| PRINCIPAL SPECIFICATIONS |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model Number | Input <br> Freq., <br> MHz | Operating Input Frequency, MHz | ${ }^{\dagger}$ Conv <br> Typ. | rsion dB, Max. | *Typical $\mathrm{F}_{1}$ dB | Harmonic F3 dB | c Output F4 dB | RF Input Range (Nom.) | Package Style |
| FDF-4C-750 | 75-1500 | $\begin{gathered} 75-300 \\ 300-700 \\ 700-1500 \end{gathered}$ | $\begin{aligned} & 11 \\ & 11 \\ & 11 \end{aligned}$ | $\begin{aligned} & 14 \\ & 14 \\ & 14 \end{aligned}$ | $\begin{aligned} & -50 \\ & -40 \\ & -35 \end{aligned}$ | $\begin{aligned} & -50 \\ & -45 \\ & -40 \end{aligned}$ |  | $\begin{gathered} +7 \text { to } 16 \\ (13 \mathrm{dBm}) \end{gathered}$ | Flat |
| FDF-500A | 5-500 | $\begin{gathered} 5-100 \\ 100-300 \\ 300-500 \end{gathered}$ | $\begin{aligned} & 12 \\ & 12 \\ & 15 \end{aligned}$ | $\begin{aligned} & 16 \\ & 15 \\ & 17 \end{aligned}$ | $\begin{aligned} & -40 \\ & -30 \\ & -30 \end{aligned}$ | $\begin{aligned} & -45 \\ & -40 \\ & -40 \end{aligned}$ | $\begin{aligned} & -25 \\ & -27 \\ & -30 \end{aligned}$ | $\begin{gathered} +5 \text { to } 18 \\ (13 \mathrm{dBm}) \end{gathered}$ | Flat |
| FDF-4A-1500 | 25-3000 | $\begin{gathered} 25-600 \\ 600-2500 \\ 2500-3000 \end{gathered}$ | $\begin{aligned} & 12 \\ & 12 \\ & 13 \end{aligned}$ | $\begin{gathered} 14 \\ 13 \\ 15.5 \end{gathered}$ | $\begin{aligned} & -27 \\ & -18 \\ & -15 \end{aligned}$ | $\begin{aligned} & -30 \\ & -30 \\ & -20 \end{aligned}$ |  | $\begin{gathered} +7 \text { to } 16 \\ (13 \mathrm{dBm}) \end{gathered}$ | Flat |
| FDM-500A | 5-500 | $\begin{gathered} 5-100 \\ 100-300 \\ 300-500 \end{gathered}$ | $\begin{aligned} & 12 \\ & 12 \\ & 15 \end{aligned}$ | $\begin{aligned} & 16 \\ & 15 \\ & 17 \end{aligned}$ | $\begin{aligned} & -40 \\ & -35 \\ & -30 \end{aligned}$ | $\begin{aligned} & -45 \\ & -40 \\ & -40 \end{aligned}$ | $\begin{aligned} & -25 \\ & -27 \\ & -30 \end{aligned}$ | $\begin{gathered} +5 \text { to } 18 \\ (13 \mathrm{dBm}) \end{gathered}$ | SMA |
| FDT-500A | 5-500 | $\begin{gathered} 5-100 \\ 100-300 \\ 300-500 \end{gathered}$ | $\begin{aligned} & 10 \\ & 10 \\ & 11 \end{aligned}$ | $\begin{aligned} & 13 \\ & 13 \\ & 15 \end{aligned}$ | $\begin{aligned} & -40 \\ & -35 \\ & -30 \end{aligned}$ | $\begin{aligned} & -45 \\ & -40 \\ & -40 \end{aligned}$ | $\begin{aligned} & -25 \\ & -27 \\ & -30 \end{aligned}$ | $+2 \text { to } 13$ <br> ( 9 dBm ) | TO-5 |
| ${ }^{\dagger}$ Conversion Loss measured at nominal Input Power <br> *Typical Harmonic Level is referenced to RF Input Power All specifications measured at nominal input power and referenced to input power. |  |  |  |  |  |  |  |  |  |



| GENERAL SPECIFICATIONS |  |
| :--- | :--- |
| Impedance: | $50 \Omega$ nom. |
| Weight, FDM-500A | $0.65 \mathrm{oz} .(2.5 \mathrm{~g})$ |
| Weight, All others: | $0.09 \mathrm{oz} .(18 \mathrm{~g})$ |
| Operating Temperature: | $-55^{\circ}$ to $+85^{\circ} \mathrm{C}$ |

## General Notes:

1. Merrimac Frequency Doublers cover the frequency range of 5 to 3000 MHz using lumped element circuits for broad bandwidth and excellent rejection of fundamental and third harmonic energy. These units may also act as quadruplers with additional conversion loss.
2. Merrimac Frequency Doublers comply with the relevant sections of MIL-M-28837 and may be supplied screened for compliance with additional specifications for military and space specifications requiring the highest reliability.

