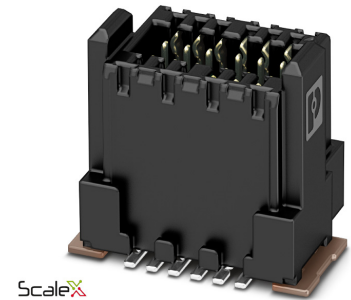


Item No.: 1061704

Type: FP 0,8/ 80-MV 2,65

SMD male connector, Reflow soldering



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

1 Main features



- | | | | |
|----------------|-----------------|------------------------|-------------------------|
| • No. of pos. | 80 | • Nominal current | 1.7 A (at 20°C 80-pos.) |
| • Test voltage | 500 V AC | • Mounting type | SMD soldering |
| • Color | black (RAL9005) | • Connection direction | 90 ° |
| • Pitch | 0.8 mm | • Type of packaging | 56 mm wide tape |

2 Your advantages

- ✓ Gold-plated contacts ensure transfer quality remains stable over the long term
- ✓ Reliable mechanical and electrical connections, thanks to the double-sided ScaleX contact system
- ✓ Robustness: ScaleX technology for high tolerance compensation and protection of contacts
- ✓ Flexible device design: various numbers of positions, designs, and stack heights with high wipe lengths



Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1061704

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1061704 FP 0,8/ 80-MV 2,65

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



1061704 FP 0,8/ 80-MV 2,65**5 General Technical Data****5.1 item properties**

Item no.	1061704
Type	FP 0,8/ 80-MV 2,65
Connector system	FINEPITCH FP 0,8
Product type	SMD male connector
Type of contact	Pin
Range of articles	FP 0,8/...-MV 2,65
Pitch	0.8 mm
Number of positions	80
Number of rows	2
Number of potentials	80
Type of locking	without
Mounting type	SMD soldering
Connection direction of the connector to the PCB	90 °
Pin layout	Linear pad geometry

1061704 FP 0,8/ 80-MV 2,65**6 Mounting****6.1 Flange mounting**

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

7 Material properties**7.1 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	Nickel (Ni) , Tin (Sn)
Surface characteristics	Selective coating

7.2 Material of plastic parts

Insulating material data	Housing
Color	black (RAL 9005)
Insulating material	LCP
Insulating material group	IIIb
CTI according to IEC 60112	150
Flammability rating according to UL 94	V0

1061704 FP 0,8/ 80-MV 2,65**8 Dimensions****8.1 Dimensions for the product**

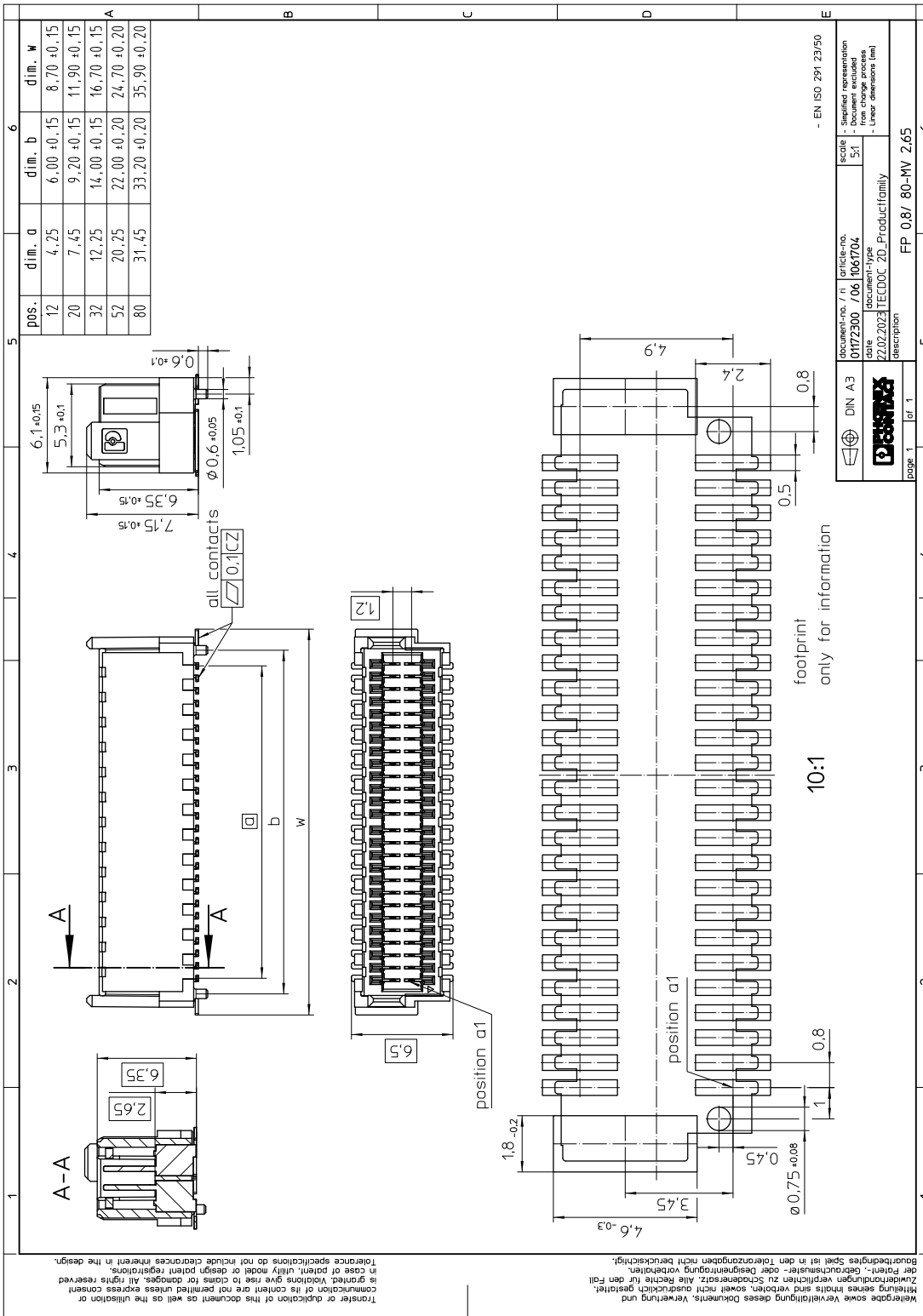
Length	6.1 mm
Width	35.9 mm
Total height	7.15 mm
Installed height	6.55 mm
Base height	2.65 mm
Positioning pin geometry	ø 0.6, Length of positioning pin: 0.6 mm
Coplanarity	≤ 0.1 mm

8.2 Dimensions for the application

Contact cover	0.8 mm
Wipe length	1.5 mm
Center offset	± 0.7 mm in longitudinal and transverse direction
Angular tolerance	± 5 ° in longitudinal and transverse direction (when plugging in)
Angular tolerance	± 5 ° in longitudinal and transverse direction (when plugged in)
Stacking height	7.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-FV 4,85)
Stacking height	10.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-FV 7,85)
Stacking height	13.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-FV 10,85)
Axial offset in X direction (longitudinal)	± 0.3 mm (Tolerance compensation when plugged in)
Axial offset in Y direction (transversal)	± 0.3 mm (Tolerance compensation when plugged in)

1061704 FP 0,8/ 80-MV 2,65

9 Series drawing



1061704 FP 0,8/ 80-MV 2,65**10 Product notes****10.1 General information**

Notes on operation

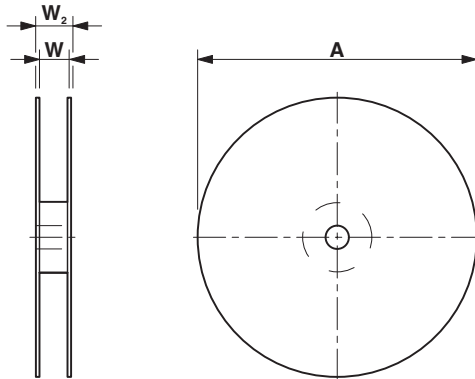
The permissible voltage during operation depends on the application, taking into consideration the air clearances and creepage distances within the scope of insulation requirements in accordance with IEC 60664-1.

Details for soldering processes

The items are suitable for assembly on both sides and for overhead soldering.

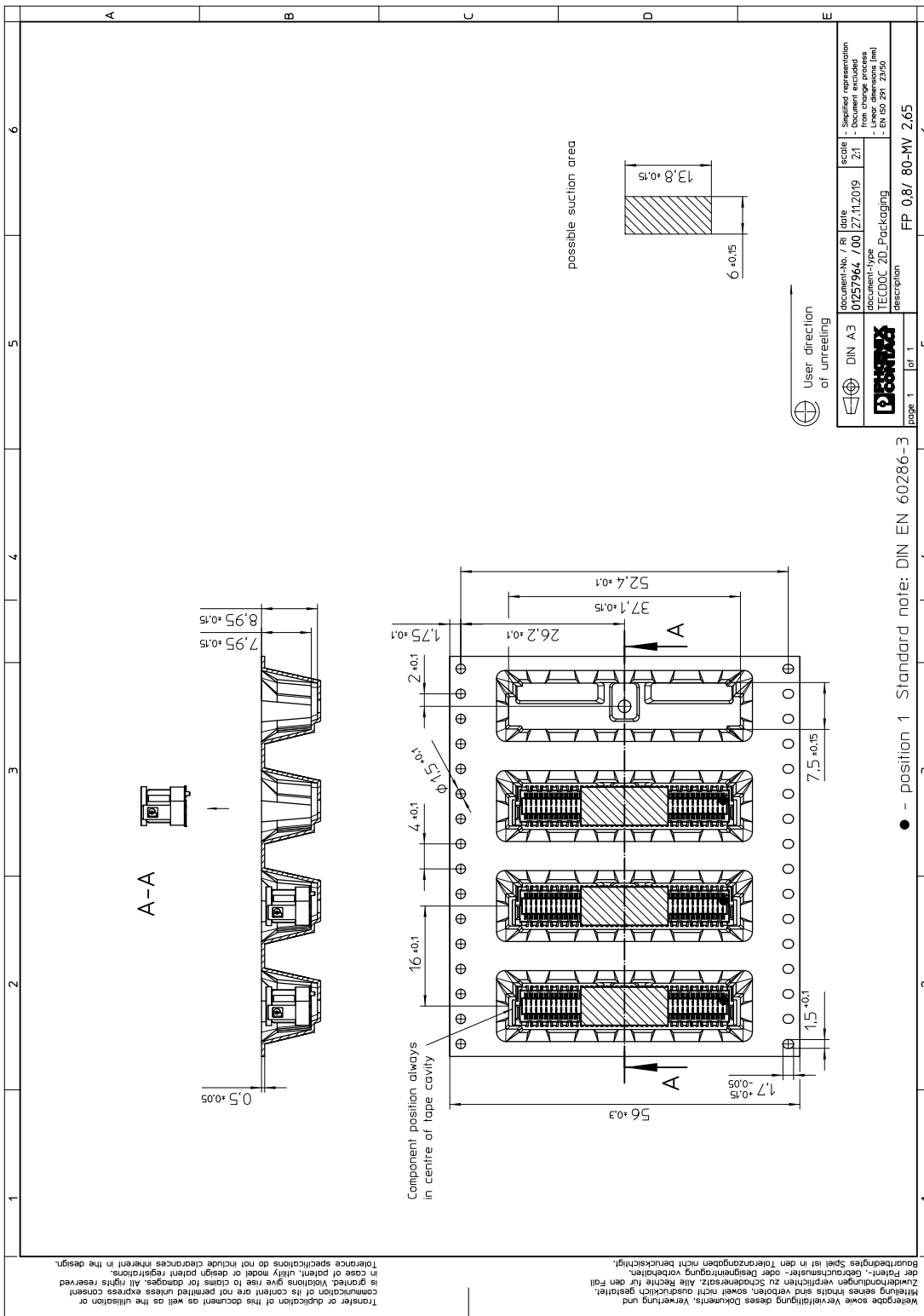
11 Packaging specifications

Type of packaging	56 mm wide tape
Note on packaging	Tape-on-reel packaging in accordance with standard DIN EN 60286-3 and EIA-481
Pieces per package	250
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07
[W] tape width	56.4 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	60.4 mm
Number of products per coil	250



1061704 FP 0,8/ 80-MV 2,65

12 Blister drawing



1061704 FP 0,8/ 80-MV 2,65**13 Application****13.1 Temperature limit values**

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-55 °C ... 125 °C

13.2 Processing notes

Process	Reflow soldering
Specification	IPC/JEDEC J-STD-020E:2014-12 (following)
Moisture Sensitive Level	MSL 1
Classification temperature T_c	max. 260 °C

13.3 PCB mounting/path geometries

Pad geometry	0.5 x 2.4 mm
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1061704 FP 0,8/ 80-MV 2,65

14 Application drawing

1061704 FP 0,8/ 80-MV 2,65

15 General tests

15.1 Specification



Brief description

Board-to-board connectors

1061704 FP 0,8/ 80-MV 2,65**16 Mechanical tests****16.1 Insertion and withdrawal force per contact**

Insertion and withdrawal force per contact	
	≤ 0.6 N
Specification	
	IEC 60512-9-1:2010-03 (following)
No. of cycles	
	500 Insertion/withdrawal cycles, Performance level 1

1061704 FP 0,8/ 80-MV 2,65**17 Electrical tests**

Nominal current I_N	1.7 A IEC 60512-5-2:2002-02 (at 20°C 80-pos.)
Test voltage	500 V AC IEC 60512-4-1:2003
Note	max. 1.7 A at 20 °C (80-pos.)

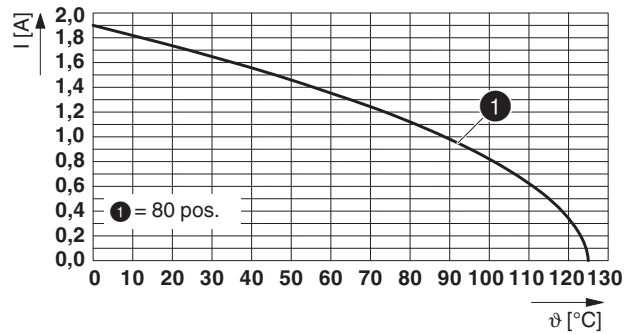
17.1 Air and creepage distances

Minimum value for clearance and creepage distance	0.25 mm
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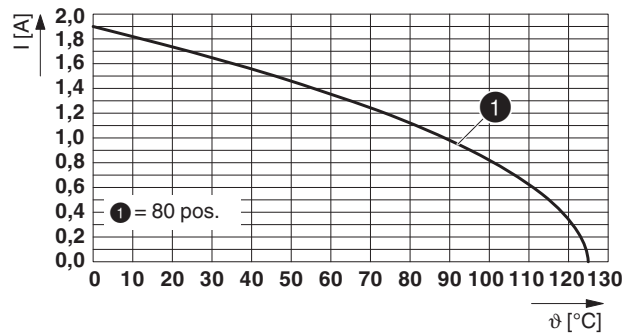
1061704 FP 0,8/ 80-MV 2,65**18 Current carrying capacity/derating curves**

Specification	IEC 60512-5-2:2002-02
Note	max. 1.7 A at 20 °C (80-pos.)
Reduction factor	0.8

Type: FP 0,8/...-MV 2,65 with FP 0,8/...-FV 4,85



Type: FP 0,8/...-MV 2,65 with FP 0,8/...-FV 7,85

**18.1 Insulation resistance**

Insulation resistance	$\geq 5 \text{ G}\Omega$, (IEC 60512-3-1:2002-02)
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18.2 forward resistance

Contact resistance	$\leq 20 \text{ m}\Omega$, (IEC 60512-2-1:2002-02)
--------------------	---

1061704 FP 0,8/ 80-MV 2,65**19 Environmental and durability tests****19.1 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 Hz ... 60.1 Hz)
Acceleration	200 m/s ² (58 Hz ... 2000 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Note	

19.2 Shock testing

Specification	IEC 60068-2-27:2008-02
Result	Test passed
Pulse shape	Semi-sinusoidal
Peak acceleration	490 m/s ²
Shock duration	11 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)

1061704 FP 0,8/ 80-MV 2,65

20 Data transmission

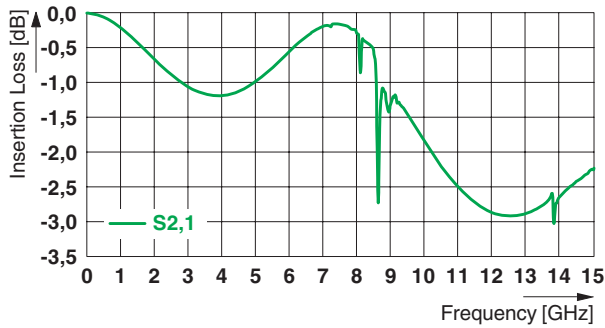
20.1 Data transmission rate

Data rate	nom. 16 Gbps
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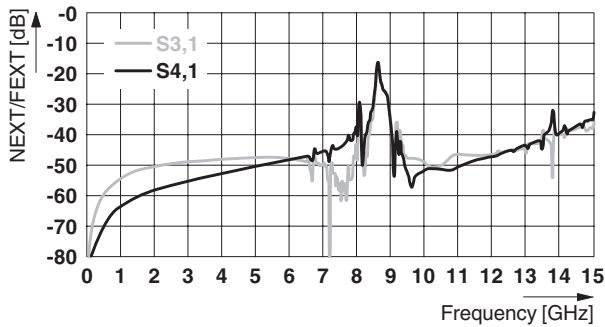
20.2 PIN assignment

Pin assignment	G, S, S, G, S, S, G
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Type: FP 0,8/...-FV 7,85 with FP 0,8/...-MV 2,65
Differential pair - 12 mm height





Type: FP 0,8/...-FV 7,85 with FP 0,8/...-MV 2,65
Differential pair - 12 mm height



1061704 FP 0,8/ 80-MV 2,65

21 Approvals / Certificates

cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
-	-	-	-	-
EAC 				

1061704 FP 0,8/ 80-MV 2,65**22 Commercial Data**

Item no.	1061704
Type	FP 0,8/ 80-MV 2,65
Pieces per package	250
Net weight	5.2 g
GTIN	4055626715889
	Information that applies locally, see link on page 1

1061704 FP 0,8/ 80-MV 2,65

23 Combination tests

**FP 0,8/...-MV 2,65****FP 0,8/...-FV 4,85****FP 0,8/...-FV 7,85**

Mechanical tests				
Durability tests				
Contact resistance R_1	20 m Ω	20 m Ω		
Insertion/withdrawal cycles	500	500		
Contact resistance R_2	20 m Ω	20 m Ω		
Insulation resistance Requirements > 5 M Ω	≥ 5 G Ω	≥ 5 G Ω		
Thermal tests				
Tested number of positions	80	80		
Test current	1.7 A	1.7 A		
Data transmission				
Data transmission rate	40 Gbps	36 Gbps		