

## Class 2 Permissive Change

**Description of Changes to the Trimmark 3, FCC ID JUP-9414-450**

- The old 2W stage driver chip was obsoleted, and is now replaced with a new part: Motorola MRF1513T1, Ref Designator Q6, and corresponding driver chip RF Microdevices RF2104
- A new 12.8MHz oscillator, Rakon IVT215BE is used to replace the previous, obsolete 12.8MHz TCXO.
- The shielding on both the power amp board and modem/processor board has been improved.

Plots are provide for a number of representative modulation types supported for by the 2W module:

Types of emission:

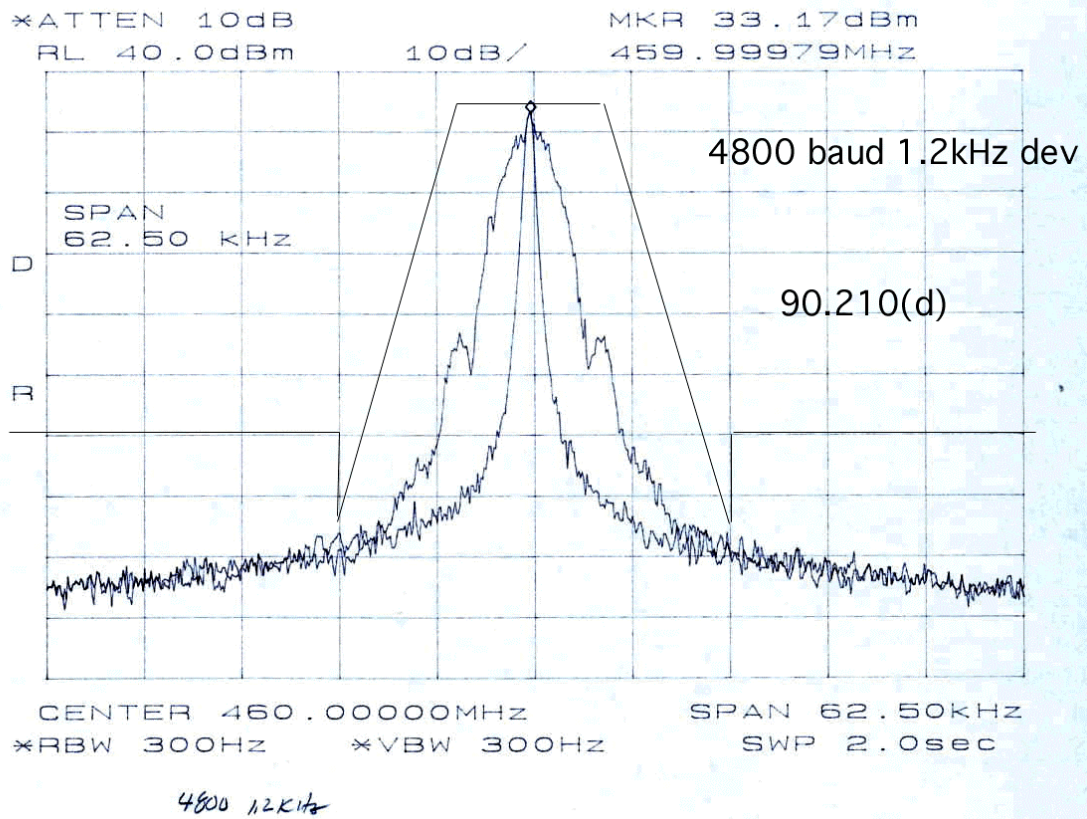
- |                                           |                    |          |
|-------------------------------------------|--------------------|----------|
| 1. 4800 baud GMSK(.5) 1.2 kHz deviation   | 11.25 kHz auth BW: | 11K25G1D |
| 2. 4800 baud GMSK(.5), 2.4 kHz deviation  | 20 kHz auth BW:    | 20K0G1   |
| 3. 4800 baud GMSK(.5), 3.5 kHz deviation  | 20 kHz auth BW:    | 20K0G1D  |
| 4. 9600 baud GMSK(.3) 1.5 kHz deviation   | 11.25 kHz auth BW: | 11K25G1D |
| 5. 9600 baud GMSK(.5), 3.5 kHz deviation  | 20 kHz auth BW:    | 20K0G1D  |
| 6. 19200 baud 4FSK 4.8 kHz deviation      | 20 kHz auth BW:    | 20K0G1D  |
| 7. Spurious out-of band emissions to 10fo |                    |          |

Spurious radiated emissions (substitution method): refer to separate attachment

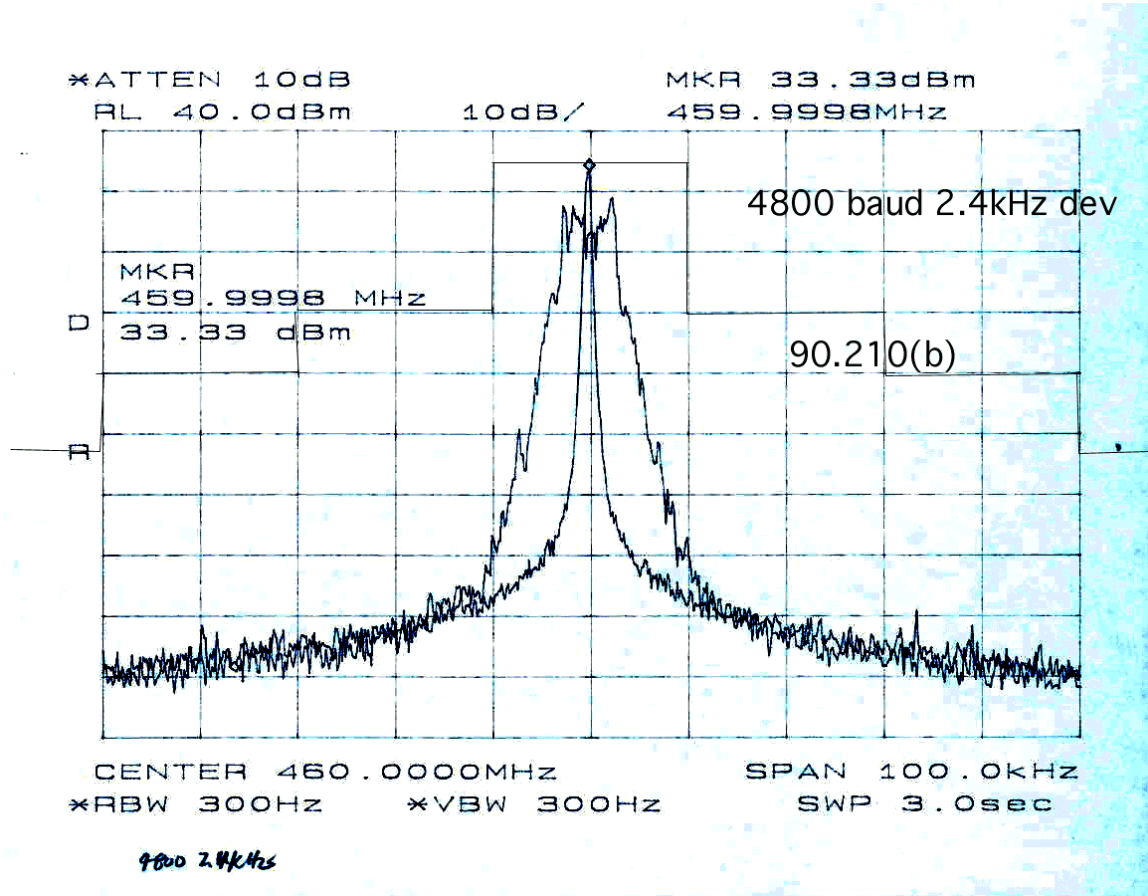
Frequency stability: refer to TCXO manufacturer's data

Schematics and photographs: refer to separate attachments

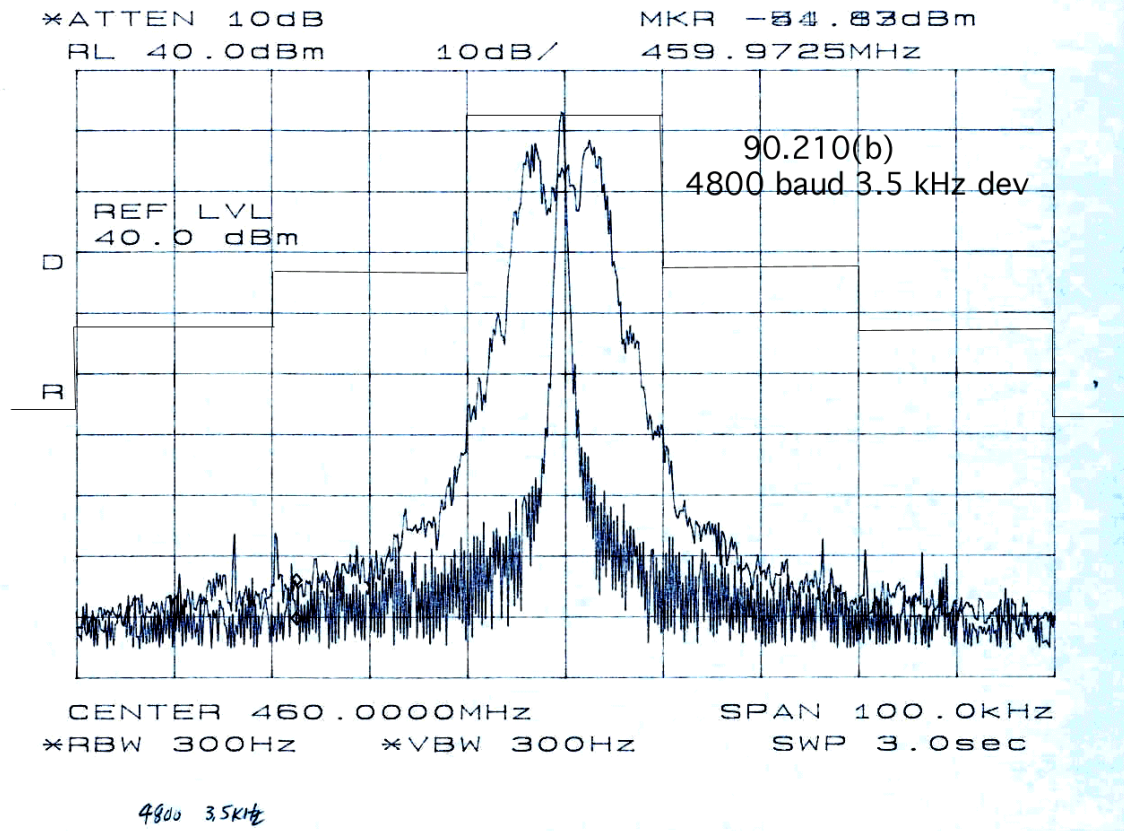
4800 baud GMSK(.5) 1.2 kHz



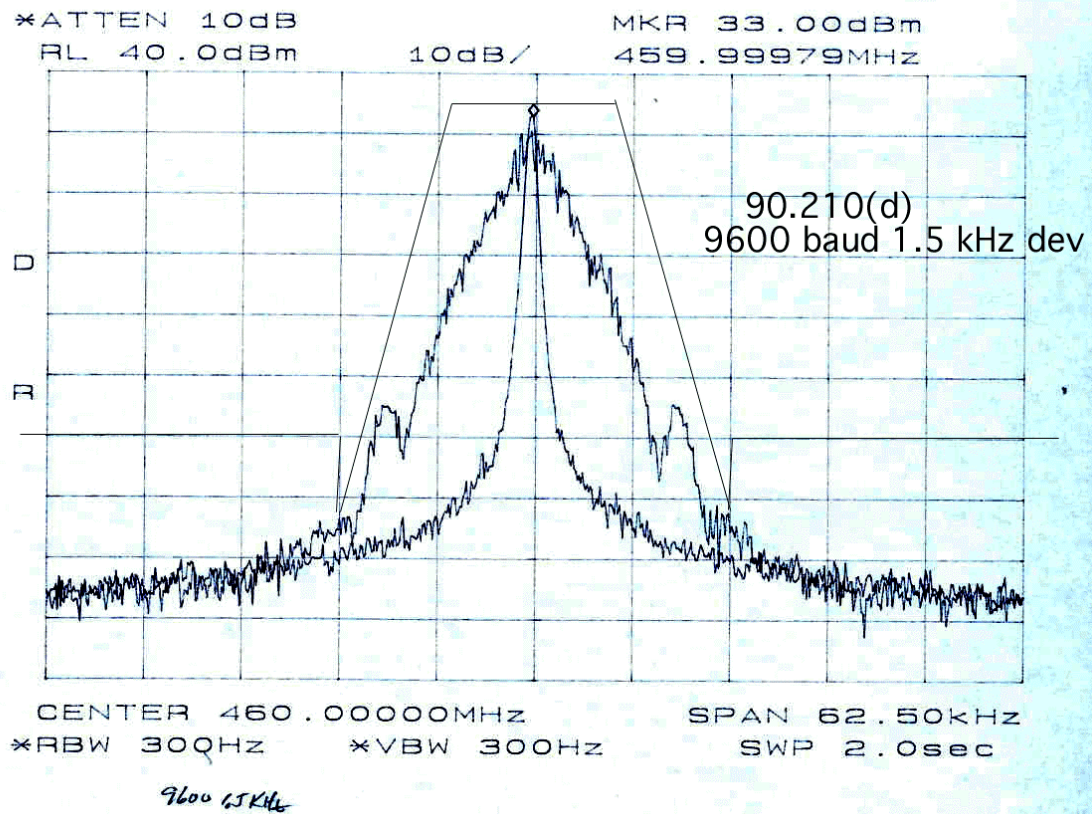
4800 baud GMSK(.5), 2.4 kHz



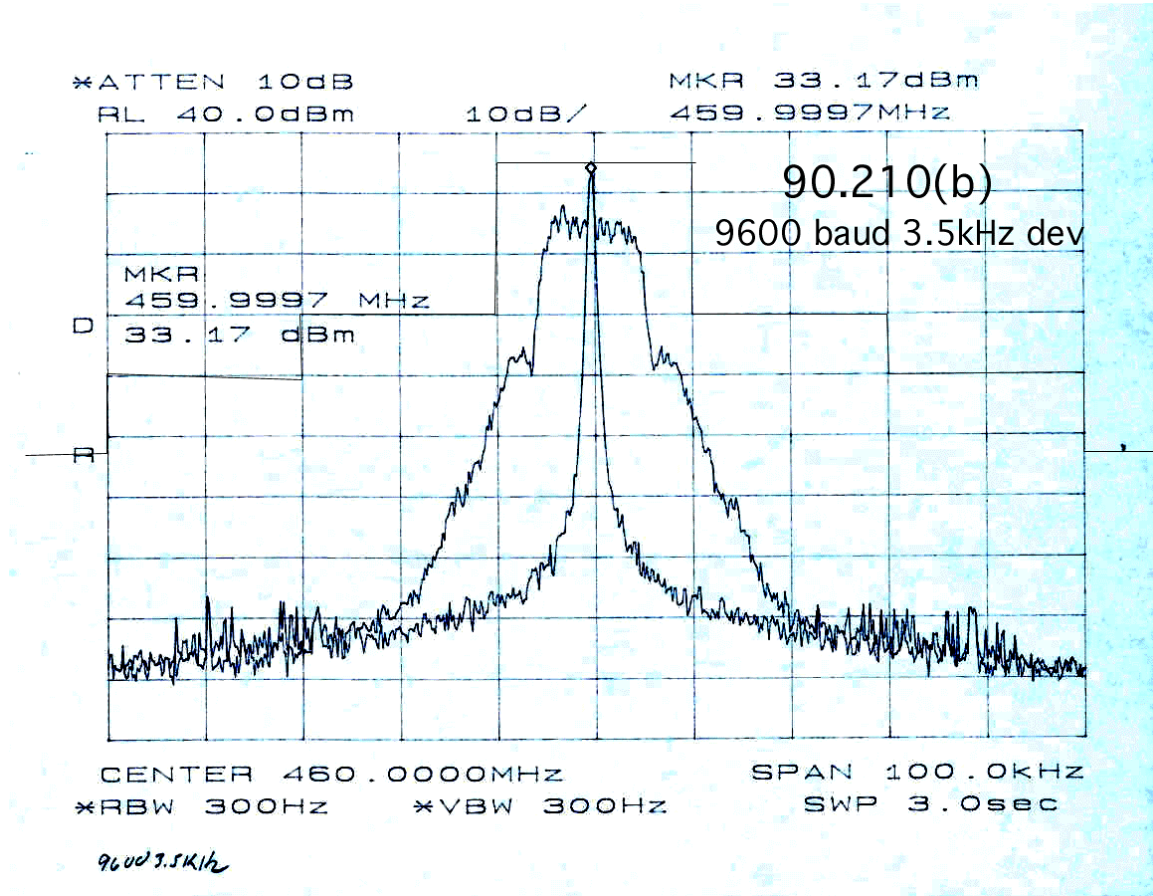
4800 baud GMSK(.5), 3.5 kHz



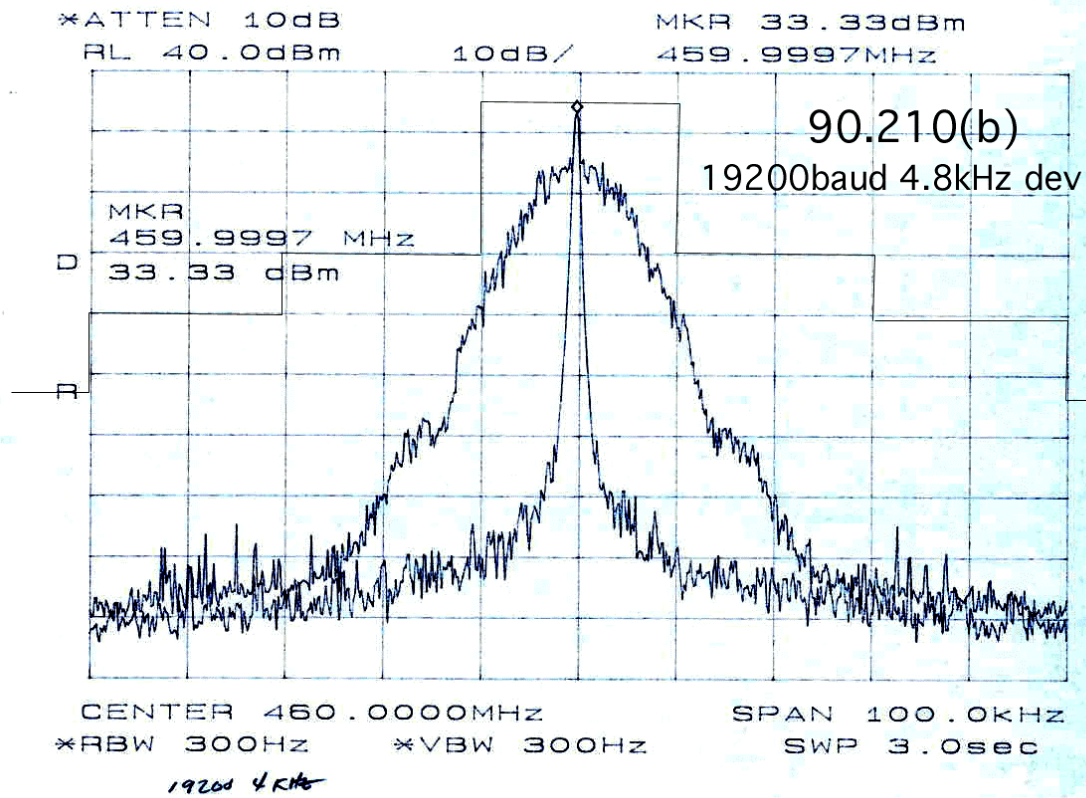
9600 baud GMSK(.3) 1.5 kHz



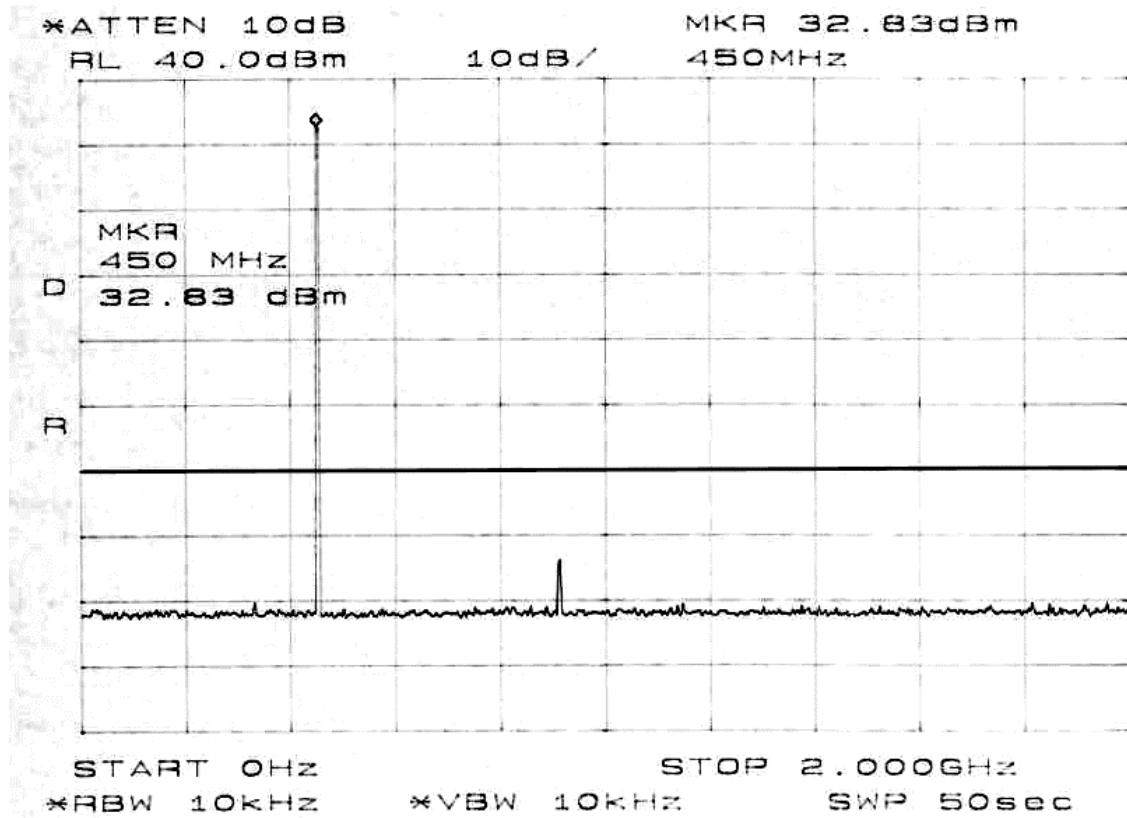
9600 baud GMSK(.5), 3.5 kHz



19200 baud 4FSK 4.8 kHz



2 Watt output spurious, 0 - 2000 MHz



2 Watt output spurious, 2 - 5 GHz

