



## KF44 Series Right Angle PCB Mount .590" Footprint with Ferrite

### Ordering Information

|        |   |            |                    |              |   |                  |                 |
|--------|---|------------|--------------------|--------------|---|------------------|-----------------|
| KF44   | - | B          | 25                 | S            | - | P                |                 |
| Series |   | Shell Size | Number of Contacts | Contact Type |   | Mounting Options | Plating Options |

#### Series

KF44 - Kycon D-Subminiature Connector, Right Angle  
PCB Termination, .590 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 36)

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

### Ferrite Specifications

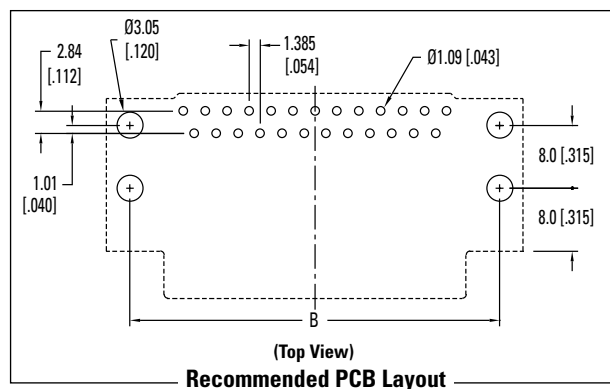
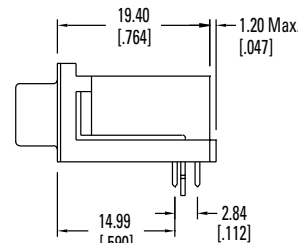
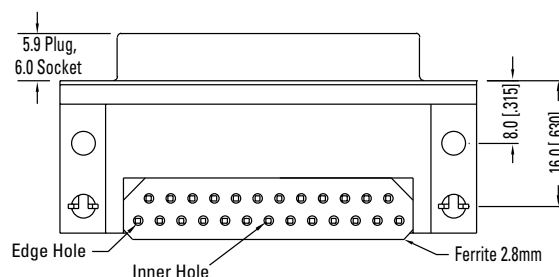
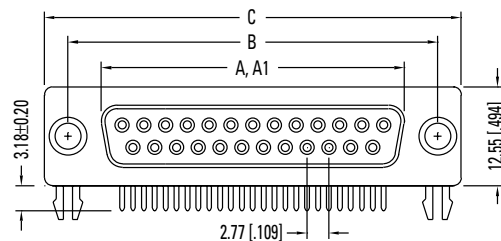
| Test Frequency | Edge Hole  | Inner Hole |
|----------------|------------|------------|
| 30 Mhz         | 17-27 Ohms | 22-30 Ohms |
| 50 Mhz         | 22-30 Ohms | 29-37 Ohms |
| 100 Mhz        | 29-34 Ohms | 35-40 Ohms |

## FERRITE D-SUBMINIATURE

### KF44 Series

### KF44 Series Dimensions

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



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

A = Exterior of Female Shell (S)

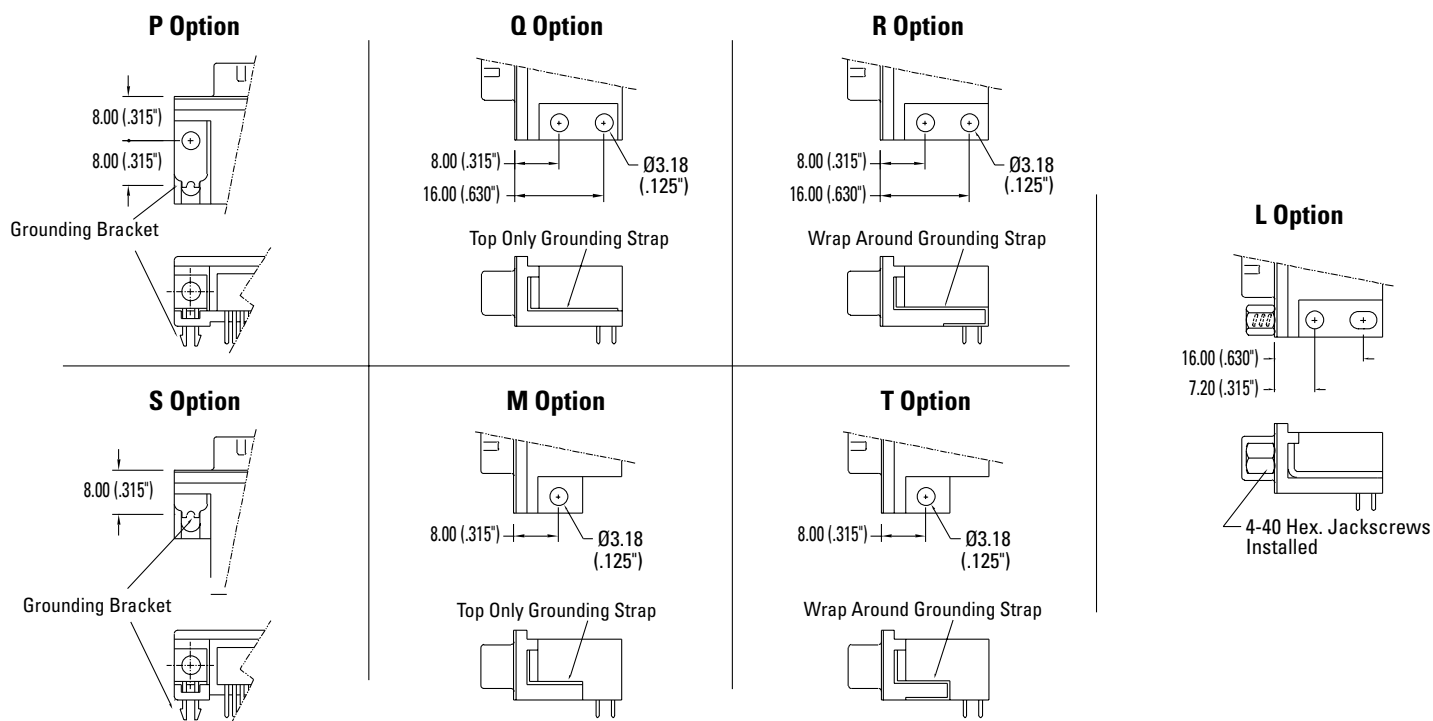
AI = Interior of Male Shell (P)

### Mounting Options K44, KF44

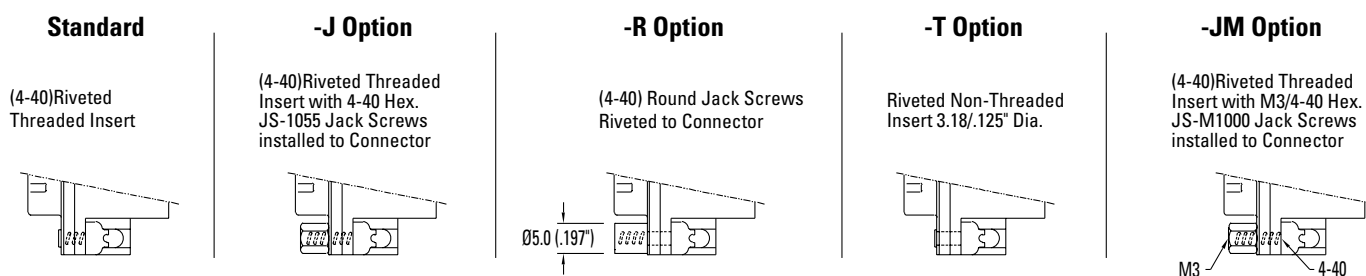
| Front Panel Mounting Options                                     | PCB Mounting Options                                                                                        |                                               |                                                                           |                                                                              |                                        |                                                                                                 |                                                                                                         |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                                                                  | Both .125" Diameter and Oblong Non-Threaded Mounting Holes and 4-40 Hex. Jack Screws Assembled to Connector | Board Locks and .125" Diameter Mounting Holes | Top Only Grounding Straps with Non-Threaded .125" Diameter Mounting Holes | Wrap Around Grounding Straps with Non-Threaded .125" Diameter Mounting Holes | Short Mounting Flange with Board Locks | Short Mounting Flange Top Only Grounding Straps with Non-Threaded .125" Diameter Mounting Holes | Short Mounting Flange with Wrap Around Grounding Straps with Non-Threaded .125" Diameter Mounting Holes |
| Riveted Threaded Inserts                                         | <b>Not Available</b>                                                                                        | <b>P</b>                                      | <b>Q</b>                                                                  | <b>R</b>                                                                     | <b>S</b>                               | <b>M</b>                                                                                        | <b>T</b>                                                                                                |
| Riveted Threaded Inserts with 4-40 Hex. Jack Screws Installed    | <b>L*</b>                                                                                                   | <b>PJ</b>                                     | <b>QJ</b>                                                                 | <b>RJ</b>                                                                    | <b>SJ</b>                              | <b>MJ</b>                                                                                       | <b>TJ</b>                                                                                               |
| 4-40 Round Jackscrews Riveted to Connector                       | <b>Not Available</b>                                                                                        | <b>PR</b>                                     | <b>QR</b>                                                                 | <b>RR</b>                                                                    | <b>SR</b>                              | <b>MR</b>                                                                                       | <b>TR</b>                                                                                               |
| Non-Threaded Riveted Inserts                                     | <b>Not Available</b>                                                                                        | <b>PT</b>                                     | <b>QT</b>                                                                 | <b>RT</b>                                                                    | <b>ST</b>                              | <b>MT</b>                                                                                       | <b>TT</b>                                                                                               |
| Riveted Threaded Inserts with M3/4-40 Hex. Jack Screws Installed | <b>Not Available</b>                                                                                        | <b>PJM</b>                                    | <b>QJM</b>                                                                | <b>RJM</b>                                                                   | <b>SJM</b>                             | <b>MJM</b>                                                                                      | <b>TJM</b>                                                                                              |

\*Removal of jack screws will cause disassembly of L option part. Dimensions in mm [In]

### PC Board Mounting Options



### Front Panel Mounting Options



***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.

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