

**JUSTIFICATION FOR SOLE SOURCE ACQUISITION
VALUES \$3,001 - \$100,000**

**RECOMMENDATION AND DETERMINATION TO SOLICIT FROM ONE
SOURCE – PR 4200446926**

NASA, John F. Kennedy Space Center, will negotiate with Empower RF Systems Inc., for Power Amplifier module and System Rack Assembly Power Amplifier. ~~The total estimated cost of this effort is [REDACTED]~~ and the estimated turnaround time is 10 – 12 weeks ARO.

Pursuant to FAR 13.106-1(b) and 13.106-3(b)(3)(i), the acquisition of referenced Power Amplifier module and System Rack Assembly Power Amplifier are determined to be available from only one source.

Competition is impractical for the following reasons:

The Radio Frequency and Telemetry Station (RFTS) is used for the test, checkout, and monitoring of flight systems during ground processing. The RFTS requires RF amplification equipment in order to provide RF relays from the vehicle in the VAB out to TDRS and local ground stations. The RFTS requires amplifier modules with the following specifications:

Item 1: Power Amplifier Module

Operating Frequency, Minimum (MHz)	1000
Operating Frequency, Maximum (MHz)	3000
Noise Figure, Maximum (dB)	10
Spurious Signals, Maximum (dBm)	-60
Output Power, Minimum (Watt)	10
Input Insertion Loss, Maximum (dB)	-10
Gain at 1dB Compression Point, Minimum (dB)	40
Power at 1dB Compression Point, Minimum (Watt)	8
Operating Voltage, Range (Volt)	12 to 15
Operating Current, Maximum (Amp)	4.5
Thermal Overload Protection, Maximum Temp (C)	85
Connectors, Input and Output	SMA Female
Amplifier Control, Enable (TTL)	Low
Amplifier Control, Disable (TTL)	High

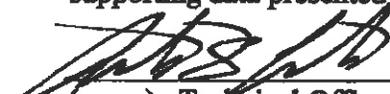
Item 2 , Rackmount system assembly

Operating Frequency, Minimum (MHz)	1000
Operating Frequency, Maximum (MHz)	3000
Noise Figure, Maximum (dB)	10
Spurious Signals, Maximum (dBm)	-60
Output Power, Minimum (Watt)	50
Input Return Loss, Maximum (dB)	-10
Gain at 1dB Compression Point, Minimum (dB)	46
Power at 1dB Compression Point, Minimum (Watt)	40
Operating Voltage, Range (Volt AC)	100 to 240
Operating AC Power Consumption, Maximum (Watt)	750
Thermal Overload Protection, Maximum Temp (C)	85
Connectors, Input and Output	Type-N Female
Amplifier Control, Enable (TTL)	Low
Amplifier Control, Disable (TTL)	High

Competition is impractical for the following reasons:

- 1) A market survey in the form of internet searches was performed with Empower RF Systems being the only vendor that supplied equipment that would meet these specifications.
- 2) After receiving no responses from a sources sought advertisement there are no other known sources that can provide the required equipment with the given specifications.

Based upon the above, I hereby determine that the circumstances of the contract action deem only one source reasonably available for this acquisition. I certify that the supporting data presented in this justification are accurate and complete.


 (name), Technical Officer
 Anthony J Costa NE-E1

9/25/2012
 Date

I hereby certify that this justification is accurate and complete to the best of my knowledge and belief.


 Contracting Officer

9/25/12
 Date