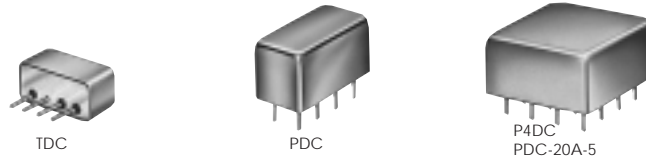


DIRECTIONAL COUPLERS 50 & 75Ω

Plug-In

6 to 30 dB COUPLING up to 10W 5 kHz to 2000 MHz



| MODEL NO. | FREQ. RANGE MHz f_L - f_U | COUPLING dB | | MAINLINE LOSS dB | | | | | | DIRECTIVITY dB | | | VSWR (:1) Typ. | POWER INPUT, W | | CASE STYLE Note B | CONNECTION | PRICE \$ Qty. (1-9) | | | |
|---------------|----------------------------------|-------------|----------|------------------|------|------|------|------|-----|----------------|----|------|-------------------|----------------|----|----------------------|------------|------------------------|------|----|-------|
| | | Nom. | Flatness | L | M* | U | L | M* | U | L | MU | Max. | | Max. | | | | | | | |
| TDC-6-1 | 10-400 | 6.3±0.4 | ±0.4 | 2.0 | 2.4 | 2.0 | 2.4 | 2.0 | 2.5 | 36 | 30 | 30 | 25 | 20 | 15 | 1.5 | 1.0 | 2.0 | B02 | cw | 23.95 |
| TDC-10-1 | 1-400 | 10.0±0.5 | ±0.5 | 1.2 | 1.5 | 1.0 | 1.3 | 1.2 | 1.5 | 35 | 25 | 30 | 20 | 20 | 15 | 1.5 | 1.0 | 2.0 | B02 | cw | 17.95 |
| TDC-10-2 | 5-1000 | 11.0±0.5 | ±0.6 | 1.4 | 1.8 | 1.5 | 1.8 | 1.6 | 2.0 | 50 | 35 | 25 | 20 | 20 | 15 | 1.5 | 0.5 | 0.5 | B02 | cw | 25.95 |
| PDC-10-1 | 0.5-500 | 11.5±0.5 | ±0.6 | 0.85 | 1.3 | 0.65 | 1.0 | 0.85 | 1.3 | 32 | 25 | 32 | 25 | 22 | 15 | 1.2 | 1.5 | 3.0 | A01 | cu | 13.45 |
| ✦ PDC-10-2 | 250-1000 | 10.5±0.5 | ±0.6 | 1.4 | 1.6 | — | — | 1.6 | 2.0 | 30 | 23 | — | — | 25 | 15 | 1.5 | — | 5.0 | A01 | cu | 34.45 |
| PDC-10-5 | 1-2000 | 10.5±0.5 | ±1.0 | 1.2 | 1.9 | 1.3 | 1.9 | 2.0 | 2.5 | 38 | 25 | 30 | 18 | 22 | 15 | 1.3 | 0.5 | 0.5 | A01 | cu | 40.95 |
| PDC-10-6 | 0.005-20 | 11.0±0.5 | ±0.5 | 0.4 | 1.2 | 0.4 | 0.8 | 0.4 | 1.0 | 40 | 30 | 40 | 30 | 35 | 25 | 1.3 | 1.5 | 3.0 | A01 | cu | 23.95 |
| PDC-10-21** | 1-1000 | 11.0±0.5 | ±0.5 | 1.2 | 1.7 | 1.2 | 1.7 | 1.6 | 2 | 40 | 30 | 25 | 20 | 25 | 20 | 1.3 | 1.0 | 2.0 | A01 | cu | 32.95 |
| PDC-10-22 | 5-750 | 11.0±0.5 | ±0.5 | 1.1 | 1.6 | 1.2 | 1.7 | 1.6 | 1.9 | 35 | 30 | 25 | 20 | 25 | 20 | 1.25 | 1.0 | 2.0 | A01 | cu | 23.95 |
| PDC-10-54 | 10-1500 | 10.5±0.5 | ±0.7 | 1.2 | 1.8 | 1.3 | 1.9 | 1.6 | 2.3 | 35 | 25 | 28 | 23 | 28 | 23 | 1.3 | 0.5 | 0.5 | A01 | cu | 35.95 |
| PDC-15-6 | 0.01-35 | 15.0±0.5 | ±0.5 | 0.3 | 0.6 | 0.2 | 0.4 | 0.3 | 0.6 | 38 | 30 | 35 | 25 | 28 | 20 | 1.15 | 2.0 | 4.0 | A01 | cu | 23.95 |
| PDC-15-21 | 1-500 | 14.7±0.5 | ±0.6 | 0.7 | 1.1 | 0.7 | 1.1 | 0.8 | 1.2 | 35 | 30 | 35 | 30 | 30 | 23 | 1.4 | 1.0 | 2.0 | A01 | cu | 23.95 |
| PDC-20-1* | 25-400 | 21.0±0.75 | ±0.5 | 0.2 | 0.25 | 0.3 | 0.35 | 0.35 | 0.5 | 25 | 20 | 35 | 25 | 25 | 20 | 1.25 | 3.0 | 5.0 | A01 | cu | 23.95 |
| PDC-20-1W | 10-700 | 19.2±0.5 | ±0.5 | 0.25 | 0.5 | 0.4 | 0.7 | 0.7 | 1.1 | 34 | 30 | 27 | 23 | 23 | 20 | 1.4 | 1.0 | 2.0 | A01 | cu | 23.95 |
| ✧ PDC-20-3 | 0.2-250 | 19.5±0.5 | ±0.5 | 0.35 | 0.6 | 0.25 | 0.5 | 0.35 | 0.6 | 36 | 30 | 33 | 25 | 25 | 20 | 1.2 | 1.5 | 4.0 | A01 | cu | 15.95 |
| PDC-20A-5 | 0.1-2000 | 20.0±0.5 | ±1.0 | 0.6 | 1.5 | 0.6 | 1.5 | 1.9 | 2.9 | 34 | 20 | 25 | 15 | 20 | 10 | 1.5 | 0.5 | 2.0 | C145 | cy | 44.95 |
| ■ PDC-10-1-75 | 1-250 | 10.5±0.5 | ±0.75 | 1.1 | 1.5 | 1.1 | 1.5 | 1.1 | 1.5 | 30 | 20 | 30 | 20 | 30 | 20 | 2.0 | 2.0 | 4.0 | A01 | cu | 14.95 |
| ■ PDC-10-6-75 | 0.2-100 | 10.0±0.5 | ±0.2 | 1.2 | 1.6 | 0.9 | 1.2 | 0.9 | 1.3 | 50 | 30 | 40 | 25 | 37 | 25 | 1.5 | 1.0 | 2.0 | A01 | cu | 23.95 |
| ■ PDC-15-6-75 | 0.02-35 | 14.5±0.5 | ±0.5 | 0.3 | 0.7 | 0.3 | 0.7 | 0.3 | 0.7 | 35 | 20 | 35 | 20 | 35 | 20 | 1.3 | 1.5 | 4.0 | A01 | cu | 25.95 |
| ■ PDC-20-3-75 | 1-150 | 19.5±0.5 | ±0.75 | 0.35 | 0.8 | 0.35 | 0.8 | 0.35 | 0.8 | 25 | 20 | 25 | 20 | 25 | 20 | 2.0 | 2.0 | 4.0 | A01 | cu | 14.95 |
| ■ PDC-20-6-75 | 0.05-40 | 20.4±0.3 | ±0.25 | 0.1 | 0.25 | 0.1 | 0.2 | 0.1 | 0.3 | 45 | 35 | 35 | 20 | 25 | 18 | 1.2 | 1.5 | 3.0 | A01 | cu | 23.95 |
| * P4DC-30A-2 | 5-1000 | 30.5±0.5 | ±1.0 | 0.7 | 1.2 | 0.7 | 1.2 | 0.8 | 1.5 | 30 | 15 | 32 | 20 | 20 | 10 | 1.15 | 1.0 | 2.0 | C07 | da | 34.95 |
| PDC20-400HP† | 40-400 | 21.5±0.5 | ±0.6 | 0.1 | 0.3 | 0.2 | 0.4 | 0.2 | 0.5 | 30 | 20 | 30 | 20 | 27 | 18 | 1.1 | 10.0 | 10.0 | A01 | gh | 49.95 |
| PDC20-900HP | 800-900 | 20.2±0.6 | ±0.5 | | | 0.25 | 0.5 | | | | | 24 | 20 | | | 1.1 | 5.0 | 5.0 | A01 | cu | 39.95 |
| PDC20-970HP | 860-970 | 20.2±0.6 | ±0.5 | | | 0.25 | 0.5 | | | | | 24 | 20 | | | 1.1 | 5.0 | 5.0 | A01 | cu | 39.95 |

L = low range [f_L to $10f_L$] M = mid range [$10f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

NOTES:

- ◆ Aqueous washable, hermetically sealed.
- * L = 25-50 MHz, M = 50-300 MHz, U = 300-400 MHz
- ** Upper range coupling ±0.75 dB
- † L = 30-100 MHz, M = 100-200 MHz, Operating Temperature +50°C
- ‡ L = 40-100 MHz, M = 100-200 MHz
- ✦ L = f_L-2f_L
- * 4-coupled ports, Isolation between coupled ports, 25 dB minimum.
- ✧ Insertion loss specification in L range may degrade up to 1dB at cold temperature, -55°C
- *** Price for quantities 10-49
- ⊕ When only specification for M or MU range given, specification applies to entire frequency range.
- ▲ Available only with SMA connectors
- Denotes 75 Ohm models
- A. General Quality Control Procedures, Environmental Specifications, Hi-Rel and MIL description are given in General Information (Section 0).
- B. Connector types and case mounted options, case finishes are given in section 0, see "Case styles & Outline Drawings".
- C. Prices and specifications subject to change without notice.
 1. Mainline Loss includes theoretical power loss at coupled port.
 2. For PDC-HP models, external heat sinking is recommended to reduce case temperature.

NSN GUIDE

| MCL NO. | NSN | MIL-C 15370/18* |
|-------------|------------------|-----------------|
| PDC-10-1 | 5985-01-178-4406 | 002 |
| PDC-10-1-75 | 5985-01-294-3796 | |
| PDC-10-2 | | 008 |
| PDC-10-5 | 5895-01-389-9497 | |
| PDC-10-21 | 5985-01-130-0177 | 003 |
| PDC-10-22 | 5985-01-190-7738 | |
| PDC-10-54 | 5895-01-394-6080 | |
| PDC-15-6 | 5985-01-147-0160 | 009 |
| PDC-20-3 | 5985-01-076-8477 | 001 |
| TDC-10-1 | 5905-01-226-3428 | |

* units are not OPL listed.



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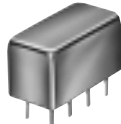
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Surface Mount, Plug-In, Coaxial

BI-DIRECTIONAL up to 50W 100 KHZ to 2500 MHZ



BDCA



PDC



ZABDC



ZFDC/ZFBDC

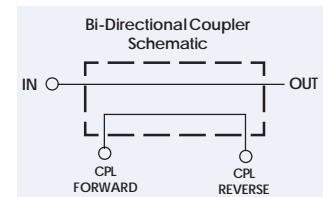
| MODEL NO. | FREQ. RANGE MHz f_L - f_U | COUPLING dB | | MAINLINE LOSS dB | | | | DIRECTIVITY dB | | | VSWR (:1) Typ. | POWER INPUT, W | | THERMAL RESISTANCE θ_{jc} °C/W | CASE STYLE Note B | CONNECTION LAY-OUT PL- | PCB Lay-out PL- Qty. (1-9) | PRICE \$ |
|-------------------------|----------------------------------|-------------|----------|------------------|----------------|------|-----|----------------|-----|----|-------------------|----------------|-----------------|--|----------------------|------------------------------|----------------------------------|----------|
| | | Nom. | Flatness | L | M ^o | U | L | M ^o | U | L | | MU | | | | | | |
| ◆ BDCA-10-25 | 800-2500 | 10.1±2.0 | ±2.0 | | 1.0 | 1.5 | | 25 | 11 | | 1.05 | — | 24 ¹ | 37 | SM1L | nl | 004 | 5.95*** |
| | 800-1000 | 11.0±0.8 | ±1.2 | | 0.6 | 1.0 | | 32 | 20 | | 1.05 | — | 50 ⁴ | 37 | | | | |
| | 1700-2000 | 8.5±0.5 | ±0.6 | | 1.1 | 1.5 | | 23 | 16 | | 1.05 | — | 34 ² | 37 | | | | |
| | 1000-2500 | 9.4±1.2 | ±1.5 | | 1.0 | 1.5 | | 22 | 11 | | 1.05 | — | 24 ¹ | 37 | | | | |
| ◆ BDCA-22-16 | 800-1600 | 22.1±2.0 | ±1.2 | | 0.4 | 0.7 | | 23 | 11 | | 1.15 | — | 35 ² | 26 | SM1L | nl | 004 | 5.95*** |
| | 800-1000 | 22.7±0.8 | ±0.8 | | 0.3 | 0.6 | | 24 | 14 | | 1.15 | — | 42 ³ | 26 | | | | |
| | 1100-1600 | 21.0±0.7 | ±0.5 | | 0.4 | 0.7 | | 22 | 11 | | 1.15 | — | 35 ² | 26 | | | | |
| PDC-10-1BD | 1-400 | 11.5±0.5 | ±0.5 | 0.6 | 0.9 | 0.8 | 1.1 | 0.9 | 1.3 | 55 | 35 | 35 | 20 | 22 | A01 | cv | | 11.45 |
| PDC-20-1BD | 0.5-200 | 19.2±0.5 | ±0.5 | 0.3 | 0.7 | 0.3 | 0.5 | 0.4 | 0.6 | 40 | 30 | 35 | 20 | 22 | A01 | cv | | 16.95 |
| PDC-20-3BD | 0.2-250 | 19.5±0.5 | ±0.5 | 0.3 | 1.0 | 0.25 | 0.9 | 0.35 | 0.7 | 47 | 25 | 40 | 25 | 30 | A01 | cv | | 17.95 |
| ZABDC10-25HP | 1500-2500 | 10±1.0 | ±0.5 | | 0.55 | 0.9 | | | | 26 | 18 | | | | DD477 | jp | | 89.95 |
| ZABDC20-2400 | 1500-2400 | 19.5±1.0 | ±1.0 | | 0.3 | 0.5 | | | | 25 | 18 | | | | DD477 | jp | | 89.95 |
| ZFDC-20-1H ¹ | 30-400 | 20.5±0.5 | ±0.4 | 0.15 | 0.4 | 0.15 | 0.4 | 0.3 | 0.4 | 30 | 25 | 30 | 25 | 30 | J17 | de | | 58.95 |
| ▲ ZFBDC20-900HP | 800-900 | 20.7±0.6 | ±0.6 | | 0.1 | 0.4 | | | | 28 | 20 | | | | J17 | gj | | 79.95 |
| ▲ ZFBDC20-970HP | 860-970 | 20.4±0.6 | ±0.6 | | 0.1 | 0.4 | | | | 28 | 20 | | | | J17 | gj | | 79.95 |

L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]

¹ Derate linearly to 10W at 100°C
² Derate linearly to 15W at 100°C
³ Derate linearly to 18W at 100°C
⁴ Derate linearly to 22W at 100°C

features

- wideband
- excellent VSWR
- excellent power handling capability
- good flatness



pin and coax connections see case style outline drawing

| Port | cu | cv | cw | cy | da | de | gh | gj | jp | nl |
|-------------------|---------|---------|----|----------------|----------------|----|-----------|----|----|-------------|
| Input | 1 | 1 | 1 | 14 | 8 | 5 | 1 | 2 | 1 | 1 |
| Output | 4 | 4 | 2 | 8 | 12 | 1 | 2 | 3 | 4 | 6 |
| Coupled (forward) | 3 | 3 | 4 | 5 | 2,1,13,14* | 3 | 5 | 1 | 2 | 10 |
| Coupled (reverse) | — | 6 | — | — | — | 2 | — | S | 3 | 5 |
| Not Used | 6 | — | — | — | — | — | — | — | — | — |
| Case GND | 2,5,7,8 | 2,5,7,8 | 3 | All other pins | All other pins | — | 3,4,6,7,8 | — | — | 2,3,4,7,8,9 |

* 4-coupled ports #1, #2, #3, #4 consecutively



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