

MULTIPOINT

Blindmate Microwave PkZ[®] Contacts




Size **8**
12
16



Leading Blindmate Microwave Contact Technology

www.phoenixofchicago.com

PkZ Microwave Contact Housing Guide

Housings	DIN 41612		D-Sub		Custom & LRM		Custom	ARINC 600			38999 (I, III, IV) & Mighty Mouse	
												
PkZ Series	26D	26	76	756	56	156	68	168	268	78	178	
Density	Standard	Standard	Standard	High	High	Very High	Standard	High	Very High	Standard	High	
Contact Size	8	8	8	12	12	16	8	12	16	8	12	
Impedance	50 Ohms	50 Ohms	75 Ohms	75 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	
Frequency	32 GHz	32 GHz	3 GHz	3 GHz	40 GHz	40 GHz	32 GHz	40 GHz	40 GHz	32 GHz	40 GHz	
Axial Mating	.090"	.090"	.090"	.070"	.070"	.050"	.090"	.110"	.110"	.090"	.070"	
Cable Mount	■	■	■	■	■	■	■	■	■	■	■	
PCB Mount	■	■	■	■	■							
Non-Magnetic	■	■			■	■						
Power Contacts	To 40A	To 40A			To 20A					To 40A		
Hermetic Capable	■	■	■	■	■		■	■		■	■	
Cryogenic Capable					■	■						
Markets	TELECOMMUNICATION		VIDEO		INSTRUMENTATION		AEROSPACE, DEFENSE					

High mating life available, wide range of cable accommodations, contact sales@phoenixofchicago.com with your design requirements.

What is a PkZ?

To accommodate large radial and axial misalignment tolerances found in modular applications, The Phoenix Company of Chicago's PkZ series of Blindmate RF Contacts offer an unmatched design featuring constant impedance up to a **.110"** axial mating tolerance - the widest available among blindmate contacts.

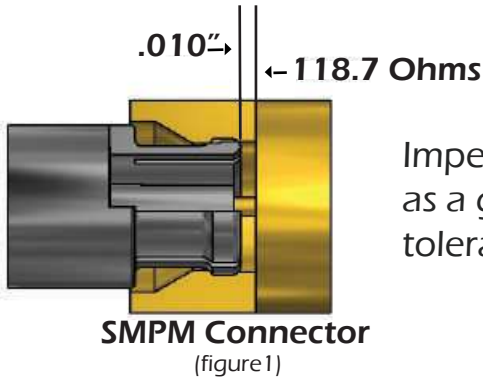
A common problem in modular applications is the tolerance stack-up in hardware that can prevent RF contacts from fully mating.

The PkZ technology no longer requires full mating to achieve constant impedance, eliminating elaborate methods such as an internal spring to overcome mating gaps and guarantee full mating. With low insertion forces and no internal engagement spring, the PkZ sets the standard for both reliability and high performance.

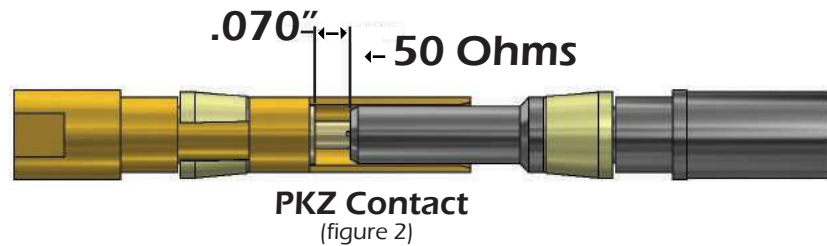
The PkZ Solution

The PkZ family of microwave contacts were developed specifically for multiport blindmate applications. Designed with patented constant impedance technology, the PkZ provides consistent performance over large axial mating gaps caused by connector and system tolerance stack ups.

How does the PkZ work?

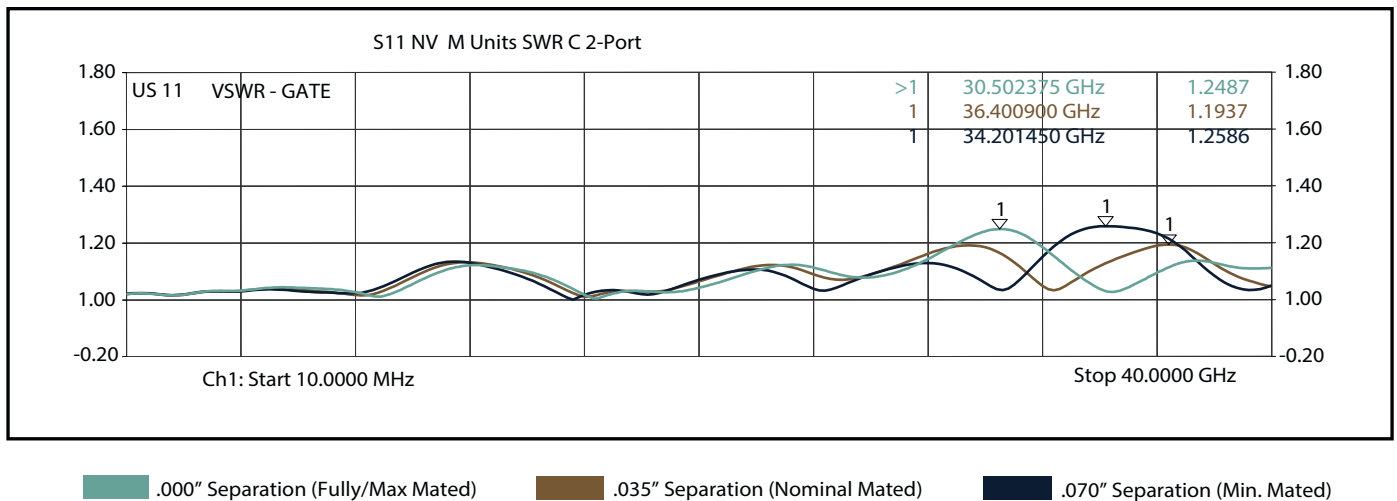


Impedance changes in a typical SMPM coaxial connector interface as a gap is introduced due to typical and expected mating tolerances (see figure 1)

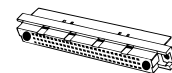


The unique PkZ design provides constant impedance even as differences in mating profiles or gaps are created in the mating interface (see figure 2)

The chart below depicts gated VSWR performance of a size 12 PkZ mated pair to 40 GHz at three stages of mating.

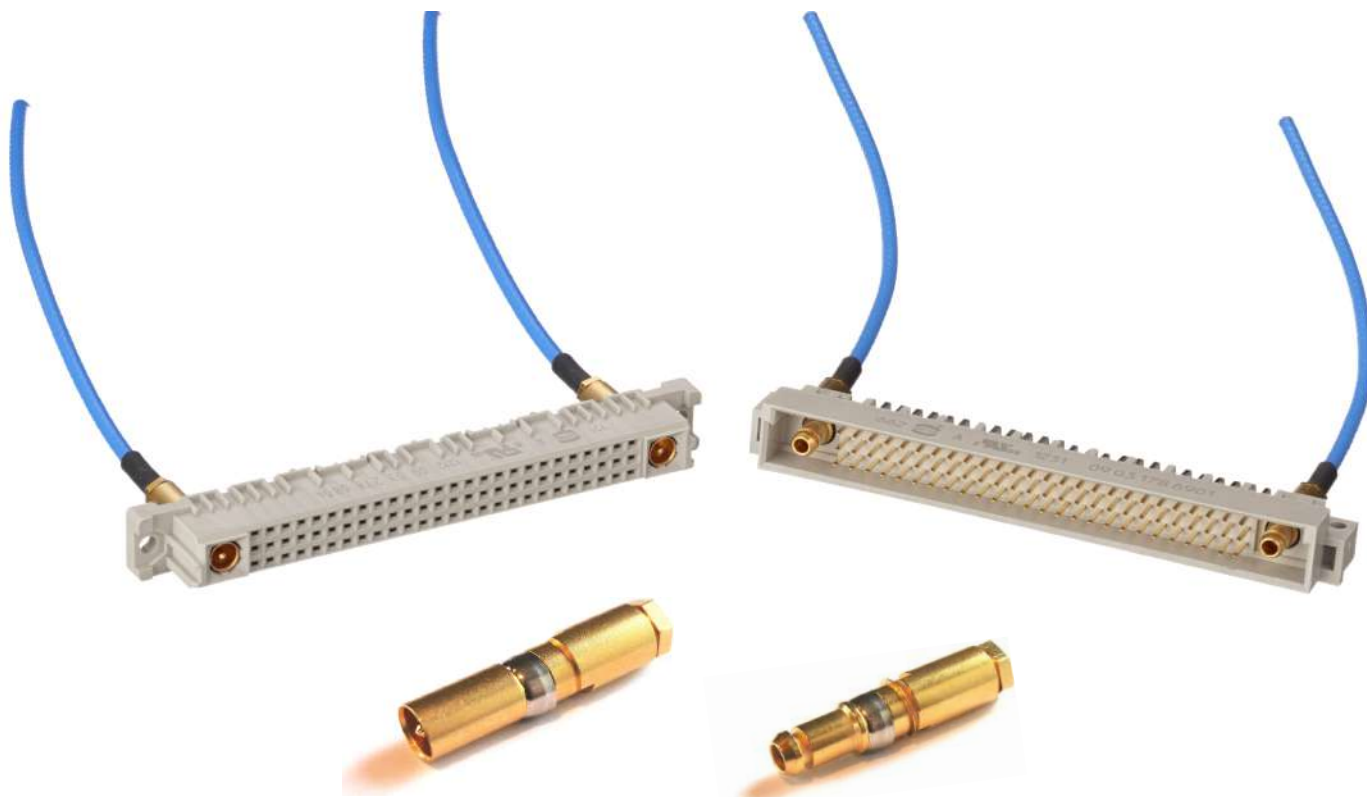


The PkZ provides a constant impedance profile over wide gaps in the mating interface, thus minimizing negative impact on VSWR.



DIN 41612 Housings

Applications: Automated Test Equipment, Aerospace, Telecommunications, Ruggedized Computing, and Ground-Based Military Programs



26D Series:

Size 8 PkZ Microwave Contacts for **DIN 41612 / IEC 60603-2** Housings

Performance: DC - 32 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.090"

Cables: RG-174, 188, 316, 402, and 405

Cable Terminations: Direct Solder, Solder/Clamp, Crimp/Clamp, and P.C. Mount



RF D-Sub Housings

Applications: Automated Test Equipment, Aerospace, In-Flight Entertainment, HD TV Broadcasting, HD Video Distribution, Security, Radio Astronomy, and Ground-Based Military Programs



76 Series:

Size 8 PkZ Microwave Contacts for **RF D-Sub** Housings

Performance: DC - 3 GHz

Impedance: **75 Ohms**

Axial Mating Tolerance: 0.090"

Cables: RG-179 and Belden 1855

Cable Terminations: Crimp/Clamp

26 Series:

Size 8 PkZ Microwave Contacts for **RF D-Sub** Housings

Performance: DC - 32 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.090"

Cables: RG-55, 142, 174, 188, 316, 316DS, 400, 402, and 405

Cable Terminations: Direct Solder, Solder/Clamp, Crimp/Clamp, and Printed Circuit Through-Hole



High Density Custom Housings

Applications: Automated Test Equipment, Aerospace, In-Flight Entertainment, HD TV Broadcasting, HD Video Distribution, Security, Radio Astronomy, and Ground-Based Military Programs



756 Series:

Size 12 PkZ Microwave Contacts for **High Density RF D-Sub** and **LRM** Housings

Performance: DC - 3 GHz

Impedance: **75 Ohms**

Axial Mating Tolerance: 0.070"

Cables: RG-179 and Harbour SS75086

Cable Terminations: Direct Solder and Crimp/Clamp

56 Series:

Size 12 PkZ Microwave Contacts for **High Density RF D-Sub** and **LRM** Housings

Performance: DC - 40 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.070"

Cables: RG-178, 188, 316, and 405

Cable Terminations: Direct Solder, Solder/Clamp, Crimp/Clamp, and P.C. Mount

156 Series:

Size 16 PkZ Microwave Contacts for **Very High Density RF D-Sub** and **Custom** Housings

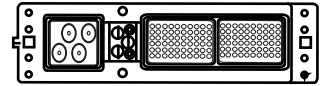
Performance: DC - 40 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.050"

Cables: RG-174, 188, 316, 405, .047 Semi-Rigid, Flex .047, and Hirose 1.37mm

Cable Terminations: Direct Solder, Solder/Clamp, and Crimp/Clamp



ARINC 600 Housings

Applications: Aerospace, In-Flight Entertainment & Networks, Flight Controls & Communications, and Ground-Based Military Systems



68 Series:

Size 8 PkZ Microwave Contacts for **ARINC** Housings (600 Series)

Performance: DC - 32 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.090"

Cables: RG-142, 174, 223, 316, 400, 402, and 405

Cable Terminations: Direct Solder and Crimp

168 Series:

Size 12 PkZ Microwave Contacts for **ARINC** Housings (600 Series)

Performance: DC - 40 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.110"

Cables: RG-178, 316, and 405

Cable Terminations: Direct Solder, Crimp/Clamp, Solder/Clamp, and Direct Crimp

268 Series:

Size 16 PkZ Microwave Contacts for **ARINC** Housings (600 Series)

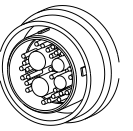
Performance: DC - 40 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.110"

Cables: RG-174, 188, 316, and 405

Cable Terminations: Direct Solder



MIL-DTL-38999 Housings

Applications: Vehicles & Aircraft Communication Systems, Shipboard Communication Systems, Avionic Test Systems, Ground-Based Radar Systems, UAV Systems, and C6ISR



78 Series:

Size 8 PkZ Microwave Contacts for **MIL-DTL-38999** Housings (Series 1, 3, 4)

Performance: DC - 32 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.090"

Cables: RG-55, 174, 188, 316, 316DS, 402, 405, and Times SFT-142B

Cable Terminations: Direct Solder, Solder/Clamp, Crimp, and Crimp/Clamp

178 Series:

Size 12 PkZ Microwave Contacts for **HD38999** Housings (Series 1, 2, 3, 4)

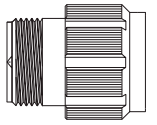
Performance: DC - 40 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.070"

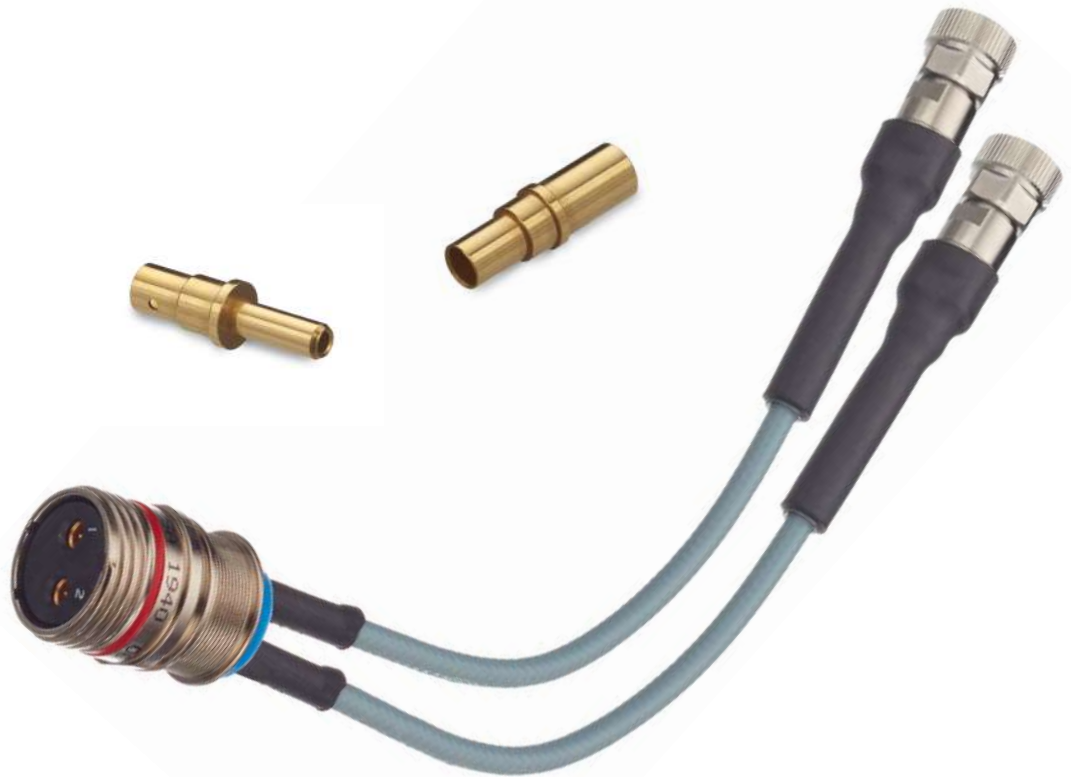
Cables: RG-316 and 405

Cable Terminations: Direct Solder and Crimp



Mighty Mouse Housings

Applications: Commercial and Military Avionics, Military Ground Vehicles, UAVs, Test & Measurement, and Medical



78 Series:

Size 8 PkZ Microwave Contacts for Series 80 **Mighty Mouse** Housings or Equivalents

Performance: DC - 32 GHz

Impedance: 50 Ohms

Axial Mating Tolerance: 0.090"

Cables: RG-142, 316, 402, and 405

Cable Terminations: Direct Solder, Direct Crimp, Solder/Clamp, and Crimp/Clamp

178 Series:

Size 12 PkZ Microwave Contacts for Series 80 **Mighty Mouse** Housings or Equivalents

Performance: DC - 40 GHz

Impedance: 50 Ohms (75 Ohm - Contact Sales)

Axial Mating Tolerance: 0.070"

Cables: RG-316, 405, and HP120s

Cable Terminations: Direct Solder and Direct Crimp



Aerospace RF Contacts

Additional Applications: Medical, Life Sciences, HD TV Broadcasting, HD Video Distribution, Security, Automated Test Equipment, Ground-Based Military Programs, and Radio Astronomy



16 Series:

Size 8 PDM Contacts for **RF D-Sub** Housings

Performance: DC - 2 GHz

Impedance: **75 Ohms**

Cables: RG-179 and 316

Cable Terminations: Solder, Crimp, Double Crimp, and P.C. Mount

15 Series:

Size 8 PDM Contacts for **RF D-Sub** Housings

Performance: DC - 1 GHz

Impedance: Unrated

Cables: RG-174, 178, 179, 188, 196, 316, and RD-178

Cable Terminations: Solder, Crimp, Double Crimp, and P.C. Mount

PkZ Adapters:

Size **8**, **12**, and **16** PkZ Contacts to **3.5mm** and **2.92mm** Connectors

Size **8**, **75** Ohm PkZ Contacts to **75** Ohm BNC Connectors

Performance: DC - 40 GHz

Impedance: **50** or **75** Ohms

Configurations: Straight Plug and Straight Receptacle



Extraction Tools:

Plunger-Style Contact Extractors for Removing Front-Release Plug and Receptacle Contacts from Standard and High Density Housings

For Use with Removable Size **8**, **12**, and **16 RF** and **Power** Contacts

Hand Tools and Replacement Tips are Available Individually or as a Complete Kit

Accessories:

D-Sub Stabilizing Rings: Designed to Reduce Radial Play or Misalignment of a Plug within the Plug D-Sub Housing

Material: Delrin 150

Accommodates: **15** and **16** Series **PDMs** and **Power Contacts** and **26** and **76** Series **PkZs**

Environmental Gasket: Designed to Help Keep Contaminants from Entering Mated PkZs

Material: Silicone Rubber

Accommodates: Select Plug PkZ Contacts

EMI Gasket: Spring Ring Designed to Improve Electrical Shielding

Material: Beryllium Copper

Accommodates: Select Plug PkZ Contacts

Terminations:

50 Ohm PkZ Terminations: Designed to Terminate Open Transmission Lines and Prevent Signal Reflection

Availability: **26**, **56**, and **78** Series **PkZs**

Contact Sales with your Specific Requirement



Leading Blindmate Microwave Contact Technology

Contact **The Phoenix Company of Chicago**
with Technical Questions and New Design Inquiries
sales@phoenixofchicago.com • (800) 323-9562



Authorized Stocking Distributor: ECM Distributors
www.ecmstockroom.com • (800) 786-2576