

1. SYSTEM DESCRIPTION

NKE-2043 Type of Unit: Scanner unit The MTR is installed within a 2 feet scanner unit. The scanner weight is approximately 10 kg. The antenna is rotated 16, 20, 24, 27, 30, 36, 42 and 48rpm by its driving motor. This has a 4 degrees horizontal beam width and 25 degrees for vertical. The transmitter operates with 7-pulse length and 6-pulse repetition frequencies. The magnetron, MSF1421B, rated output is 4kw and is driven by solid-state modulator. The receiver has a microwave front end, containing the low noise amplifier, mixer, local oscillator, IF amplifier and detector.

GENERAL SPECIFICATION

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| 1. Dimensions: | Height: 275mm, Diameter of redome: 620mm |
| 2. Mass: | Approx. 10.0kg |
| 3. Polarization: | Horizontal |
| 4. Beam width | |
| Horizontal (-3dB): | 4 degree |
| Vertical (-3dB): | 25 degree |
| Side lobe level: | Less than -21dB within 10 degree of main beam |
| 5. Rotation speed: | 16, 20, 24, 27, 30, 36, 42 and 48rpm |
| 6. Frequency: | 9410 +/-30MHz |
| 7. Peak Power (kW): | 4kW |
| 8. Peak Power(dBm): | 66dBm (+/- 3dBm tolerance) |
| 9. Pulse length / Repetition frequency: | 0.08us/4000Hz, 0.08us/2250Hz, 0.13us/1700Hz 0.25us/1700Hz, 0.5us/1200Hz, 0.8us/750Hz, 1.0us/650Hz |
| 10. Modulator: | Solid-state modulator |
| 11. Duplexer: | Circulator / Diode Limiter |
| 12. Front end module: | Built in |
| 13. Tuning: | Manual / Auto |
| 14. IF amplifier: | Logarithmic amplifier, Noise figure 6dB maximum. |