Single Source Justification (Simplified Acquisition)

Section A: General Contract Information

Contracting Activity: 56th Contracting Squadron

Project/Program Name: Signal Generator

Purchase Request/Identification Number: F2UT506104A009

Estimated Contract Cost (including Options): [redacted]

Section B: Description of the Supplies/Services Required

This request is for one Keysight Technologies Model N5183B MXG X-Series Microwave Analog Signal Generator. This signal generator is a critical component of the FOC Niner Threat Emitter Program, providing the necessary signals for testing and validating our systems. The key minimum technical specifications required for this program are: a frequency range of 9KHz to 31.5GHz for wideband testing, fast frequency switching to simulate dynamic threats, narrow pulse modulation for precise signal emulation, high output power to overcome system losses, a step attenuator to 115dB in 0.01dB steps for accurate signal level control, and a pulse capability to 100nS PD with a 1uS PRI minimum for simulating complex pulse trains.

Section C: Justification for Soliciting from a Single Source or Brand Name

The FOC NINER Threat Emitter program has an established and validated test environment that exclusively utilizes Keysight signal analyzers (PXA N9030B, UXA N9040B) and signal generators (MXG N5183B) in the prototype. To ensure data integrity and consistency across all tuning, testing, and research, it is imperative that the new equipment is identical to what is currently used in production. Introducing a different brand would invalidate previous test results, require a complete and costly re-validation of our test procedures, which is estimated to cost an additional [redacted], and introduce significant delays to the program schedule, estimated at 6-8 months. Consequently, procuring the Keysight item is essential to fulfilling our requirements without substantial cost and schedule delays, all while safeguarding the validity of our testing to guarantee a high-quality mission system.

Section D: Efforts to Obtain Competition

A market survey was conducted in April 2026 to identify signal generators from other manufacturers that could potentially meet the program's requirements. While several manufacturers produce signal generators, none were found to be fully compatible with the existing Keysight-based test environment. The integration of a non-Keysight signal generator would require significant software and hardware modifications, introducing unacceptable risks to the program's cost, schedule, and performance. Therefore, based on this market research, Keysight Technologies is the only source capable of meeting the program's requirements without a substantial duplication of cost and unacceptable delays.

Section E: Steps to Preclude Future Single Source or Brand Name Awards

For future requirements, the program office will conduct a comprehensive market survey approximately 12-18 months prior to the next planned technology refresh cycle. This survey will involve a formal Request for Information (RFI) to identify and evaluate signal generators from a wide range of manufacturers to determine if alternative sources can meet the program's evolving technical requirements. The results of this survey will be used to inform the acquisition strategy for future procurements, with the goal of ensuring full and open competition whenever possible.

Section F: Contracting Officer's Determination

I have determined, in accordance with RFO 6.103, that the circumstances of this contract action deem only a single source is reasonably available.

Date	Typed Name and Rank/Grade of Contracting Officer	Signature of Contracting Officer
2 June 2026	Kristie Canterbury, GS-13	CANTERBURY.KRISTIE.K.1127120400 Digitally signed by CANTERBURY.KRISTIE.K.1127120400 Date: 2026.06.02 08:28:31 -07'00'