



New Japan Radio Co., Ltd.

Technical Information

Rev.2

# New JRC **【V9 Technology】**<sup>TM</sup> Advanced Spectrum Controlled Magnetrons

| Part Number | Frequency | Output Power | Outline  |
|-------------|-----------|--------------|----------|
| MAF1610B    | X band    | 2kW          | Figure 1 |
| MAF1611B    |           | 4kW          |          |
| MAF1562R    |           | 6kW          |          |
| MAF1565N    |           | 10kW         |          |
| MAF1615B    |           | 12kW         |          |
| M1568BS     |           | 25kW         |          |
| M1555       | S band    | 30kW         | Figure 3 |
| M1556       |           | 60kW         |          |



Figure 1

- Feature of the V9 Technology**
- ✓ Narrower B-40 Bandwidth
  - ✓ Better Symmetry of Spectrum
  - ✓ Shorter Rise Time [8nsec-17nsec]
  - ✓ Lower Pi-1 Spurious Emission



Figure 2

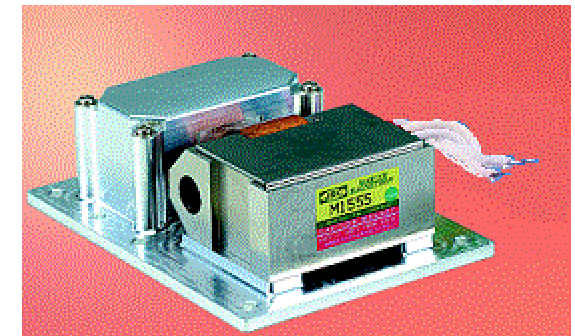


Figure 3

This technology has been published in the IEEE transaction on Electron Devices  
 December 2009 Volume 56 Number 12 pp. 3191-3195. "Frequency Bandwidth Narrowing technology for Pulsed Magnetrons"  
<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=5299051&contentType=Journals+%26+Magazines&queryText%3DFrequency+Bandwidth+Narrowing+Technology>



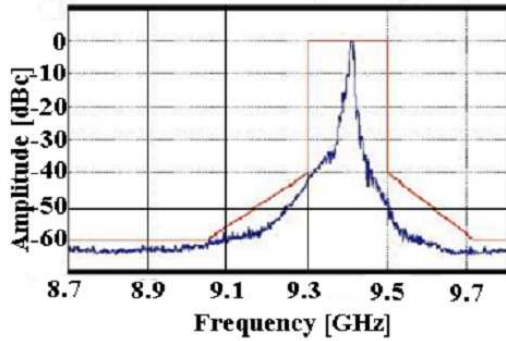
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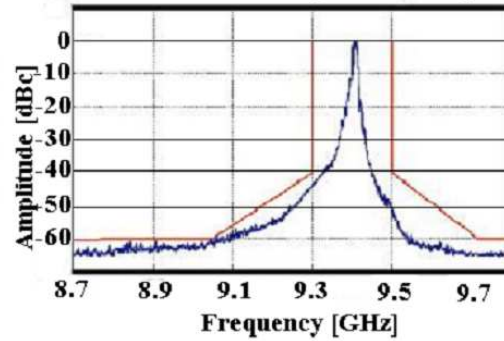
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## 【V9 Technology】<sup>TM</sup> Magnetron spectra

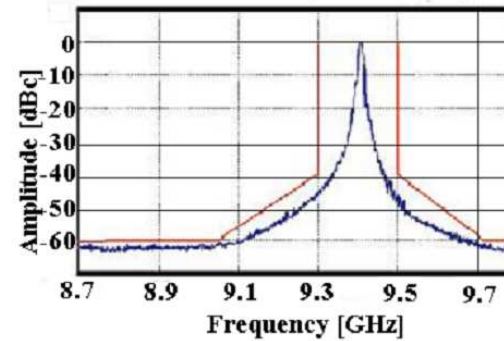
MAF1610B (Po=2kW)



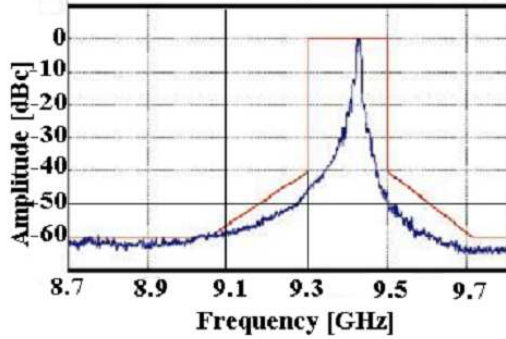
MAF1611B (Po=4kW)



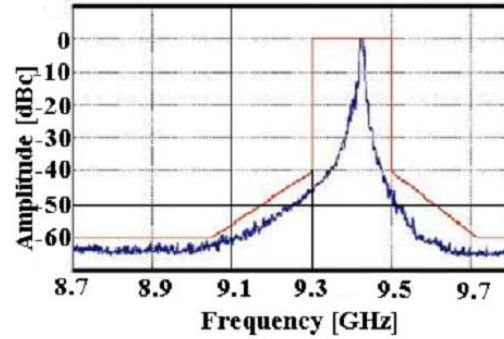
MAF1562R (Po=6kW)



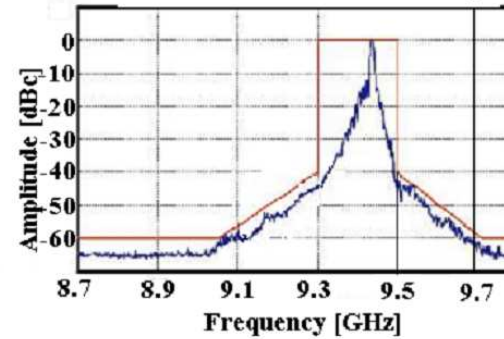
MAF1565N (Po=10kW)



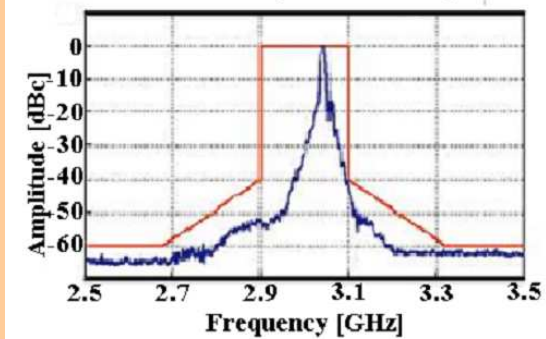
MAF1615B (Po=12kW)



M1568BS Po=25kW)



M1555 (Po=30kW)



These are typical data measured at the magnetrons driven with NewJRC modulators.  
The spectra will be changed by the modulator anode voltage waveforms.