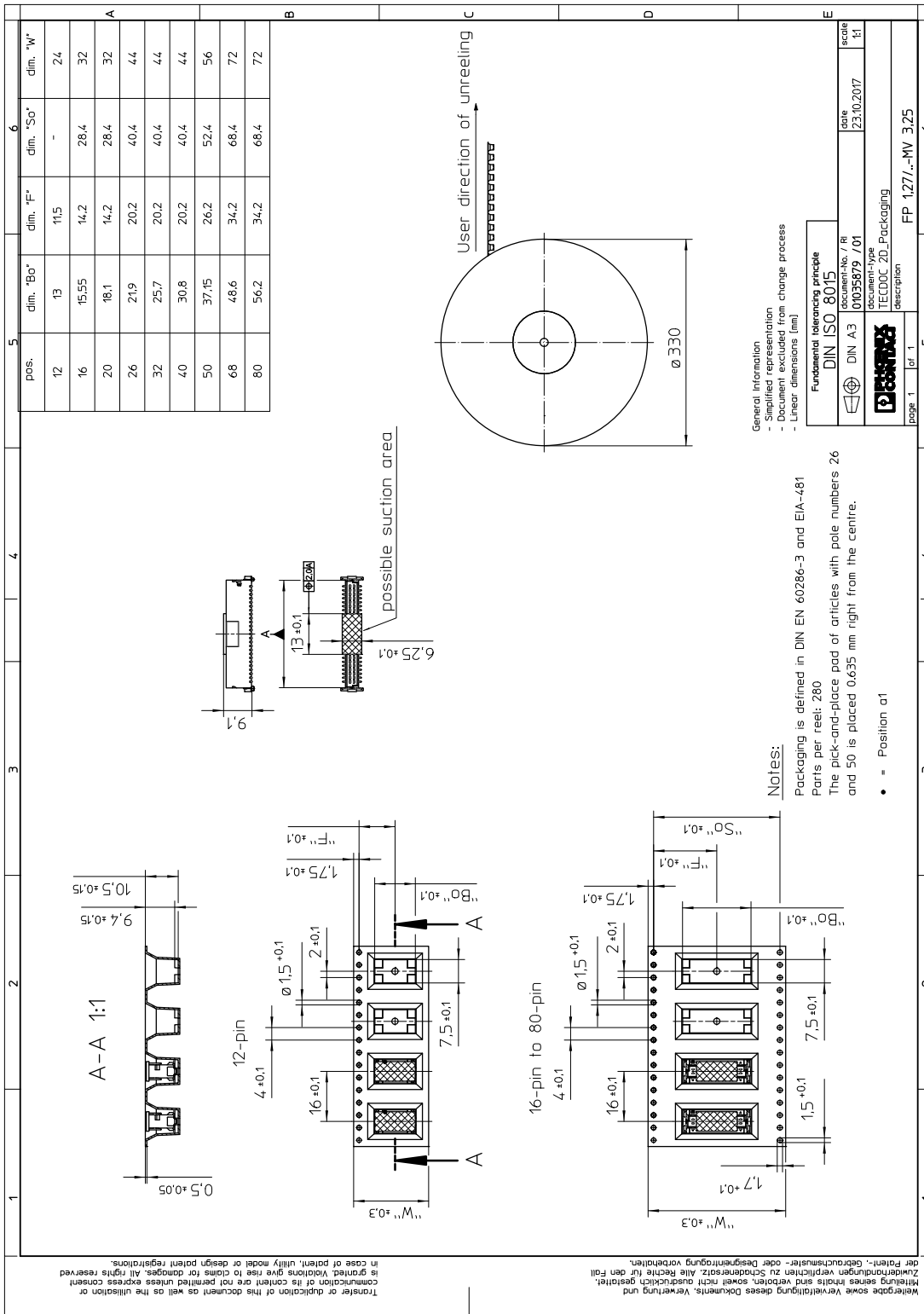
## 8 Packaging information

Type of packaging	32 mm wide tape
Note on packaging	Tape-on-reel packaging in accordance with standard DIN EN 60286-3 and EIA-481
Pieces per package	280
Outer packaging type	Transparent-Bag
[W] tape width	32 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	38.4 mm
Number of products per coil	280



1714927 FP 1,27/ 20-MV 3,25

9 Blister drawing





## 10 Application

### 10.1 Temperature limit values

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-55 °C ... 125 °C

## 11 General tests

### 11.1 Specification

Brief description

Board-to-board connectors

**1714927 FP 1,27/ 20-MV 3,25**

## 12 Mechanical tests

### 12.1 Insertion and withdrawal force per contact

Insertion and withdrawal force per contact	approx. 0.5 N
--	---------------

### 12.2 Service life

Specification	IEC 60512-9-1:2010-03 (following)
Service life	500 Insertion/withdrawal cycles, Performance level 1

**1714927 FP 1,27/ 20-MV 3,25****13 Electrical tests****13.1 Electrical data**

Nominal current at 20 °C	1.4 A IEC 60512-5-2:2002-02 (50-pos.)
Test voltage	500 V AC IEC 60512-4-1:2003

**13.2 Air and creepage distances**

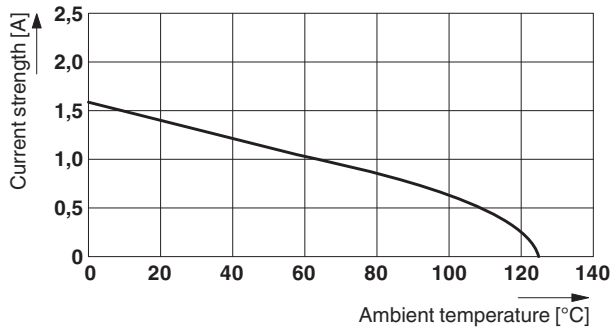
Minimum value for clearance and creepage distance	0.4 mm
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1714927 FP 1,27/ 20-MV 3,25

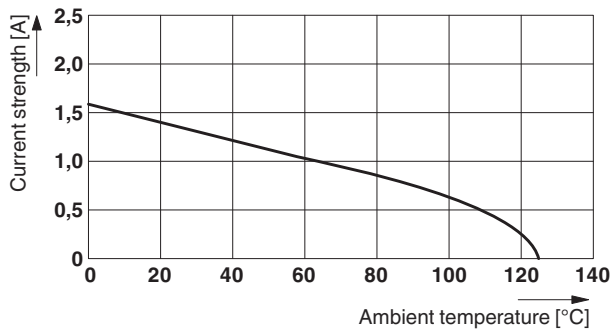
14 Current carrying capacity/derating curves

Specification	IEC 60512-5-2:2002-02
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	0.8
Number of positions	See diagram

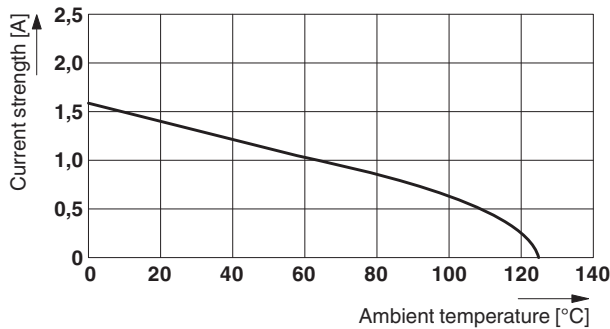
Type: FP 1,27/...-FH with FP 1,27/...-MV 3,25



Type: FP 1,27/...-FV 6,25 with FP 1,27/...-MV 3,25



Type: FP 1,27/...-FV 9,05 with FP 1,27/...-MV 3,25



14.1 Insulation resistance

Insulation resistance	≥ 10 GΩ, (IEC 60512-3-1:2002-02)
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**1714927 FP 1,27/ 20-MV 3,25****14.2 forward resistance**

Contact resistance	≤25 mΩ, (IEC 60512-2-1:2002-02)
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**14.3 Vibration test**

Specification	IEC 60068-2-6:2007-12
---------------	-----------------------

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

Frequency	10 - 2000 - 10 Hz
-----------	-------------------

Sweep speed	1 octave/min
-------------	--------------

Amplitude	1.5 mm (10 - 60.1 Hz)
-----------	-----------------------

Acceleration	20g (60.1 - 2000 Hz)
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Test duration per axis	2.5 h
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Test directions	X-, Y- and Z-axis
-----------------	-------------------

Note

**15 Approvals**

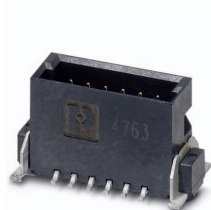
cULus Recognized 

**1714927 FP 1,27/ 20-MV 3,25****16 Commercial Data**

Order No.	1714927
Type	FP 1,27/ 20-MV 3,25
Pieces per package	280
Net weight	2.22 g
GTIN	4055626403021
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

## 1714927 FP 1,27/ 20-MV 3,25

## 17 Combination tests



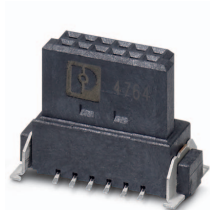
FP 1,27/...-MV 3,25



FP 1,27/...-FH



FP 1,27/...-FV 6,25



FP 1,27/...-FV 9,05



FP 1,27/...-FWL

Mechanical tests				
Insertion/withdrawal force per position	approx. 0.5 N / 0.5 N	approx. 0.5 N / 0.5 N	approx. 0.5 N / 0.5 N	approx. 0.5 N / 0.5 N
Durability tests				
Contact resistance R <sub>1</sub>	25 mΩ	25 mΩ	25 mΩ	10 mΩ
Insertion/withdrawal cycles	500	500	500	500
Contact resistance R <sub>2</sub>	25 mΩ	25 mΩ	25 mΩ	10 mΩ
Test voltage	500 V AC	500 V AC	500 V AC	500 V AC
Thermal tests				
Tested number of positions	50	50	50	50
Test current	1.4 A	1.4 A	1.4 A	1.4 A