EFJohnson’s Viking™ Solution portfolio offers products catering to mission critical communication systems. Viking P25 subscribers offer a broad set of capabilities to fully meet the communication needs of our customer networks with interoperability, reliability, and maximum flexibility.

51SL ES  7/800 MHz | VHF | UHF

Durable and interoperable P25 portable radio for public safety, featuring the AMBE+2 vocoder which provides loud and clear digital audio.

**RUGGED & RELIABLE**
- Lightweight aluminum casting & polycarbonate housing is strong and has optional immersion rating
- Meets applicable MIL Standard 810C, D, E, and F specs
- FM intrinsically safe

**P25 COMPLIANT**
- Supports P25 CAI (Common Air Interface)
- Trunked and conventional system protocols
- Over-the-Air rekeying (OTAR) functionality

**ACCESSORY SUITE**
- Complete line of accessories including speaker mics, cases, batteries, and chargers

**FLEXIBLE**
- Compatible with Motorola® System v 7.x and Motorola Astro®
- SMARTNET® II/SmartZone® interoperability
- Up to 512 talkgroups
- Supports narrowband (12.5 kHz) & wideband (25 kHz) channel spacing with multiple system protocols
- MDC-1200 and GE-Star signaling
- Over-the-Air programming (OTAP) option enables you to program radios in the field
- Industry-standard encryption capabilities such as AES, DES-OFB, and DES
- Easy radio programming & feature updating with EFJohnson’s PC Configure™ software

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## TYPICAL PERFORMANCE SPECIFICATIONS

### GENERAL 700/800 | VHF | UHF
---|---|---
Frequency Range | 762-806 MHz | 136-174 MHz | 380-470 MHz
Channel Spacing | 12.5 kHz, 25 kHz | | |
Max Freq. Separation | Full Bandsplit | | |
FCC Type Acceptance Certification | ATH2425171 | ATH2425111 | ATH2425131
Canada Type Certification | IC:933B-2425171 | IC:933B-2425112 | IC:933B-2425131
FCC Emissions Designators | 11K0F3E, 16K0F3E, 14K0F3E, 8K10F1E, 8K10F1D | 16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D | 16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D
Input Voltage | 7.2 V | | |
Dimensions (w/o antenna) HxWxD | 6.7” x 2.52” x 1.8” (6.4 cm x 17.0 cm x 4.6 cm) | | |
Weight (w/o standard battery) | 11 oz. (312 g) | | |
Case | Polycarbonate-black | Immersion rated option available for all housings | |
Temperature Range | -30°C to +60°C | | |
Vocoder | AMBE+2 | | |

### Transmitter 700/800 | VHF | UHF
---|---|---
RF Power Output | 2.5/1 W (700 MHz) | 5/1 W | 4/1 W
Frequency Stability (30°C to +60°C) | ±1.5 ppm | | |
Modulation Limiting 25 kHz Channels | ±5 kHz | | |
Modulation Limiting 12.5 kHz Channels | ±2.5 kHz | | |
Emissions (Conducted/Radiated) | -75 dBc | | |
Audio Response | +1, -3 dB | | |
FM Hum and Noise 25 kHz Channels | -40 dB | -45 dB | |
FM Hum and Noise 12.5 kHz Channels | -35 dB | -40 dB | |
Audio Distortion | 2% | | |

### Receiver 700/800 | VHF | UHF
---|---|---
Audio Power Output | 500 mW | | |
Frequency Stability (30°C to +60°C) | ±1.5 ppm | | |
Analog Mode Sensitivity: 12 dB SINAD | 0.25 uV (-119 dBm) | | |
Digital Mode Sensitivity: 5% BER | 0.25 uV (-119 dBm) | | |
Selectivity: 25 kHz Channels | -75 dB | | |
Selectivity: 12.5 kHz Channels | -63 dB | | |
Intermodulation | -75 dB | | |
Spurious & Image Rejection | -75 dB | | |
FM Hum and Noise 25 kHz Channels | -40 dB | | |
FM Hum and Noise 12.5 kHz Channels | -35 dB | | |
Audio Distortion | 2% | | |

### Battery
- **Dimensions (HxWxD)**
  - Extra-High Capacity NiMH: 6.0” x 2.3” x 0.85”
  - Extra-High Capacity NiMH, IS: 6.0” x 2.3” x 0.85”
  - Lithium Polymer: 6.2” x 2.3” x .81”
- **Weight**
  - Extra-High Capacity NiMH: 12.96 oz
  - Extra-High Capacity NiMH, IS: 12.96 oz
  - Lithium Polymer: 7.9 oz
- **Approx. Life (5/5/90)**
  - UHF/VHF: Minimum 10 hours
  - 700/800 MHz: Minimum 12 hours

### Environmental Specifications

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<tr>
<td>Low Temp.</td>
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<td>NA</td>
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<td>Salt Fog</td>
<td>509.4</td>
<td>NA</td>
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<td>Dust and Sand</td>
<td>510.4</td>
<td>I</td>
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<td>Shock</td>
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<tr>
<td>Immersion*</td>
<td>512.4</td>
<td>I</td>
</tr>
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M=Method, P=Procedure, *=Optional
Also meets equivalent superseded C, D and E standards.

### Encryption Options
- **Supported Encryption**
  - AES, DES, DES-OFB
- **Encryption Key/ Radio**
  - 64 Common Key Reference (CKR), 64 Physical Identifier, (PID), Compatible w/ Motorola Key Variable Loader
- **Encryption Frame Re-sync Interval**
  - P2S CAI 160 MSEC
- **Encryption Keying**
  - External Key Loader, OTAR
- **Synchronization**
  - CFB-Cipher Feedback OFF-Output Feedback
- **Vector Generator**
  - National Institute of Standards and Technology (NIST) Approved random number generator
- **Encryption Type**
  - Digital
- **Key Erasure**
  - Keyboard Command
- **Code Key Initialization**
  - Internal Pseudorandom Generator
- **Standards**
  - FIPS 46-3, FIPS 81, FIPS 140-2, FIPS 197

### Factory Mutual Approvals
- **Class I**
  - Division 1 Location in which easily ignitable fibers or materials producing combustible flyings are handled, manufactured, or used
- **Class II**
  - Division 1 Location in which there is or could be an explosive atmosphere where there is or could be an explosive atmosphere most of the time in normal conditions
- **Class III**
  - Division 1 Location in which there is or could be an explosive atmosphere most of the time in normal conditions
  - Division 2 An area where ignitable fibers or materials producing combustible flyings are handled, manufactured, or used
  - Division 2 An area where there is or could be an explosive atmosphere as a result of a fault

Specifications are measured per TIA 102.CAAB-B, TIA 102.CAAB-8 and per TIA 603-C. All EFJohnson radios are made in the U.S.A.