

Initiated by: Dave Emrich

Project Manager: Tom Booler

Proposed Priority: Fast Track Normal

Title: RF Amplifiers in the MWA Low-noise amplifier board

Affected item(s):

All tiles at the MRO

Technical description:

The manufacturer of the amplifier used in the MWA LNA Board that sits inside the dipole hub has declared the part obsolete and does not offer a suitable drop-in replacement. The part that is obsolete is the ATF54143 HEMT amplifier. A reel of 5000pcs of run-out stocks of this chip was procured to mitigate risk until a new chip has been qualified.

A part (SAV541+) with very similar characteristics was identified from a different manufacturer and has been tested in the LNA circuit board. Without any other parts changes, the LNA design appears to show identical performance in: gain vs frequency, bias voltage, and cross-polarisation coupling performance. It only remains to confirm a noise-figure measurement before the part can be declared suitable for ongoing replacements.

Effective Date: (dd-mm-yyyy) 2018-06-12

Reason for given effective date:

Expected impact on cost (\$AUD): Minimal since the new part is similar in price.

Impact on schedule: Initially major due to not having identified a suitable part.

Other impacts: None apparent.

Attached Document(s):

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Signature:



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Date:

2018-06-12