

## DPF VHF/33-DR 3000

### 6-Cavity Duplexer for the 160 MHz band for installation inside

- The DPF VHF/33-DR 3000 is a 6-cavity duplex filter designed to be built into the Motorola DR 3000 duplex base station / repeater.
- This duplexer is delivered in a low-band version, DPF VHF/33-DR 3000-L, tunable within 138 - 156 MHz, and a high band version, DPF VHF/33-DR 3000-H, tunable within 152 - 175 MHz. The duplexer can delivered with 4 - 10 MHz spacing.

### DESCRIPTION

- The DPF VHF/33-DR 3000 is primarily intended for TX and RX operation on single frequencies, but it can also, however with slightly reduced data, be used where the TX and RX operate on several channels, i.e. within a certain port bandwidth. In the latter case, factory tuning is recommended.
- The filter has very small physical dimensions due to the use of high-Q, temperature-compensated helical resonators in a compact, extruded aluminium housing. The chassis is made of passivated steel, and teflon insulation has been applied in the coaxial cables and in the connectors.
- The filter is coated with black vinyl to prevent corrosion.



### ORDERING DESIGNATION

| TYPE                      | TUNING RANGE (MHz) | DUPLEX SPACING (MHz) | PRODUCT NO. |
|---------------------------|--------------------|----------------------|-------------|
| DPF VHF/33-DR 3000-L-4/6  | 138 - 156          | 4 - 6                | 200002189   |
| DPF VHF/33-DR 3000-L-6/8  | 138 - 156          | 6 - 8                | 200002430   |
| DPF VHF/33-DR 3000-L-8/10 | 138 - 156          | 8 - 10               | 200002429   |
| DPF VHF/33-DR 3000-H-4/6  | 152 - 175          | 4 - 6                | 200002202   |
| DPF VHF/33-DR 3000-H-6/8  | 152 - 175          | 6 - 8                | 200002432   |
| DPF VHF/33-DR 3000-H-8/10 | 152 - 175          | 8 - 10               | 200002431   |

### ORDERING INFORMATION

When ordering, please state TX and RX frequencies. If TX and RX frequencies are not stated, the filters are delivered non-adjusted.

SPECIFICATIONS

| ELECTRICAL  |  |
|---|--|
| MODEL   | DPF VHF/33-DR 3000                         |
| FREQUENCY<br>DPF VHF/33-DR 3000-L<br>DPF VHF/33-DR 3000-H   | : 138 - 156 MHz<br>: 152 - 175 MHz         |
| MAX. INPUT POWER  | 50 W                                       |
| INSERTION LOSS LOW<br>OR HIGH TO ANT.<br>(at 5 MHz duplex spacing)<br>Single-channel tuned:<br>Multi-channel tuned, 1.5 MHz BW: | ≤ 1.5 (typ. 1.3 dB)<br>≤ 1.6 (typ. 1.4 dB) |
| LOW TO HIGH ISOLATION<br>ON LOW FREQUENCY<br>Single-channel tuned:<br>Multi-channel tuned, 1.5 MHz BW:                          | ≥ 80 dB<br>≥ 40 dB                         |
| HIGH TO LOW ISOLATION<br>ON HIGH FREQUENCY<br>Single-channel tuned:<br>Multi-channel tuned, 1.5 MHz BW:                         | ≥ 80 dB<br>≥ 40 dB                         |
| IMPEDANCE   | Nom. 50 Ω                                  |
| SWR (All ports)   | ≤ 1.5                                      |

| MECHANICAL                                     |   |
|--|---|
| TEMP. RANGE                                    | -30° C → +60° C   |
| FREQ. STABILITY                                | Approx. 4.5 ppm/° C   |
| CONNECTION                                     | RG 400 Length =<br>510 mm / 20.08 in  |
| CONNECTORS<br>Low and high port:<br>Ant. port: | BNC-male<br>N-female, bulkhead  |
| DIMENSIONS (L x W x H)                         | 170 x 77 x 61.7 mm /<br>6.69 x 3.03 x 2.43 in   |
| WEIGHT   | Approx. 860 g / 1.90 lb.  |
| MOUNTING                                       | Supplied with three stays<br>(length 63 mm / 2.48 in) for<br>mounting with screws<br>M4 x 12 mm/0.47 in |

PLEASE NOTE

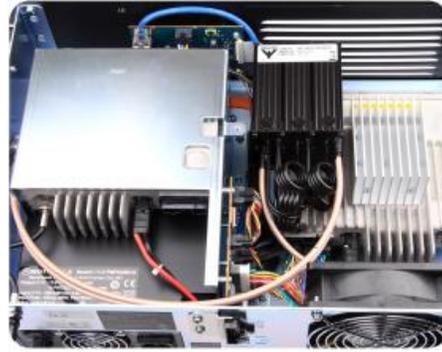
Special configurations of this filter type may be quoted on request. The filter is supplied with flying leads (RG 400 coaxial cable) terminated with connectors.

The filter is delivered with 3 stays and screws for mounting.

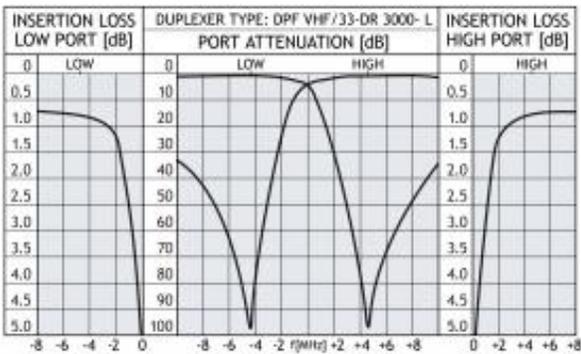
MOUNTING IN MOTOROLA DR 3000



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TYPICAL RESPONSE CURVES



MOUNTING DETAILS

