



## 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
<b>Series</b> KF22 - Kycon D-Subminiature Connector, Right Angle PCB Termination, .318 Footprint, with Ferrite							
<b>Shell Size</b> E - 9 Contacts A - 15 Contacts B - 25 Contacts C - 37 Contacts							
<b>Number of Contacts</b> 9, 15, 25, 37							
<b>Contact Type</b> P - Pin Contact (Plug) S - Socket Contact (Receptacle)							
<b>Mounting Options</b> (see page 35)							
<b>Plating Options and Performance Specifications</b> (see page 4)							

### Ferrite Specifications

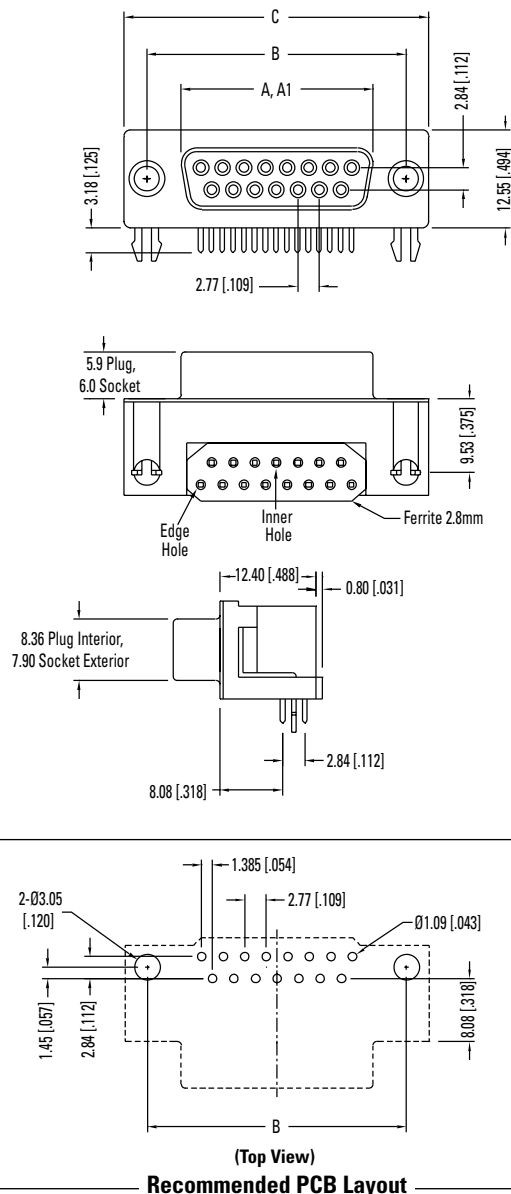
Test Frequency	Edge Hole	Inner Hole
30 MHz	17-27 Ohms	22-30 Ohms
50 MHz	22-30 Ohms	29-37 Ohms
100 MHz	29-34 Ohms	35-40 Ohms

## FERRITE D-SUBMINIATURE

### KF22 Series

### KF22 Series Dimensions

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



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

A = Exterior of Female Shell (S)  
AI = Interior of Male Shell (P)

### Mounting Options

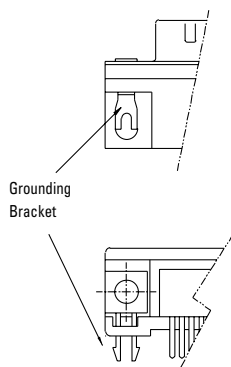
**K22, KF22,**

**K66, KF66**

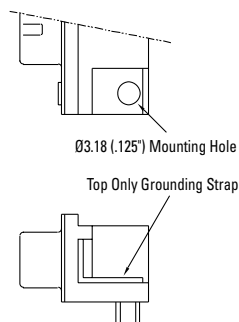
Front Panel Mounting Options	PCB Mounting Options			
	Grounding Board Locks	Top Only Grounding Straps with Non-Threaded .125" Diameter Mounting Holes	Wrap Around Grounding Straps with Non-Threaded .125" Diameter Mounting Holes (K22/KF22/Only)	4 Prong Board Locks
Riveted Threaded Inserts	<b>N</b>	<b>H</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

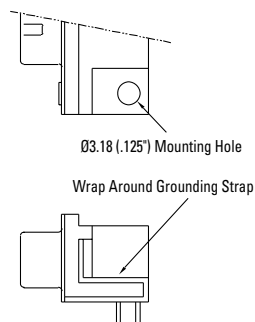
**N Option**



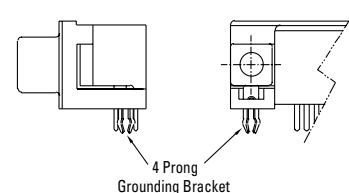
**H Option**



**O Option**



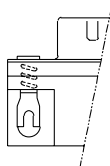
**NV Option**



### Front Panel Mounting Options

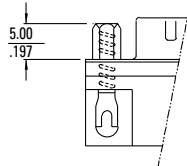
**Standard**

(4-40) Riveted Threaded Insert



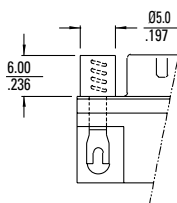
**-J Option**

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



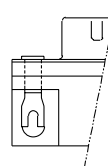
**-R Option**

(4-40) Round Jack Screws Riveted to Connector



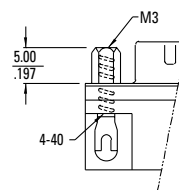
**-T Option**

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

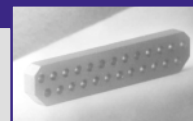


## FERRITE D-SUBMINIATURE CONNECTORS

### 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.

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

Where  $Z_s$  = Source Impedance

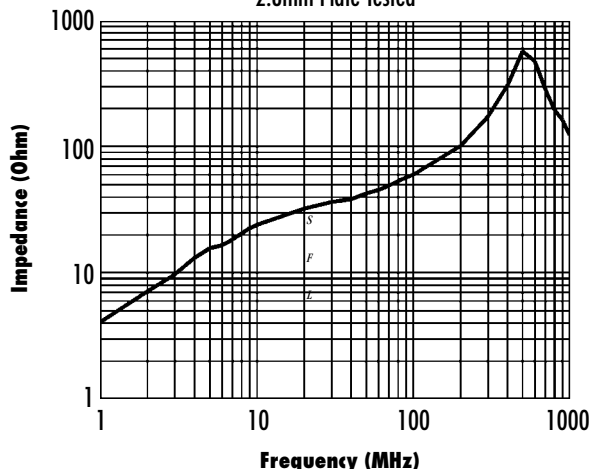
$Z_F$  = Ferrite Impedance

$Z_L$  = 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.