

BROADBAND

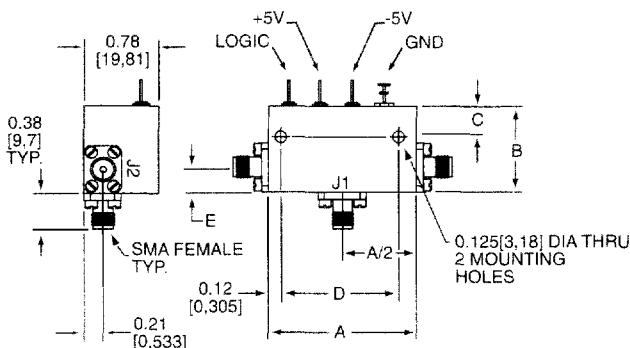
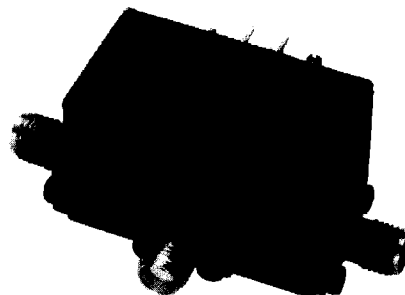
SPDT DIODE SWITCH

HIGH ISOLATION-REFLECTIVE AND ABSORPTIVE 0.02-18 GHz

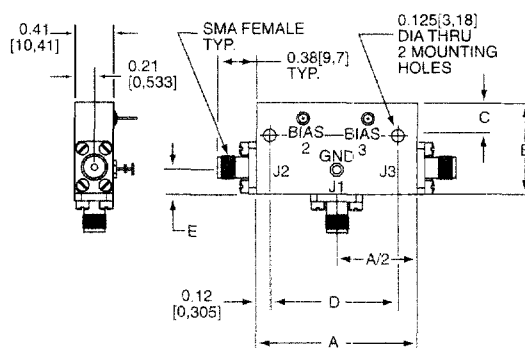
SERIES XB, XL, XN

GENERAL SPECIFICATIONS

| | |
|---------------------------------|--|
| Frequency Coverage: | 0.02 to 18.0 GHz. |
| RF Impedance: | 50 OHMS. |
| RF Power: | +20 dBm operational. Consult factory for high power options. 1 watt average, 10 watts peak survival. |
| DC Requirements: | Switches without drivers require +60 mA maximum per path for the "off" condition and -60 mA for the "on" condition. Switches with drivers require ±5 volt supply at ±130 mA. Logic "1" turns J2 "on" and J3 "off". Logic "0" turns J3 "on" and J2 "off". |
| Temperature Information: | Operating temperature from -55°C to +85°C. |
| Switching Speed: | 10% to 90% or 90% to 10% of RF. There is an additional 30 nanosec of driver delay. |
| Connectors: | SMA. |



OUTLINE WITH DRIVER J1-INPUT



OUTLINE WITHOUT DRIVER J1-INPUT

MECHANICAL OUTLINES

| Outline | A in[mm] | B in[mm] | C in[mm] | D in[mm] | E in[mm] |
|---------|-------------|-------------|-------------|--------------|-------------|
| 1 | 1.55[39,37] | 0.90[22,86] | 0.30[7,6] | 1.300[33,02] | 0.25[6,4] |
| 2 | 1.30[33,02] | 0.75[19,1] | 0.20[5,1] | 1.050[26,7] | 0.25[6,4] |
| 3 | 1.55[39,37] | 0.95[24,13] | 0.30[7,6] | 1.300[33,02] | 0.35[8,9] |
| 4 | 2.00[50,8] | 1.00[25,4] | 0.35[8,9] | 1.750[44,5] | 0.30[7,6] |
| 5 | 1.55[39,37] | 0.95[24,13] | 0.30[7,6] | 1.300[33,02] | 0.25[6,4] |
| 6 | 1.55[39,37] | 1.20[30,48] | 0.50[12,7] | 1.300[33,02] | 0.25[6,4] |
| 7 | 1.55[39,37] | 0.90[22,86] | 0.30[7,6] | 1.300[33,02] | 0.25[6,4] |

(TYP. IN INCHES [MILLIMETERS]) XX ±0.05 XXX ±0.10 [XX ±0.03 XX ±0.25]



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BROADBAND

SPDT DIODE SWITCH

SERIES XB, XL, XN

HIGH ISOLATION-REFLECTIVE AND ABSORPTIVE 0.02-18 GHz

ELECTRICAL PERFORMANCE

| Model No. | Type | Driver Yes/No | Frequency Range (GHz) | Isolation Minimum dB | Insertion Loss Maximum dB | VSWR Maximum | Outline | Speed Nanosec. |
|-------------|------|---------------|-----------------------|----------------------|---------------------------|--------------|---------|----------------|
| XN-12 | REFL | NO | 0.02-0.07 | 80 | 0.40 | 1.45 | 1 | 2,000 |
| XB-11-HAD-1 | ABS | YES | 0.02-0.1 | 60 | 0.75 | 1.65 | 4 | 500 |
| XB-14-AD | REFL | YES | 0.1-1.0 | 30 | 1.00 | 1.60 | 4 | 2,000 |
| XB-17-HAD | ABS | YES | 0.1-1.0 | 80 | 1.10 | 1.65 | 4 | 2,000 |
| XB-15-HAD | ABS | YES | 0.1-1.0 | 60 | 1.00 | 1.65 | 4 | 2,000 |
| XB-20-HAD-1 | ABS | YES | 0.1-2.0 | 80 | 1.45 | 1.65 | 4 | 500 |
| XN-17-HAD | ABS | YES | 0.2-0.25 | 80 | 0.60 | 1.45 | 4 | 2,000 |
| XB-21-AD-1 | REFL | YES | 0.25-0.5 | 30 | 1.05 | 1.60 | 4 | 500 |
| XL-22D-1 | REFL | YES | 0.25-0.5 | 30 | 0.95 | 1.60 | 1 | 500 |
| XB-37-HAD-2 | ABS | YES | 0.5-2.0 | 80 | 1.30 | 1.65 | 4 | 20 |
| XB-35-HAD-1 | ABS | YES | 0.5-2.0 | 60 | 1.10 | 1.65 | 5 | 100 |
| XL-31D-1 | REFL | YES | 0.5-2.0 | 30 | 1.00 | 1.60 | 2 | 100 |
| XN-25-HAD | ABS | YES | 0.95-1.22 | 60 | 0.75 | 1.45 | 5 | 2,000 |
| XB-39-HAD | ABS | YES | 1.0-2.0 | 60 | 0.90 | 1.65 | 5 | 2,000 |
| XB-40-HAD-1 | ABS | YES | 1.0-2.0 | 80 | 1.10 | 1.65 | 4 | 100 |
| XB-42-HAD-1 | ABS | YES | 1.0-4.0 | 60 | 1.10 | 1.65 | 5 | 100 |
| XB-48-HAD | ABS | YES | 1.0-6.0 | 80 | 1.30 | 1.65 | 4 | 2,000 |
| XB-46-HAD-1 | ABS | YES | 1.0-6.0 | 60 | 1.30 | 1.65 | 5 | 100 |
| XN-28-HAD | ABS | YES | 1.02-1.10 | 60 | 0.75 | 1.45 | 5 | 2,000 |
| XB-53-HAD-2 | ABS | YES | 1.5-3.0 | 80 | 1.20 | 1.65 | 4 | 20 |
| XA-35D | REFL | YES | 1.7-2.4 | 30 | 0.70 | 1.40 | 2 | 2,000 |
| XB-55-HAD | ABS | YES | 2.0-4.0 | 60 | 1.10 | 1.65 | 6 | 2,000 |
| XB-57-HAD | ABS | YES | 2.0-4.0 | 80 | 1.20 | 1.65 | 6 | 2,000 |
| XB-59D-1 | REFL | YES | 2.0-8.0 | 60 | 1.30 | 1.65 | 3 | 100 |
| XB-59-1 | REFL | NO | 2.0-8.0 | 60 | 1.30 | 1.65 | 3 | 100 |
| XL-52D | ABS | YES | 2.0-8.0 | 30 | 1.10 | 1.60 | 3 | 2,000 |
| XN-44-HAD | ABS | YES | 2.2-2.3 | 80 | 0.95 | 1.45 | 5 | 2,000 |
| XN-46-HAD-1 | ABS | YES | 2.9-3.1 | 80 | 1.00 | 1.45 | 6 | 100 |
| XB-66-HAD | ABS | YES | 4.0-8.0 | 60 | 1.30 | 1.70 | 6 | 2,000 |
| XB-68-HAD | ABS | YES | 4.0-8.0 | 80 | 1.40 | 1.70 | 6 | 2,000 |
| XB-65-AD | ABS | YES | 4.0-8.0 | 30 | 1.40 | 1.60 | 6 | 2,000 |
| XN-58D | REFL | YES | 4.2-4.4 | 80 | 0.95 | 1.45 | 3 | 2,000 |
| XN-47-AD-2 | ABS | YES | 5.4-5.9 | 30 | 1.20 | 1.50 | 6 | 20 |
| XN-70-HAD-1 | ABS | YES | 5.4-5.9 | 80 | 1.40 | 1.45 | 6 | 100 |
| XB-80-HAD-1 | ABS | YES | 6.0-12.0 | 80 | 2.10 | 1.90 | 7 | 100 |
| XB-80-HAD | ABS | YES | 6.0-12.0 | 80 | 2.00 | 1.90 | 7 | 2,000 |
| XB-79-HA | ABS | NO | 6.0-12.0 | 60 | 1.90 | 1.90 | 7 | 2,000 |
| XB-79-1 | REFL | NO | 6.0-12.0 | 60 | 2.10 | 1.90 | 3 | 100 |
| XB-84-HAD-2 | ABS | YES | 6.0-18.0 | 80 | 3.50 | 2.50 | 7 | 20 |
| XB-88-HAD-1 | ABS | YES | 7.0-12.4 | 80 | 2.35 | 1.80 | 7 | 100 |
| XB-88D-1 | REFL | YES | 7.0-12.4 | 80 | 2.25 | 1.80 | 2 | 100 |
| XN-56-AD-2 | ABS | YES | 8.5-9.6 | 30 | 1.40 | 1.50 | 7 | 20 |
| XN-77D | REFL | YES | 8.5-9.6 | 60 | 1.40 | 1.45 | 7 | 2,000 |
| XN-86-HAD | ABS | YES | 9.8-10.4 | 60 | 1.50 | 1.45 | 7 | 2,000 |
| XB-98-HAD-1 | ABS | YES | 12.0-18.0 | 60 | 3.10 | 2.30 | 7 | 100 |

KEY: Inches [Millimeters] | X1 = 0.5 | X2 = 1.0 | X3 = 0.8 | X4 = 0.25



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