

# BI-DIRECTIONAL COUPLERS



## THROUGH HOLE (8 Pin Relay Header)

| COUPLING (dB) | FREQUENCY RANGE LF-HF | COUPLING FLATNESS | MAINLINELOSS (dB) |            |            | DIRECTIVITY (dB) |            |            | VSWR TYP | PACKAGE | PIN-OUT (See Below) | MODEL   |
|---------------|-----------------------|-------------------|-------------------|------------|------------|------------------|------------|------------|----------|---------|---------------------|---------|
|               |                       |                   | LB TYP/MAX        | MB TYP/MAX | UB TYP/MAX | LB TYP/MIN       | MB TYP/MIN | UB TYP/MIN |          |         |                     |         |
| 6.0 ± 0.5     | 10 - 100              | ± 0.25            | 1.5/2.0           | 1.5/2.0    | 1.5/2.0    | 30/25            | 30/25      | 30/25      | 1.2:1    | 120     | 1                   | KAP-241 |
| 11.5 ± 1.0    | 0.5 - 400             | ± 1.0             | 0.8/1.0           | 0.7/0.9    | 0.9/1.0    | 37/25            | 25/20      | 20/15      | 1.2:1    | 120     | 1                   | KBP-243 |
| 19.5 ± 1.0    | 0.5 - 400             | ± 1.0             | 0.3/0.5           | 0.4/0.5    | 0.5/0.6    | 35/25            | 33/20      | 25/15      | 1.5:1    | 120     | 1                   | KDP-243 |

## THROUGH HOLE (TO-5 & TO-8)



| COUPLING (dB) | FREQUENCY RANGE LF-HF | COUPLING FLATNESS | MAINLINELOSS (dB) |            |            | DIRECTIVITY (dB) |            |            | VSWR TYP | PACKAGE | PIN-OUT (See Below) | MODEL   |
|---------------|-----------------------|-------------------|-------------------|------------|------------|------------------|------------|------------|----------|---------|---------------------|---------|
|               |                       |                   | LB TYP/MAX        | MB TYP/MAX | UB TYP/MAX | LB TYP/MIN       | MB TYP/MIN | UB TYP/MIN |          |         |                     |         |
| 6.0 ± 0.5     | 10 - 100              | ± 0.25            | 1.5/2.0           | 1.5/2.0    | 1.5/2.0    | 30/25            | 30/25      | 30/25      | 1.2:1    | 104     | 2                   | KAP-541 |
| 6.0 ± 0.5     | 10 - 100              | ± 0.25            | 1.5/2.0           | 1.5/2.0    | 1.5/2.0    | 30/25            | 30/25      | 30/25      | 1.2:1    | 127     | 3                   | KAP-841 |
| 10.8 ± 1.0    | 10 - 500              | ± 0.7             | 0.6/1.0           | 0.8/1.2    | 0.8/1.6    | 30/25            | 25/20      | 25/17      | 1.3:1    | 104     | 2                   | KBP-543 |
| 10.8 ± 1.0    | 10 - 500              | ± 0.7             | 0.6/1.0           | 0.8/1.2    | 0.8/1.6    | 30/25            | 25/20      | 25/17      | 1.3:1    | 127     | 3                   | KBP-843 |
| 20.0 ± 1.0    | 10 - 500              | ± 0.5             | 0.3/0.5           | 0.4/0.5    | 0.5/0.6    | 35/28            | 35/25      | 30/17      | 1.4:1    | 104     | 2                   | KDP-543 |
| 20.0 ± 1.0    | 10 - 500              | ± 0.5             | 0.3/0.5           | 0.4/0.5    | 0.5/0.6    | 35/28            | 35/25      | 30/17      | 1.4:1    | 127     | 3                   | KDP-843 |

Power rating (all models) = 1 Watt, max

\* Select connector suffix: "S" = SMA, "B" = BNC, "N" = Type N, "T" = TNC Impedance, unless otherwise noted is 50 ohms.

For pin location and package outline drawings, see back pages.

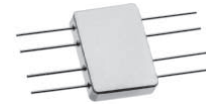
PIN-OUT TABLE

|    | INPUT | OUTPUT | FORWARD COUPLED | REVERSE COUPLED | CASE GND  |
|----|-------|--------|-----------------|-----------------|-----------|
| #1 | 6     | 3      | 4               | 1               | All Other |
| #2 | 8     | 5      | 11              | 2               | All Other |
| #3 | 1     | 2      | 4               | 3               | 5         |

LB=LF to 10 LF  
MB=10 LF to HF/2  
UB=HF/2 to HF



# BI-DIRECTIONAL COUPLERS



## FLAT-PACK

| COUPLING<br>(dB) | FREQUENCY<br>RANGE<br>LF-HF | COUPLING<br>FLATNESS | MAINLINE LOSS<br>(dB) |               |               | DIRECTIVITY<br>(dB) |               |               | VSWR<br>TYP | PACKAGE | PIN-OUT<br>(See Below) | MODEL          |
|------------------|-----------------------------|----------------------|-----------------------|---------------|---------------|---------------------|---------------|---------------|-------------|---------|------------------------|----------------|
|                  |                             |                      | LB<br>TYP/MAX         | MB<br>TYP/MAX | UB<br>TYP/MAX | LB<br>TYP/MIN       | MB<br>TYP/MIN | UB<br>TYP/MIN |             |         |                        |                |
| 10.8 ± 0.7       | 10 - 500                    | ± 0.5                | 1.0/1.3               | 1.0/1.4       | 1.2/1.6       | 28/23               | 28/24         | 23/20         | 1.2:1       | 101     | 4                      | <b>KBF-143</b> |
| 20.3 ± 0.7       | 10 - 500                    | ± 0.5                | 0.3/0.4               | 0.3/0.5       | 0.4/0.5       | 35/28               | 35/25         | 30/20         | 1.35:1      | 101     | 4                      | <b>KDF-143</b> |



## COAXIAL CONNECTOR

| COUPLING<br>(dB) | FREQUENCY<br>RANGE<br>LF-HF | COUPLING<br>FLATNESS | MAINLINE LOSS<br>(dB) |               |               | DIRECTIVITY<br>(dB) |               |               | VSWR<br>TYP | PACKAGE | PIN-OUT<br>(See Below) | MODEL           |
|------------------|-----------------------------|----------------------|-----------------------|---------------|---------------|---------------------|---------------|---------------|-------------|---------|------------------------|-----------------|
|                  |                             |                      | LB<br>TYP/MAX         | MB<br>TYP/MAX | UB<br>TYP/MAX | LB<br>TYP/MIN       | MB<br>TYP/MIN | UB<br>TYP/MIN |             |         |                        |                 |
| 6.0 ± 0.5        | 10 - 100                    | ± 0.25               | 1.5/2.0               | 1.5/2.0       | 1.5/2.0       | 30/25               | 30/25         | 30/25         | 1.2:1       | 113     | 5                      | <b>KAK-741*</b> |
| 10.0 ± 1.0       | 2 - 100                     | ± 0.5                | 0.9/1.0               | 0.9/1.0       | 0.9/1.0       | 45/35               | 37/33         | 35/30         | 1.2:1       | 113     | 5                      | <b>KBK-741*</b> |
| 10.8 ± 0.5       | 10 - 500                    | ± 0.5                | 0.6/1.0               | 0.8/1.2       | 0.8/1.6       | 30/25               | 25/23         | 25/20         | 1.3:1       | 113     | 5                      | <b>KBK-743*</b> |
| 11.5 ± 0.5       | 10 - 1000                   | ± 1.1                | 1.5/1.8               | 1.6/1.9       | 1.6/2.0       | 45/30               | 28/23         | 20/15         | 1.4:1       | 113     | 5                      | <b>KBK-744*</b> |
| 15.0 ± 1.0       | 2 - 100                     | ± 0.5                | 0.4/0.5               | 0.3/0.5       | 0.4/0.6       | 35/30               | 35/30         | 33/30         | 1.3:1       | 113     | 5                      | <b>KCK-741*</b> |
| 15.0 ± 1.0       | 10 - 500                    | ± 0.75               | 0.5/0.8               | 0.7/1.0       | 0.8/1.2       | 35/25               | 33/25         | 30/25         | 1.3:1       | 113     | 5                      | <b>KCK-743*</b> |
| 15.0 ± 1.0       | 5 - 1000                    | ± 0.75               | 0.5/1.0               | 0.8/1.3       | 1.0/1.65      | 30/25               | 28/23         | 25/20         | 1.5:1       | 113     | 5                      | <b>KCK-744*</b> |
| 20.0 ± 1.0       | 2 - 100                     | ± 0.5                | .15/.25               | 0.1/0.2       | 0.1/.25       | 43/33               | 38/33         | 33/30         | 1.06:1      | 113     | 5                      | <b>KDK-741*</b> |
| 20.0 ± 1.0       | 10 - 500                    | ± 0.5                | 0.3/0.6               | 0.4/0.8       | 0.5/1.0       | 35/28               | 35/25         | 35/25         | 1.3:1       | 113     | 5                      | <b>KDK-743*</b> |
| 20.0 ± 1.0       | 10 - 1000                   | ± 1.0                | 0.1/0.2               | 0.3/1.0       | 1.0/1.5       | 30/23               | 25/18         | 20/15         | 1.3:1       | 113     | 5                      | <b>KDK-744*</b> |

Power rating (Flat-Pack models) = 1 Watt, max  
Impedance, unless otherwise noted is 50 ohms.  
For pin location and package outline drawings, see back pages.

PIN-OUT TABLE

|    | INPUT | OUTPUT | FORWARD<br>COUPLED | REVERSE<br>COUPLED | CASE<br>GND |
|----|-------|--------|--------------------|--------------------|-------------|
| #4 | 1     | 5      | 4                  | 8                  | All Other   |
| #5 | 1     | 4      | 2                  | 3                  | -           |

LB=LF to 10 LF  
MB=10 LF to HF/2  
UB=HF/2 to HF

