



## RF5603 Reliability Report

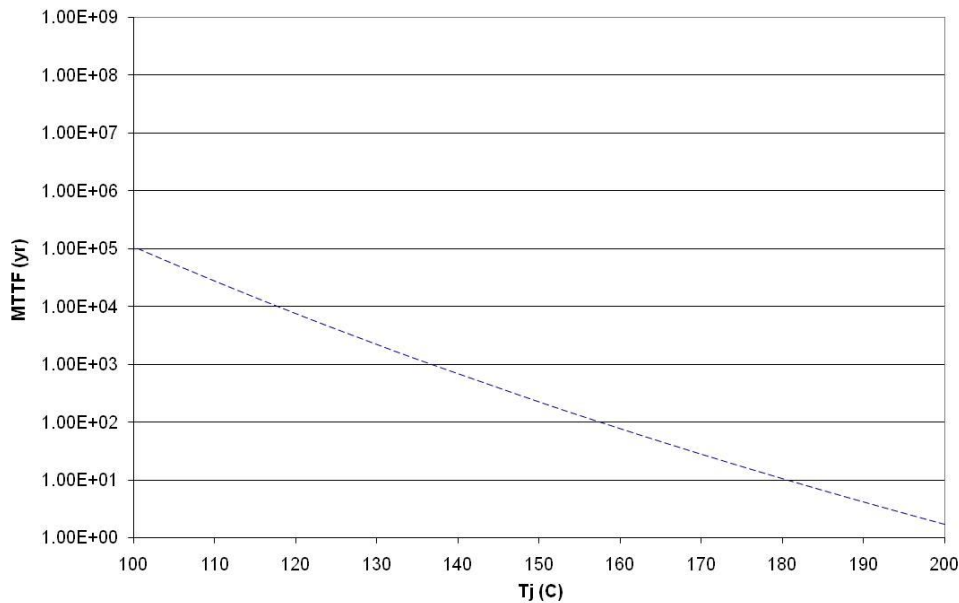
### Introduction

The RF5603 is a linear power amplifier IC designed specifically for WiMAX medium power applications. The device is manufactured on an advanced InGaP Heterojunction Bipolar Transistor (HBT) process, and has been designed for use as the final RF amplifier in 802.16d/e transmitters. The device is provided in a 3mmx3mmx0.45mm, 16-pin, leadless chip carrier with a backside ground. The RF5603 is designed to maintain linearity over a wide range of conditions and power outputs.

### Wearout Failure Rate

The process wearout reliability tests were performed on single HBT transistors at the RFMD GaAs fabrication facility. The wearout activation energy and other distribution parameters were determined with 3-temperature life tests. The wearout failure rate of products are calculated based on the parameters and product specific information such as total number of transistors on each GaAs die. Therefore, the wearout reliability is determined by both process wearout parameters and product specific information. Ea was observed to be 1.68 eV. The MTTF results are presented in the graph below.

RF5603 Wearout MTTF vs Tj



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