

BAND PASS-BAND REJECT BASE STATION DUPLEXERS

DVN Series • 30 - 960 MHz



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.



DVN4522L



DVN1522L



DVN4533L

ELECTRICAL SPECIFICATIONS	DVN0322L	DVN0522L	DVN1522L	DVN1533L	DVN2522L
Frequency Range - MHz	30 – 40	40 – 60	136 - 174	136 - 174	200 – 300
Cavity O.D., in inches	4	4	4	4	4
Number fo cavities in each section	2	2	2	3	2
Tx–Rx Separation, Min - MHz	0.4	0.6	0.6	0.5	1.0
Tx–Rx Separation, Typ - MHz	2.0	5.0	2.0	2.0	5
Tx-Rx Band Width – MHz	0.025	0.050	0.050	0.050	0.025
Continuous Power Input, Max- W.	150	150	150	150	150
Insertion Loss Tx - Antenna - dB	1.5 @ 0.4 MHz split 1.1 @ 2.0 MHz split	1.5 @ 0.6 MHz split 0.8 @ 5.0 MHz split	1.5 @ 0.6 MHz split 1.0 @ 2.0 MHz split	1.5 @ 0.5 MHz split 1.0 @ 5.0 MHz split	1.5 @ 1.0 MHz split 0.9 @ 5.0 MHz split
Insertion Loss Antenna - Rx - dB	1.5 @ 0.4 MHz split 1.1 @ 2.0 MHz split	1.5 @ 0.6 MHz split 0.8 @ 5.0 MHz split	1.5 @ 0.6 MHz split 1.0 @ 2.0 MHz split	1.5 @ 0.5 MHz split 1.0 @ 5.0 MHz split	1.5 @ 1.0 MHz split 0.9 @ 5.0 MHz split
Tx Noise Rejection at Rx Freq. - dB	75 @ 0.4 MHz split 90 @ 2.0 MHz split	75 @ 0.6 MHz split 85 @ 2.0 MHz split	75 @ 0.6 MHz split 85 @ 2.0 MHz split	85 @ 0.5 MHz split 95 @ 2.0 MHz split	75 @ 1.0 MHz split 90 @ 5.0 MHz split
Rx-Tx Isolation at Tx Freq. - dB	75 @ 0.4 MHz split 90 @ 2.0 MHz split	75 @ 0.6 MHz split 85 @ 2.0 MHz split	75 @ 0.5 MHz split 85 @ 2.0 MHz split	80 @ 0.5 MHz split 95 @ 2.0 MHz split	75 @ 1.0 MHz split 90 @ 5.0 MHz split
RL - dB	22	22	22	22	22
Connectors, Standard Type	N(f)	N(f)	N(f)	N(f)	N(f)
Temperature range - °C	- 30 to + 60	- 30 to + 60	- 30 to + 60	- 30 to + 60	- 30 to + 60

MECHANICAL SPECIFICATIONS	DVN0333L	DVN0522L	DVN1522L	DVN1533L	DVN 2522L
Height – in (mm)	89.0 (2260)	89.0 (2260)	34.25 (870)	34.25 (870)	27.0(686.0)
Width – in (mm)	19.0 (482.6)	19.0 (482.6)	19.0 (482.6)	19.0 (482.6)	19.0 (482.6)
Depth – in (mm)	5.0 (127.0)	5.0 (127.0)	5.0 (127.0)	10.0 (250.0)	5.0 (127.0)
Weight – lbs (kg)	51.1(24.0)	33.0(15.0)	17.2(7.8)	30.0(13.6)	15.5(7.0)

ELECTRICAL SPECIFICATIONS	DVN 2533L	DVN 3522L	DVN4522L	DVN4533L	DVN 9022/3L
Frequency Range - MHz	200 – 300	300 – 400	400 – 520	400 – 520	800 – 960
Cavity O.D., in inches	4	4	4	4	4
Number fo cavities in each section	3	2	2	3	2
Tx–Rx Separation, Min - MHz	1.0	3.0	3.0	1.0	3.6
Tx–Rx Separation, Typ - MHz	3	5	5.0	3.0	45.0
Tx-Rx Band Width – MHz	0.050	0.050	0.050	0.050	0.050
Continuous Power Input, Max- W.	150	150	150	150	150
Insertion Loss Tx - Antenna - dB	1.5 @ 1.0 MHz split 1.1 @ 3.0 MHz split	1.5 @ 3.0 MHz split 0.9 @ 5.0 MHz split	0.8 @ 3.0 MHz split 0.7 @ 5.0 MHz split	1.8 @ 1.0 MHz split 1.1 @ 3.0 MHz split	1.3 @ 3.6 MHz split 0.5 @45.0MHz split
Insertion Loss Antenna - Rx - dB	1.5 @ 1.0 MHz split 1.1 @ 3.0 MHz split	1.5 @ 3.0 MHz split 0.9 @ 5.0 MHz split	0.8 @ 3.0 MHz split 0.7 @ 5.0 MHz split	1.8 @ 1.0 MHz split 1.1 @ 3.0 MHz split	1.3 @ 3.6 MHz split 0.5 @45.0MHz split
Tx Noise Rejection at Rx Freq. - dB	90 @ 1.0 MHz split 95 @ 3.0 MHz split	75 @ 3.0 MHz split 90 @ 5.0 MHz split	75 @ 3.0 MHz split 90 @ 5.0 MHz split	75 @ 1.0 MHz split 100 @ 3.0MHz split	75 @ 3.6 MHz split 90 @45.0 MHz split
Rx-Tx Isolation at Tx Freq. - dB	90 @ 1.0 MHz split 95 @ 3.0 MHz split	75 @ 3.0 MHz split 90 @ 5.0 MHz split	75 @ 3.0 MHz split 90 @ 5.0 MHz split	75 @ 1.0 MHz split 100 @ 3.0MHz split	75 @ 3.0 MHz split 90 @ 5.0 MHz split
RL - dB	22	22	22	22	22
Connectors, Standard Type	N(f)	N(f)	N(f)	N(f)	N(f)
Temperature range - °C	- 30 to + 60	- 30 to + 60	- 30 to + 60	- 30 to + 60	- 30 to + 60

MECHANICAL SPECIFICATIONS	DVN 2533L	DVN 3522L	DVN4522L	DVN4533L	DVN 9022/3L
Height – in (mm)	27.0(686.0)	17.0(432.0)	16.0(406.0)	16.0(406.0)	20.0(508.0)
Width – in (mm)	19.0 (482.6)	19.0 (482.6)	19.0(483.0)	19.0(483.0)	19.0(483.0)
Depth – in (mm)	10.0 (254.0)	5.0 (127.0)	5.0(127.0)	10.0(250.0)	5.0(127.0)
Weight – lbs (kg)	26.5(12.0)	11.0(5.0)	8.8(4.0)	15.2(6.9)	11.0(5.0)