

FDFS 66.667MHz

g4hup

18-Jan-10
Version 2.00

Bill of Materials

Ref FDFSIss20_04

General
PCB
Housing

Iss 2
148x74x30mm tin plate box

Components shown greyed out are either not required, or included in filter packs (F1,F3,F8,F10)

| Sheet Ref | Des | Value | Spec | Comments |
|-----------|-----------|-------|--------|-----------------------|
| | | | | 1 |
| C1 | 10n | | C0805 | |
| C2 | 10n | | C0805 | |
| C3 | 10n | | C0805 | |
| C4 | 100n | | C0805 | |
| C5 | 100n | | C0805 | |
| C6 | 10n | | C0805 | |
| R1 | 43R | | R0805 | |
| R2 | 130R | | R0805 | |
| R3 | 130R | | R0805 | Atten 1 - 7dB |
| R4 | 47R | | R0805 | |
| R5 | 16R | | R0805 | |
| R6 | 16R | | R0805 | |
| R7 | 16R | | R0805 | |
| R8 | 270R | | R0805 | |
| R9 | 15R | | R0805 | |
| R10 | 270R | | R0805 | Atten 2 nominally 3dB |
| L1 | 8u2H | | R1210 | |
| IC1 | MAV-11SM+ | | RRR137 | |
| X1 | SMA | | 2 hole | |
| X2 | SMA | | 2 hole | |

| Sheet Ref | Des | Value | Spec | Comments |
|-----------|-----------|-------|--------|---------------|
| | | | | 2 |
| C201 | 100p | | C0805 | |
| C202 | 220p | | C0805 | |
| C203 | 18p | | C0805 | |
| C204 | 18p | | C0805 | |
| C205 | 220p | | C0805 | F1 - 70MHz |
| C207 | 10n | | C0805 | |
| C208 | 10n | | C0805 | |
| C209 | 100n | | C0805 | |
| C210 | 10n | | C0805 | |
| C211 | 10n | | C0805 | |
| C212 | 100n | | C0805 | |
| C213 | 10n | | C0805 | |
| C214 | 100n | | C0805 | |
| C215 | 10n | | C0805 | |
| C216 | 100n | | C0805 | |
| C217 | | | C0805 | TC cap for F1 |
| R201 | 150R | | R0805 | |
| R202 | 47R | | R0805 | |
| R203 | 130R | | R0805 | |
| R204 | 43R | | R0805 | |
| R205 | 130R | | R0805 | Atten 3 - 7dB |
| L201 | 47uH | | R1210 | |
| L202 | 1uH | | R0805 | |
| L203 | 47uH | | R1210 | |
| L204 | 100nH | | R0805 | |
| L205 | 230nH | | S18 | |
| L206 | 230nH | | S18 | F1 - 70MHz |
| L208 | 8u2H | | R1210 | |
| L209 | 8u2H | | R1210 | |
| D201 | BAT54C | | SOT23 | |
| IC201 | MAR-6 | | WW107 | |
| IC202 | MAV-11SM+ | | RRR137 | |

| Sheet Ref | | 4 | | Comments |
|-----------|-----------------|-------|--|----------|
| Des | Value | Spec | | |
| C401 | 100n | C0805 | | |
| C402 | 100n | C0805 | | |
| C403 | 100n | C0805 | | |
| C404 | 100n | C0805 | | |
| C405 | 100n | C0805 | | |
| C406 | 100n | C0805 | | |
| C407 | 100n | C0805 | | |
| C408 | 100n | C0805 | | |
| C409 | 100n | C0805 | | |
| C410 | 10n | C0805 | | |
| R401 | 6k8 | R0805 | | |
| R402 | 18k | R0805 | | |
| R403 | 10k | R0805 | | |
| R406 | 10k | R0805 | | |
| R407 | 18k | R0805 | | |
| R408 | 6k8 | R0805 | | |
| L401 | 120uH | R1210 | | |
| L402 | 120uH | R1210 | | |
| L403 | 120uH | R1210 | | |
| L404 | 120uH | R1210 | | |
| IC401 | 74F14D | SO14 | | |
| IC402 | 74F161N/74AC161 | DIL16 | | |
| IC403 | 74F161N | DIL16 | | |
| IC404 | 74F14D | SO14 | | |
| X301 | SMA | | | |

| Sheet Ref | | 6 | | Comments |
|-----------|-------------|-------|--|-------------------------|
| Des | Value | Spec | | |
| C601 | 220p | C0805 | | |
| C602 | 33p | C0805 | | |
| C603 | 0.4p | C0805 | | |
| C604 | 33p | C0805 | | |
| C605 | 220p | C0805 | | F8 - post VHF mixer BPF |
| C606 | 1n | C0805 | | |
| C607 | 10n | C0805 | | |
| C608 | 100n | C0805 | | |
| C609 | 10n | C0805 | | |
| C610 | 100n | C0805 | | |
| R601 | 150R | R0805 | | |
| R602 | 270R | R0805 | | |
| R603 | 15R | R0805 | | |
| R604 | 270R | R0805 | | Atten 7 - 0dB |
| L601 | 100nH | S18 | | |
| L602 | 100nH | S18 | | F8 - post VHF mixer BPF |
| L603 | 1uH | R1210 | | |
| M601 | ADE 1 MIXER | CD636 | | |
| IC601 | MAR-6 | WW107 | | |

| Sheet Ref | | 7 | | Comments |
|-----------|-------|----------|--|-----------------------|
| Des | Value | Spec | | |
| C701 | 100p | C0805 | | |
| C702 | 20p | SMD TRIM | | |
| C703 | 100p | C0805 | | |
| C704 | 20p | SMD TRIM | | |
| C705 | 100p | C0805 | | |
| C706 | 20p | SMD TRIM | | |
| C707 | 100p | C0805 | | F9 VHF Crystal Filter |
| C708 | 1n | C0805 | | |
| C709 | 1n | C0805 | | |
| C710 | 10n | C0805 | | |
| C711 | 100n | C0805 | | |
| C712 | 22p | C0805 | | |

| | | | |
|-------|-----------|-------------|-------------------------|
| C713 | 56p | C0805 | |
| C714 | 22p | C0805 | F10 - output LPF |
| C715 | 1n | C0805 | |
| C716 | 10n | C0805 | |
| C717 | 100n | C0805 | |
| R701 | 150R | R0805 | |
| R702 | 270R | R0805 | |
| R703 | 15R | R0805 | |
| R704 | 270R | R0805 | Atten 8 - 0dB |
| L701 | 47nH | R0805 | |
| L702 | 220nH | R0805 | |
| L703 | 47nH | R0805 | |
| L704 | 220nH | R0805 | |
| L705 | 47nH | R0805 | |
| L706 | 220nH | R0805 | |
| L707 | 47nH | R0805 | F9 - VHF Crystal Filter |
| L708 | 100nH | R0805 | |
| L709 | 100nH | R0805 | F10 - output LPF |
| L710 | 1uH | R1210 | |
| IC701 | MAR-6 | WW107 | |
| Q701 | 66.667MHz | min tubular | CRYSTAL |
| Q702 | 66.667MHz | min tubular | CRYSTAL |
| Q703 | 66.667MHz | min tubular | CRYSTAL |

X701 SMA

| Sheet Ref | Des | Value | Spec | Comments |
|-----------|---------|-------|----------|-----------------------|
| 8 | | | | |
| C801 | 100n | | C0805 | |
| C802 | 10u 16V | | C1210 | |
| C803 | 100n | | C0805 | |
| C804 | 10u 16v | | C1210 | |
| C805 | 100n | | C0805 | |
| C806 | 10u 16v | | C1210 | |
| C807 | 1nF | | Feedthru | Not shown on diagrams |
| D801 | 1N4001 | | | Not shown on diagrams |
| IC801 | 78M05 | | DPACK | |
| IC802 | 78M08 | | DPACK | |

| Sheet Ref | Des | Value | Spec | Comments |
|-----------|------|-------|-------|------------------------|
| 9 | | | | |
| C901 | 100n | | C0805 | |
| C902 | 100n | | C0805 | |
| C903 | 100n | | C0805 | |
| C904 | 330p | | C0805 | |
| C905 | 1n5 | | C0805 | F2 - Multiplier Filter |
| C906 | | | C0805 | |
| C907 | | | C0805 | |
| C908 | | | C0805 | |
| C909 | | | C0805 | F3 LPF |
| C910 | 22p | | C0805 | |
| C911 | 390p | | C0805 | F2 - Multiplier Filter |

| | | | |
|------|------|-------|--------------|
| R901 | 3k3 | R0805 | |
| R902 | 22R | R0805 | |
| R903 | 100R | R0805 | |
| R904 | 75R | R0805 | |
| R905 | 100R | R0805 | Atten 4 10dB |

| | | | |
|------|------|-------|----------------------|
| L901 | 15uH | R1210 | |
| L902 | 15uH | R1210 | |
| L903 | 15uH | R1210 | F3 - LPF |
| L904 | 5u6H | 7KLL | |
| L905 | 1u2H | R1210 | |
| L906 | 6u8H | 7KLL | F2 Multiplier Filter |

TR901 BC847A SOT23