



GE MDS

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June 11th 2009

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
U.S.A.

Subject: Authority to Act as an Agent to FCC, and PC2 changes

Applicant: Microwave Data Systems Inc.

Product: TRM450 transceiver

Model: TRM450

FCC ID's: E5MDS-TRM450

Dear Sir/Madam,


I hereby appoint Elliott Labs of Sunnyvale Calif. to act as my agent in preparation of this PC2 application to F.C.C. for authorization of equipment under F.C.C. Rules.

See pages 2 and 3 for a complete description of the changes to file this class 2 change.

I also certify that the information provided, properly described the device or system for which authorization is required.

If you have any queries, please do not hesitate to contact me at 585 242-8440:

Yours truly,

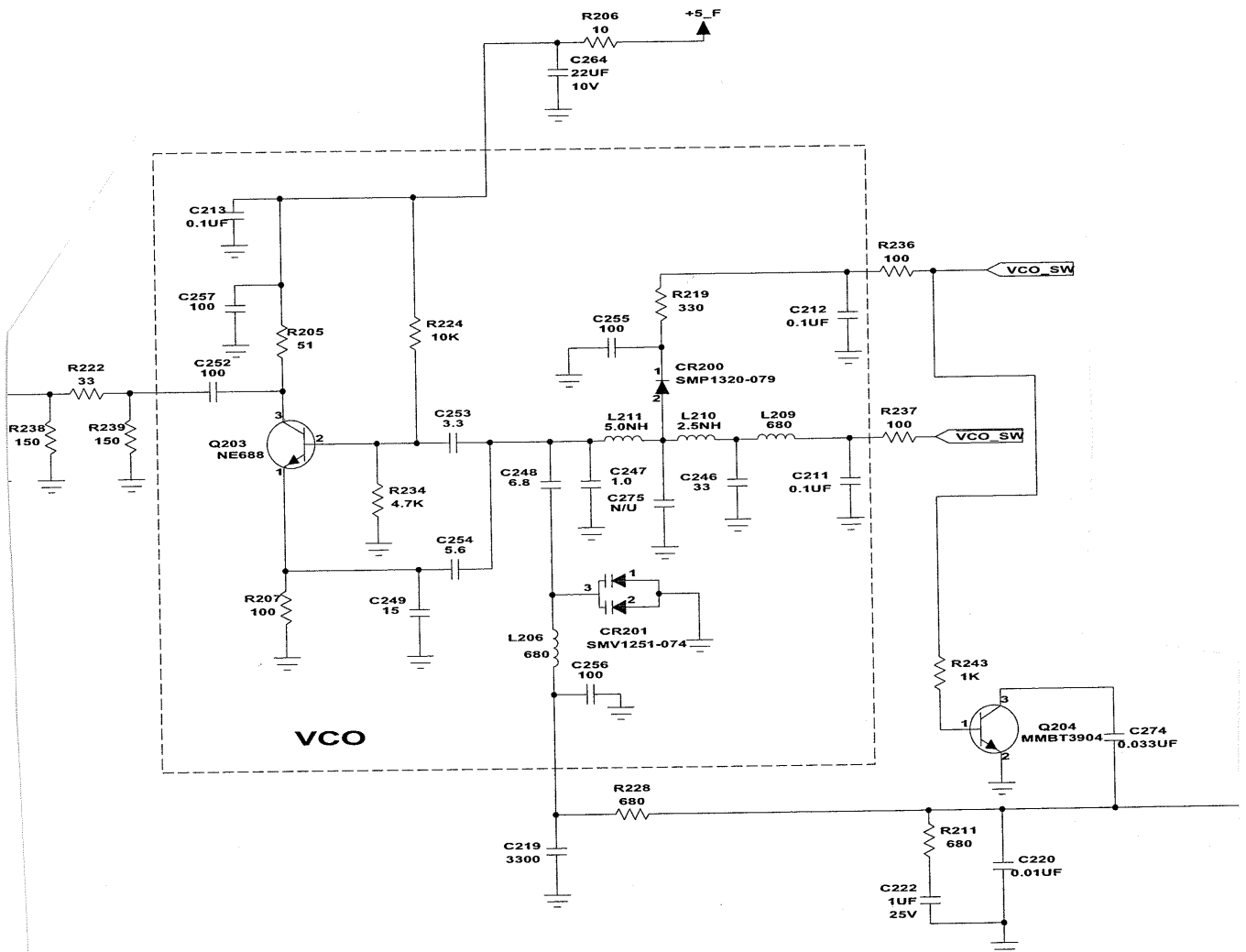
Signed:  Name: Dennis McCarthy

Dennis McCarthy
Agency Compliance Engineer
GE MDS LLC
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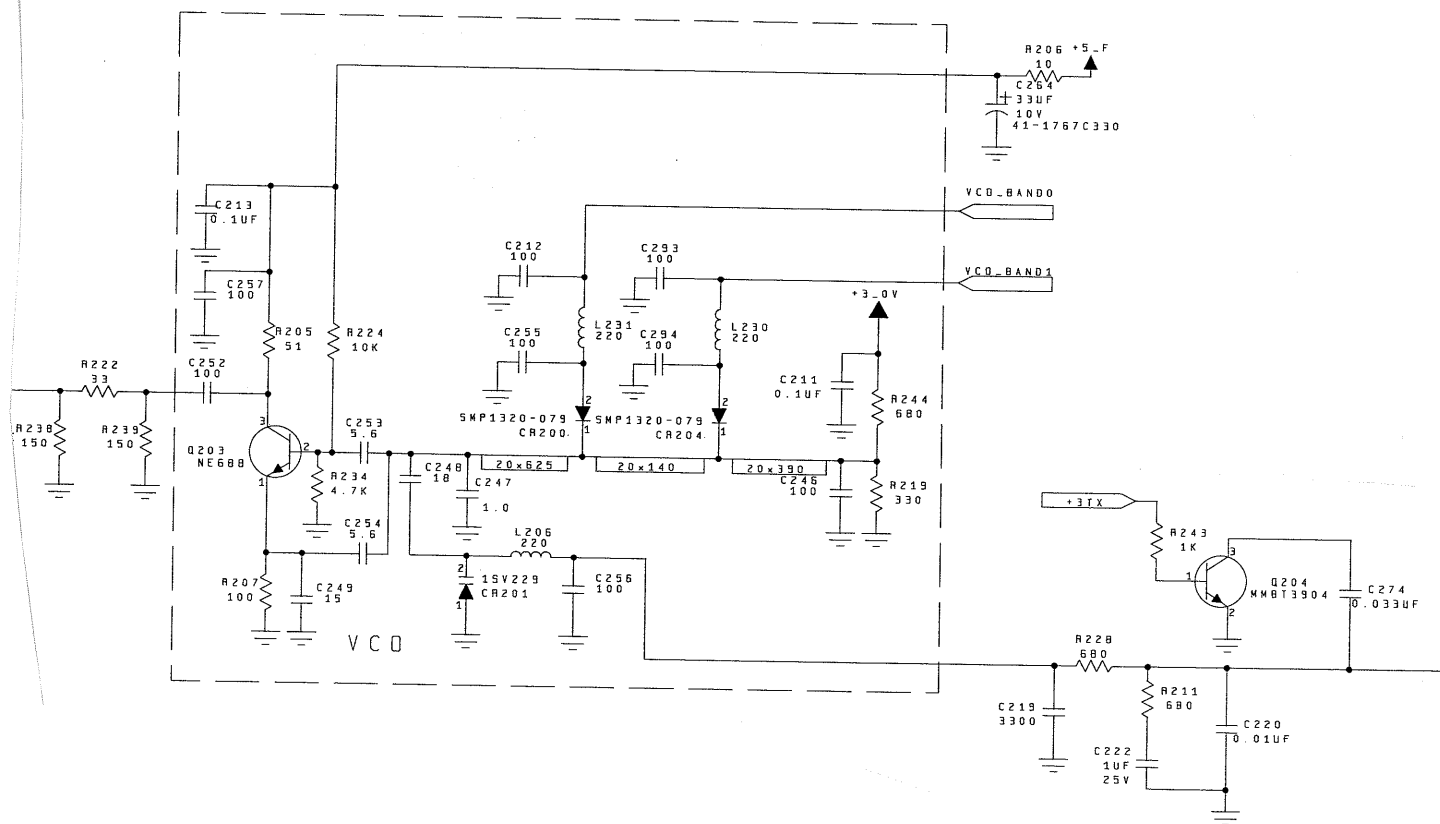
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Transmitter Changes for the Single-band Radio Module.

The TRM450 radio module is a 400MHz transceiver that covers the 410 to 470 MHz range in 3 separate 20MHz bands. The T42 version covers 410-430MHz, the T44 covers 430-450MHz, and the T46 covers 450-470MHz. The only difference between the 3 units are some component values. In the VCO circuit 2 capacitor values (C247, C248) are changed to select the frequency range. The VCO frequency is controlled by a varactor diode (CR201) and by a PIN diode (CR200) that selects the RX or TX range. The VCO circuit is shown below:



For the new single-band radio the entire 410 to 470MHz range will be covered. This will be accomplished by increasing the tuning range of the VCO. Instead of the 2 inductors (L210, L211) used on the previous design 3 printed circuit inductors will be used. Instead of the single PIN diode to switch between the TX and RX range, now 2 PIN diodes will be used (CR200, CR204) to provide 3 VCO ranges. The varactor diode (CR201) has been changed to a 1SV229. The new VCO covers 400 to 520MHz and will be used for both transmit and receive LO. The new VCO circuit is shown below:



The VCO buffer, transmit power amplifier, T/R switching, and low-pass filter are the same as the TRM450 circuits. Some component values may be adjusted to improve circuit performance. All other changes are to the receive section of the circuit.