

Introduction

The firefly GSM handset was tested for output power and SAR by the FCC in the GSM 850 and PCS 1900 bands. The original tests were done on antenna revision M30. Both GSM 850 and PCS passed all SAR requirements. Mobicom since deployed a new antenna to better center tune the response in the GSM 850 band with the intention of not changing the tuning in PCS. This new antenna version is M35.

Mechanical Differences Between M30 and M35 Antenna Design

Pictured below is the M30 (left) and M35 (right) antenna. The only difference is the addition of 1.4 mm of material to the vertical slot below. This affects the GSM 850 response only.



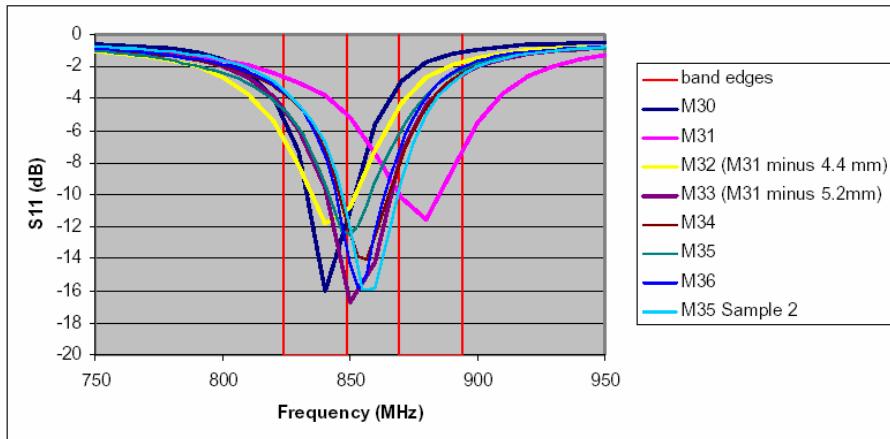
M 30 Antenna



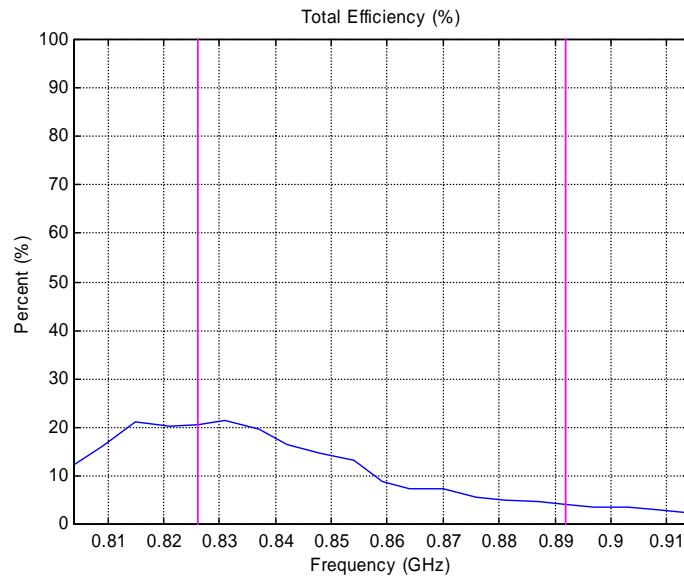
M35 Antenna

GSM 850 Tuning Change

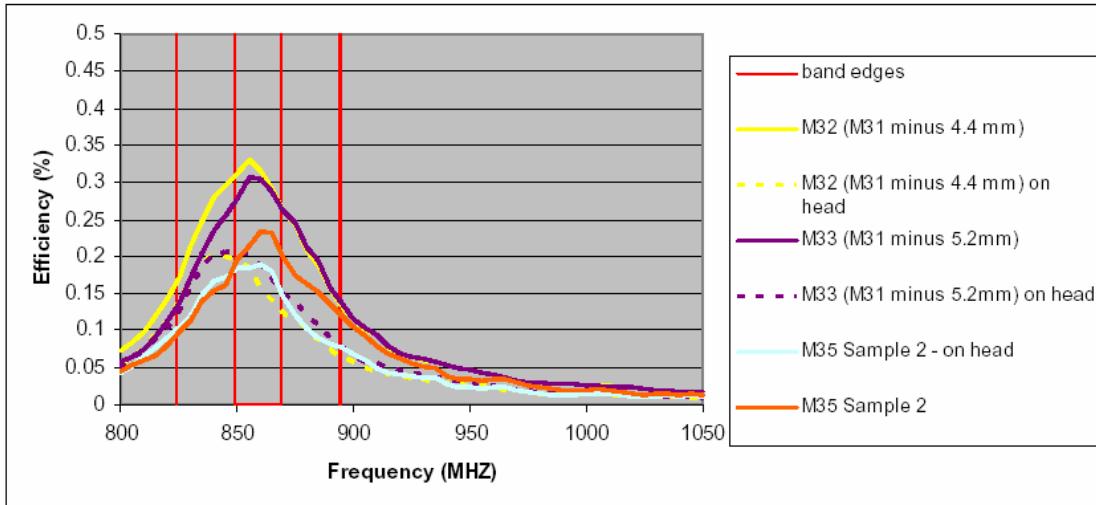
The following shows the difference in tuning for the M30 and M35 antenna. This data is direct from the antenna vendor.



Pictured below is the M30 with the mistuned response. The graph shows overall efficiency.



Pictured below is the M35 and several other proto-types. Note the re-tuned response of the M35. Again the graph shows overall efficiency.



Performance Differences Between M30 and M35 Antenna Design in PCS Band

The change to the M30 antenna to the M35 antenna was very slight and only affects the GSM850 center frequency tuning. For this reason Mobicom believes we do not need to re-test SAR in the PCS band on the M35 design. Mobicom sees no difference in return loss as well as our field trials.