

BAND PASS-BAND REJECT BASE STATION DUPLEXERS

136 - 960 MHz

DVN Series

Product Features

Fiplex DVN Series are efficient duplexers, made of four or six round coaxial cavities, able to be installed in a 19" cabinet. These duplexers are intended to be used in high power applications, or when there is small Tx-Rx separation. Around the pass frequencies, these duplexers display a quasi band pass response, providing an additional selectivity that protects the receiver against interferences and reduces the noise and spurious emission of the transmitter.

TEM coaxial resonant cavities area 4" O.D. ("L" type), and models ending in "/3" use $\frac{3}{4}$ wavelength coaxial resonators in order to improve the Q factor of the cavity.

Good thermal stability is obtained by a fine design and by the use of INVAR rods to control the tuning of each resonator. In order to have a long life performance, inner copper lines are silver plated and the outer aluminum conductors are passivated.

Duplexers are supplied with mounting brackets for 19" racks. Standard connectors are N female.



DVN 9022/3L



Specifications

	DVN1522L	DVN1533L
Frequency Range	136 - 174 MHz	136 - 174 MHz
Cavity O.D.	4 inches	4 inches
Number fo cavities in each section	2	3
Tx-Rx Separation, Min	0.6 MHz	0.5 MHz
Tx-Rx Separation, Typ	2.0 MHz	2.0 MHz
Continuous Power Input, Max	150 W	150 W
Insertion Loss Tx - Antenna Max	1.5 dB @ 0.6 MHz split 1.0 dB @ 2.0 MHz split	1.5 dB @ 0.5 MHz split 1.0 dB @ 5.0 MHz split
Insertion Loss Antenna - Rx Max	1.5 dB @ 0.6 MHz split 1.0 dB @ 2.0 MHz split	1.5 dB @ 0.5 MHz split 1.0 dB @ 5.0 MHz split
Tx Noise Rejection at Rx Freq. Max	75 dB @ 0.6 MHz split 85 dB @ 2.0 MHz split	85 dB @ 0.5 MHz split 95 dB @ 2.0 MHz split
Rx-Tx Isolation at Tx Freq. Max	75 dB @ 0.5 MHz split 85 dB @ 2.0 MHz split	80 dB @ 0.5 MHz split 95 dB @ 2.0 MHz split
RL	22 dB	22 dB
Connectors, Standard Type	N(f)	N(f)
Temperature range	-22° to 140° F • -30° to +60° C	-22° to 140° F • -30° to +60° C
Dimension	34.3 x 19 x 5 inches • 870 x 482.6 x 127 mm	34.3 x 19 x 10 inches • 870 x 482.6 x 254 mm
Weight	17.2 lbs • 7.8 kg	30 lbs • 13.6 kg

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DVN Series

Specifications	DVN2522L	DVN 2533L
Frequency Range	200 – 300 MHz	200 – 300 MHz
Cavity O.D.	4 inches	4 inches
Number fo cavities in each section	2	3
Tx–Rx Separation, Min	1.0 MHz	0.8 MHz
Tx–Rx Separation, Typ	5.0 MHz	3.0 MHz
Continuous Power Input, Max	150 W	150 W
Insertion Loss Tx - Antenna Max	1.5 dB @ 1.0 MHz split 0.9 dB @ 5.0 MHz split	1.5 dB @ 0.8 MHz split 1.1 dB @ 3.0 MHz split
Insertion Loss Antenna - Rx Max	1.5 dB @ 1.0 MHz split 0.9 dB @ 5.0 MHz split	1.5 dB @ 0.8 MHz split 1.1 dB @ 3.0 MHz split
Tx Noise Rejection at Rx Freq. Max	75 dB @ 1.0 MHz split 90 dB @ 5.0 MHz split	90 dB @ 0.8 MHz split 95 dB @ 3.0 MHz split
Rx-Tx Isolation at Tx Freq. Max	75 dB @ 1.0 MHz split 75 dB @ 1.0 MHz split	90 dB @ 0.8 MHz split 95 dB @ 3.0 MHz split
RL	22 dB	22 dB
Connectors, Standard Type	N(f)	N(f)
Temperature range	-22° to 140° F • -30° to +60° C	-22° to 140° F • -30° to +60° C
Dimension	27 x 19 x 5 inches • 686 x 482.6 x 127 mm	27 x 19 x 10 inches • 686 x 482.6 x 254 mm
Weight	15.5 lbs • 7 kg	26.5 lbs • 12 kg

Specifications	DVN 3522L	DVN3533L	DVN4522L
Frequency Range	300 – 400 MHz	300-400 MHz	400 – 520 MHz
Cavity O.D.	4 inches	4 inches	4 inches
Number fo cavities in each section	2	3	2
Tx–Rx Separation, Min	3.0 MHz	1.0 MHz	3.0 MHz
Tx–Rx Separation, Typ	5.0 MHz	3.0 MHz	5.0 MHz
Continuous Power Input, Max	150 W	150 W	150 W
Insertion Loss Tx - Antenna Max	1.5 dB @ 3.0 MHz split 0.9 dB @ 5.0 MHz split	1.5 dB @ 1.0 MHz split 1.1 dB @ 3.0 MHz split	0.8 dB @ 3.0 MHz split 0.7 dB @ 5.0 MHz split
Insertion Loss Antenna - Rx Max	1.5 dB @ 3.0 MHz split 0.9 dB @ 5.0 MHz split	1.5 dB @ 1.0 MHz split 1.1 dB @ 3.0 MHz split	0.8 dB @ 3.0 MHz split 0.7 dB @ 5.0 MHz split
Tx Noise Rejection at Rx Freq. Max	75 dB @ 3.0 MHz split 90 dB @ 5.0 MHz split	75 dB @ 3.0 MHz split 100 dB @3.0 MHz split	75 dB @ 3.0 MHz split 90 dB @ 5.0 MHz split
Rx-Tx Isolation at Tx Freq. Max	75 dB @ 3.0 MHz split 90 dB @ 5.0 MHz split	75 dB @ 3.0 MHz split 100 dB @3.0 MHz split	75 dB @ 3.0 MHz split 90 dB @ 5.0 MHz split
RL	22 dB	22 dB	22 dB
Connectors, Standard Type	N(f)	N(f)	N(f)
Temperature range	-22° to 140° F • -30° to +60° C	-22° to 140° F • -30° to +60° C	-22° to 140° F • -30° to +60° C
Dimension	17 x19 x5 in • 432x482.6x127 mm	17x19x10 in • 432x482.6x254 mm	16x19x5 in • 406x482.6x127 mm
Weight	11 lbs • 5 kg	17 lbs • 8kg	8.8 lbs • 4 kg

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Specifications	DVN4533L	DVN 9022/3L	DVN9033/3L
Frequency Range	400 – 520 MHz	800 – 960 MHz	800 - 960 MHz
Cavity O.D.	4 inches	4 inches	4 inches
Number fo cavities in each section	3	2	3
Tx–Rx Separation, Min	1.0 MHz	3.6 MHz split	3.6 MHz split
Tx–Rx Separation, Typ	3.0 MHz	45.0 MHz split	45 MHz split
Continuous Power Input, Max	150 W	150 W	150 W
Insertion Loss Tx - Antenna Max	1.8 dB @ 1.0 MHz split	1.3 dB @ 3.6 MHz split	1.5 dB @ 3.6 MHz split
	1.1 dB @ 3.0 MHz split	0.5 dB @ 45.0 MHz split	0.7 dB @ 45.0 MHz split
Insertion Loss Antenna - Rx Max	1.8 dB @ 1.0 MHz split	1.3 dB @ 3.6 MHz split	1.5 dB @ 3.6 MHz split
	1.1 dB @ 3.0 MHz split	0.5 dB @ 45.0 MHz split	0.7 dB @ 45.0 MHz split
Tx Noise Rejection at Rx Freq. Max	75 dB @ 1.0 MHz split	75 dB @ 3.6 MHz split	85 dB @ 3.6 MHz split
	100 dB @ 3.0 MHz split	90 dB @ 45.0 MHz split	100 dB @ 45.0 MHz split
Rx-Tx Isolation at Tx Freq. Max	75 dB @ 1.0 MHz split	75 dB @ 3.6 MHz split	85 dB @ 3.6 MHz split
	100 dB @ 3.0 MHz split	90 dB @ 45.0 MHz split	100 dB @ 45.0 MHz split
RL	22 dB	22 dB	22 dB
Connectors, Standard Type	N(f)	N(f)	N(f)
Temperature range	-22° to 140° F • -30° to +60° C	-22° to 140° F • -30° to +60° C	-22° to 140° F • -30° to +60° C
Dimension (No Rods Included)	16x19x10 in • 406x482.6x254 mm	6.6x19x5 in • 167x482.6x127 mm	17x19x10 in • 432x482.6x254 mm
Weight	15.2 lbs • 6.9 kg	11 lbs • 5 kg	17 lbs • 6 kg