

**KF22 Series**  
**Right Angle PCB Mount**  
**.318" Footprint**  
**with Ferrite**

**Ordering Information**

KF22	-	B	25	S	-	N	
Series	Shell Size	Number of Contacts	Contact Type	Mounting Options		Plating Options	

**Series**

KF22 - Kycon D-Subminiature Connector, Right Angle PCB Termination, .318 Footprint, with Ferrite

**Shell Size**

E - 9 Contacts  
A - 15 Contacts  
B - 25 Contacts  
C - 37 Contacts

**Number of Contacts**

9, 15, 25, 37

**Contact Type**

P - Pin Contact (Plug)  
S - Socket Contact (Receptacle)

**Mounting Options** (see page 35)

**Plating Options and Performance Specifications** (see page 4)

**Ferrite Specifications**

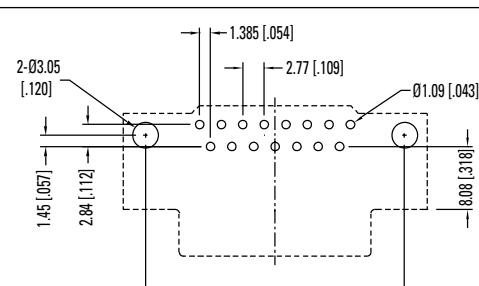
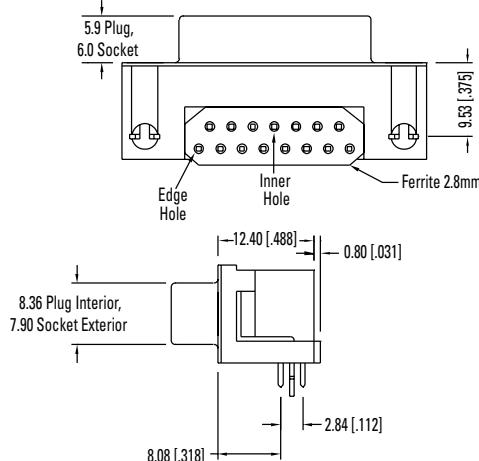
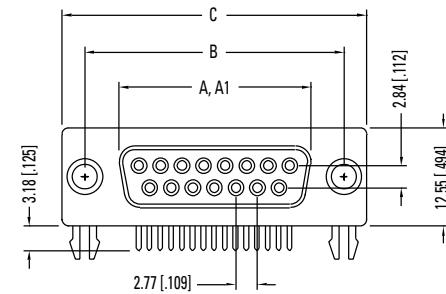
Test Frequency	Edge Hole	Inner Hole
30 MHz	17-27 Ohms	22-30 Ohms
50 MHz	22-30 Ohms	29-37 Ohms
100 MHz	29-34 Ohms	35-40 Ohms

**FERRITE D-SUBMINIATURE**

**KF22 Series**

**KF22 Series Dimensions**

Pictured with Board Lock Option, Dimensions in mm [In]



**Recommended PCB Layout**

Shell Size In mm	A ±.010 ±0.25	A1 ±.010 ±0.25	B ±.005 ±0.13	C ±.015 ±0.38
9 (E)	.643 16.33	.666 16.92	.984 24.99	1.213 30.81
15 (A)	.971 24.66	.994 25.25	1.312 33.32	1.541 39.14
25 (B)	1.511 38.38	1.534 38.96	1.852 47.04	2.088 53.04
37 (C)	2.159 54.84	2.182 55.42	2.500 63.50	2.729 69.32

**A = Exterior of Female Shell (S)**

**A1 = Interior of Male Shell (P)**

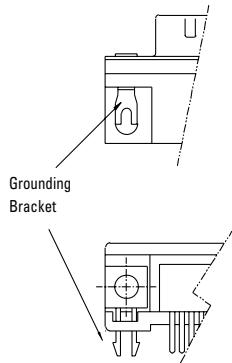


**Mounting Options**  
**K22, KF22,**  
**K66, KF66**

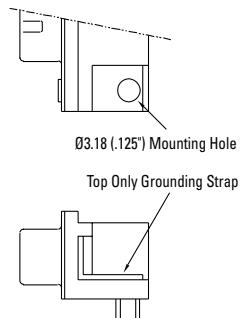
PCB Mounting Options				
Front Panel Mounting Options	Grounding Board Locks	Top Only Grounding Straps with Non-Threaded .125" Diameter Mounting Holes	Wrap Around Grounding Straps with Non-Threaded .125" Diameter Mounting Holes (K22/KF22/Only)	4 Prong Board Locks
Riveted Threaded Inserts	<b>N</b>	<b>H</b>	<b>O</b>	<b>NV</b>
Riveted Threaded Inserts with 4-40 Hex. Jack Screws Installed	<b>NJ</b>	<b>HJ</b>	<b>OJ</b>	<b>NVJ</b>
4-40 Round Jackscrews Riveted to Connector	<b>NR</b>	<b>HR</b>	<b>OR</b>	<b>NVR</b>
Non-Threaded Riveted Inserts	<b>NT</b>	<b>HT</b>	<b>OT</b>	<b>NVT</b>
Riveted Threaded Inserts with M3/4-40 Hex. Jack Screws Installed	<b>NJM</b>	<b>HJM</b>	<b>OJM</b>	<b>NVJM</b>

**PC Board Mounting Options**

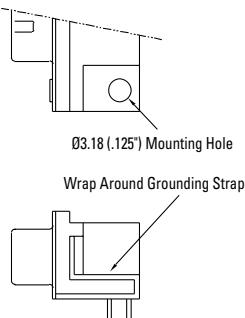
**N Option**



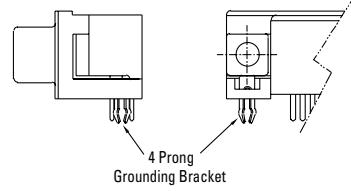
**H Option**



**O Option**



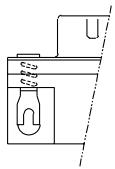
**NV Option**



**Front Panel Mounting Options**

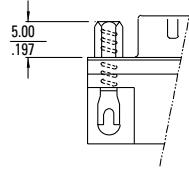
**Standard**

(4-40)Riveted Threaded Insert



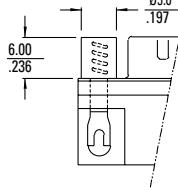
**-J Option**

(4-40)Riveted Threaded Insert with 4-40 Hex. JS1000 Jack Screws Installed to Connector



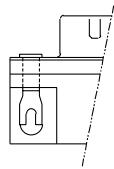
**-R Option**

(4-40) Round Jack Screws Riveted to Connector



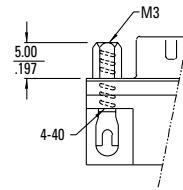
**-T Option**

Riveted Non-Threaded Insert 3.18/.125" Dia.



**-JM Option**

(4-40)Riveted Threaded Insert with M3/4-40 Hex. Jack Screws Installed to Connector





**KYCON continues its leadership in D-Subminiature connectors by offering a complete line of sizes and options.**

### **PC99 Colors Available:**

- HD15: Blue
- DB15: Gold
- DB25: Burgundy
- DB09: Teal



## **D-SUBMINIATURE CONNECTORS**

### *Performance Specifications*

#### **Materials and Finish**

##### **Shell**

Steel Material, Tin Finish, and Indentations (Dimples) on Plug Only

##### **Insert**

Standard: PBT Thermoplastic, Black Color, 30% Glass Filled, 94V-0 Rated  
Reflow Compatible: High Temperature Thermoplastic, Black Color, 30% Glass Filled, 94V-0 Rated

##### **Contact Material**

Pin: Brass .040 (1.02) Diameter Standard; .030 (0.76) Diameter High Density

Socket: Phosphor Bronze (Precision Formed Contact)

Brass (Precision Machined Contact)

##### **Contact Finish-Standard**

Gold Flash Over 0.0001 (0.00254) Nickel on Mating End of Contacts

Tin/Lead Over Nickel or Gold Flash Over Nickel on Solder Tails

##### **Riveted Insert**

Brass Material, Nickel Finish

#### **Mechanical Characteristics**

##### **Contact Retention**

Precision Machined Contact 10 Lbs, Precision Formed Contact 10 Lbs

##### **Contact Extraction Force**

Typ. 4 Oz.

##### **Contact Insertion Force**

Typ. 9 Oz.

##### **Durability**

1,000 Insertion Cycles Min (With Standard Plating)

##### **Operating Temperature Rating**

-55°C to +125°C

#### **Electrical Characteristics**

##### **Contact Current Rating**

Precision Machined Contact 7.6 Amps

Precision Formed Contact 5.0 Amps (Except K99 Series)

##### **Contact Resistance**

Precision Machined Contact 5 Milliohms Max

Precision Formed Contact 8 Milliohms Max

##### **Dielectric Withstanding Voltage**

1000 V AC Min for 1 Minute

##### **Insulation Resistance**

5000 Megohms Min

#### **Processing Characteristics**

##### **Soldering Temperature Rating**

High Temperature Plastic: 230°C for 30 Seconds, 260°C for 10 Seconds

#### **Plating Options**

Designator	Plating Description
Standard	Gold Flash over Nickel on Contacts. Gold Flash over Nickel or Tin/Lead over Nickel on Solder Tails.
15	15μ" Gold over Nickel on Mating End of Contacts. Tin/Lead over Nickel on Solder Tails.
30	30μ" Gold over Nickel on Mating End of Contacts. Tin/Lead over Nickel on Solder Tails.



**KYCON continues its leadership in Ferrite D-Subs by offering a complete line of styles, sizes, and pin configurations.**

**Features:**

- Applications include Computer Peripherals, Data Processing, Telecommunications, Industrial Controls, and Local Area Networks
- High performance ferrite filter with superior high frequency attenuation characteristics
- Minimal effect on fundamental waveforms
- EMI/RFI noise suppression in data communication lines
- Cost effective way to meet FCC and VDE Class B requirements
- Does not require any more board space than a standard D-Sub
- No need to redesign board layout to accommodate separate filter placement
- UL Recognized File No. E140125



# FERRITE D-SUBMINIATURE CONNECTORS

## Directory

### Right Angle

<b>KF22 - 0.318" footprint</b>	<b>28</b>
<b>KF44 - 0.590" footprint</b>	<b>29</b>
<b>KF66 - High Density 0.350" footprint</b>	<b>30</b>
<b>KF42 - Dual Port</b>	<b>31</b>



### Vertical

<b>KF85 - Low Profile</b>	<b>32</b>
<b>KF86 - High Density</b>	<b>33</b>
<b>KF88 - High Profile</b>	<b>34</b>



### Technical Information:

Ferrite filters provide an easy and efficient way of reducing both radiated and conducted interference. KYCON uses a medium permeability nickel zinc ferrite material that is most effective at attenuating frequencies above 30MHz.

$$\text{Attenuation} = 20 \log_{10} \frac{[Z_s + Z_f + Z_l]}{[Z_s + Z_l]} \text{ dB}$$

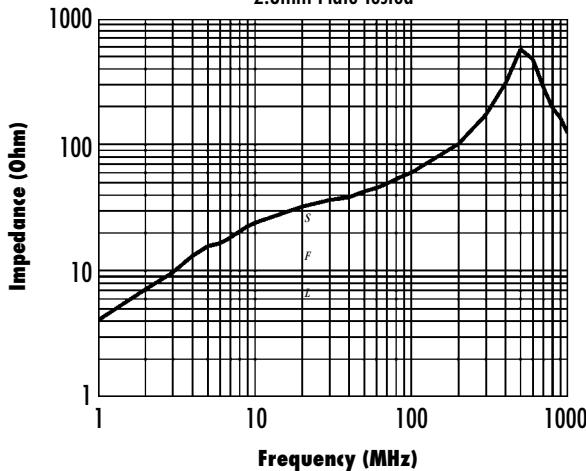
Where  $Z_s$  = Source Impedance

$Z_f$  = Ferrite Impedance

$Z_l$  = Load Impedance

With the above impedance values calculated at the interference frequency.

**Typical Impedance of KYCON Ferrite D-Sub**  
2.8mm Plate Tested



The above chart is typical performance data for a 2.8mm thick ferrite plate at room temperature. Impedance will be reduced by increased temperature (down approx. 15% at 100°C at 25MHz) and by increased DC bias (down approx. 15% at 1 amp at 25MHz). Also, impedance varies with ferrite thickness. Please contact our technical support for data specific to your application.