

MXP40 – 40 GHz multicoax solution

Key features

- Operating range at up to 40 GHz
- Standard absolute phase matching down to ± 2 ps
- 4 mm (0.157 inch) pitch centre-to-centre
- Slide-on mounting – no threading
- Highly flexible and ultra stable Multiflex cable
- Extensive technical support

Benefits

- **State-of-the-art-testing**
The broadband characteristics and the true 40 GHz coaxial-to-PCB transition allow the design of evaluation boards (test set-ups) for most of the existing semiconductor standards.
- **Space saving**
Due to the dense interface pitch, the PCB connectors take up less space on boards. This is advantageous, as expensive high-performance board material is essential for good signal integrity at high data rates.
- **Shorter transmission lines**
The compact design of the PCB connector allows it to be positioned directly adjacent to the DUT/chip. This helps to keep the transmission lines on the board short and the losses low.
- **Reliable push-on mating**
Thanks to the revolutionary slide-on interface design, assemblies can be replugged quickly and easily, while guaranteeing stable electrical values even after numerous mating cycles.
- **Easy channel handling**
The highly flexible Multiflex cable in combination with a detailed numbering and coding system ensure easy channel handling without any degradation of the signal integrity.
- **Overall cost savings and service benefits**
Reduced cost of ownership compared to single interfaces thanks to lower outlay for PCB population and channel handling. 3D files, modelling data and customised footprints are free of charge.

Comprehensive range of standard products (1×8 and 2×8 ganged systems)

- 1×8 and 2×8 straight PCB connectors (SMD)
- 1×8 and 2×8 breakout assemblies MXP-to-SK (2.92 mm standard)
- Standardised SUCOFLEX assembly lengths with different classes of phase matching
- Customised assemblies on request

MXP40 – technical data

Electrical data (typical)	Testing condition	Performance
Impedance		50 Ω
Interface frequency max.		40 GHz
Return loss	gated measurement: cable connector/ PCB transition PCB: Rogers RO3003 cable: Multiflex 53-02	≥ 20 dB up to 22.5 GHz ≥ 12 dB up to 40 GHz
Insertion loss		according Multiflex 53-02
Phase match		+/- 2 ps

Mechanical data (typical)	Testing condition	Requirements
Mating force (per single channel)		max. 3.4 N (typical 1.1 N)
Demating force (per single channel)		max. 3.4 N (typical 1.1 N)
Number of matings	MIL-PRF-39012, paragraph 4.7.12	≥ 500
Pitch centre-to-centre		4 mm (0.157 in.)

Environmental data (typical)	Testing condition	Requirements
Temperature range		-55 °C ... 85 °C / -67 °F ... 185 °F
Thermal aging (mated condition)	IEC 60068-2-2, test B	120 °C/260 h
Change of temperature	IEC 60068-2-14, test na	assembly: -55°C ... 85°C / -67°F ... 185 °F PCB: -55°C ... 85°C / -67°F ... 185 °F
Vibration	IEC 60068-2-6	on request
Mechanical shock (transport)	MIL-STD-202, method 213, condition I	100 g/6 ms
Damp heat steady state	IEC 60068-2-78, test ca	40 °C (104 °F)/humidity 93%/96 h
2011/65/EU (RoHS)		compliant
2006/1907/EC (REACH)		compliant

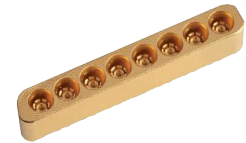
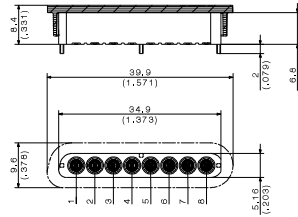
Material data cable connector	Material	Coating
Center contact	copper beryllium	SUCOPRO® gold plating
Outer contact	brass	SUCOPRO® gold plating
Body	aluminium	black anodised
Insulator	PEEK	n/a

Material data PCB connector	Material	Coating
Center contact	copper beryllium	SUCOPRO® gold plating
Outer contact	BZ4	SUCOPRO® gold plating
Body	brass	SUCOPRO® gold plating
Insulator	PEEK	n/a

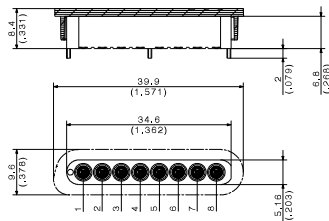
Performance values are typical for the connector interface. Individual component or connector performance may vary depending on the connector design, attachment (e.g. cable, PCB) or application. For detailed specifications please refer to the specific data sheets on our website www.hubersuhner.com.

MXP40 – PCB connectors

- Pitch 4 mm (0.16")
- Via-in-pad capable
- 0.7 mm (0.028") pin size allows easy matching to smallest trace width
- SMD technology – ground pins for better mechanical stability of solder joint



Type 1×8 ganged	Item no.	Packaging	Notes
1×8A_81_MXP-S50-0-1/111_NE	84091435	tape	asymmetric design (keyed)



Type 1×8 ganged	Item no.	Packaging	Notes
1×8A_81_MXP-S50-0-2/111_NE	84091436	tape	symmetric design (non keyed)

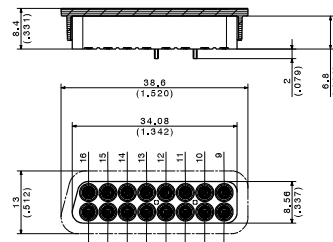
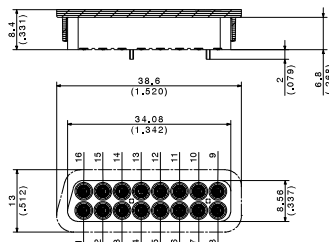


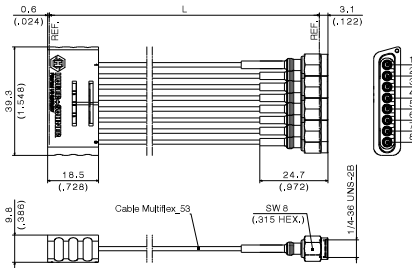
Fig. 1

Fig. 2

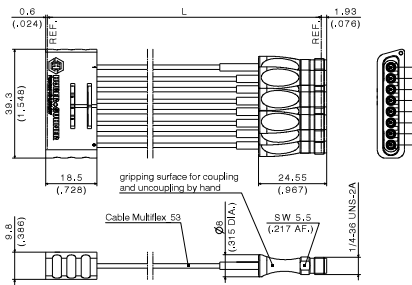


Type 2×8 ganged	Item no.	Packaging	Notes	Fig.
2×8A_81_MXP-S50-0-1/111_NE	84072058	tape	asymmetric design (keyed)	1
2×8A_81_MXP-S50-0-3/111_NE	85013397	tape	asymmetric design (keyed) optimised grounding pin layout for differential pair routing	2

MXP40 - breakout to SK

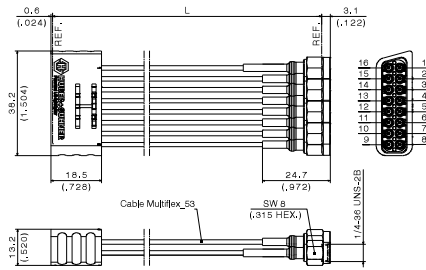


Type 1×8 ganged	Item no.	Length	Notes
MF53/1×8A_21MXP/11SK/152	84097196	152 mm (6")	single channels numbered
MF53/1×8A_21MXP/11SK/229	84099600	229 mm (9")	
MF53/1×8A_21MXP/11SK/305	84099607	305 mm (12")	
MF53/1×8A_21MXP/11SK/610	84123646	610 mm (24")	

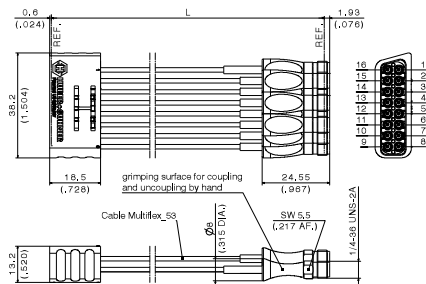


Type 1×8 ganged	Item no.	Length	Notes
MF53/1×8A_21MXP/21SK_ergo/152	84093980	152 mm (6")	single channels numbered with ergo grip on SK (2.92 mm standard) side
MF53/1×8A_21MXP/21SK_ergo/229	84098899	229 mm (9")	
MF53/1×8A_21MXP/21SK_ergo/305	84098900	305 mm (12")	
MF53/1×8A_21MXP/21SK_ergo/610	85009273	610 mm (24")	

MXP40 - breakout to SK



Type 2×8 ganged	Item no.	Length	Notes
MF53/2×8A_21MXP/11SK/152	84088950	152 mm (6")	single channels numbered
MF53/2×8A_21MXP/11SK/229	84098901	229 mm (9")	
MF53/2×8A_21MXP/11SK/305	84088954	305 mm (12")	
MF53/2×8A_21MXP/11SK/610	84089090	610 mm (24")	



Type 2×8 ganged	Item no.	Length	Notes
MF53/2×8A_21MXP/21SK_ergo/152	84093901	152 mm (6")	single channels numbered with ergo grip on SK (2.92 mm standard) side
MF53/2×8A_21MXP/21SK_ergo/229	84098908	229 mm (9")	
MF53/2×8A_21MXP/21SK_ergo/305	84098902	305 mm (12")	
MF53/2×8A_21MXP/21SK_ergo/610	85009286	610 mm (24")	