

MMIC

MMIC

Mini-Circuits , Rohan Shrotriya

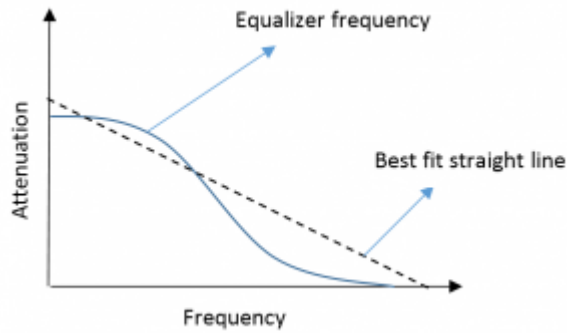
1.0

MMIC

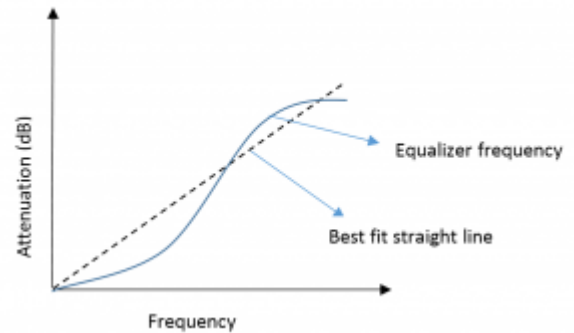
2.0

MMIC

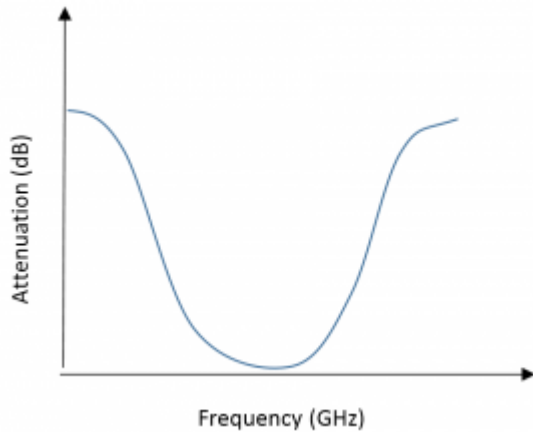
Attenuation vs Frequency : 2



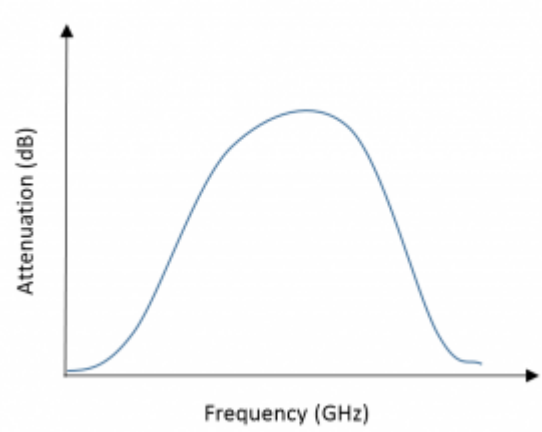
Attenuation vs Frequency : 1



Attenuation vs Frequency : 4



Attenuation vs Frequency : 3



Attenuation vs Frequency : 4.0

+PHA-1 MMIC

+EQY-6-63

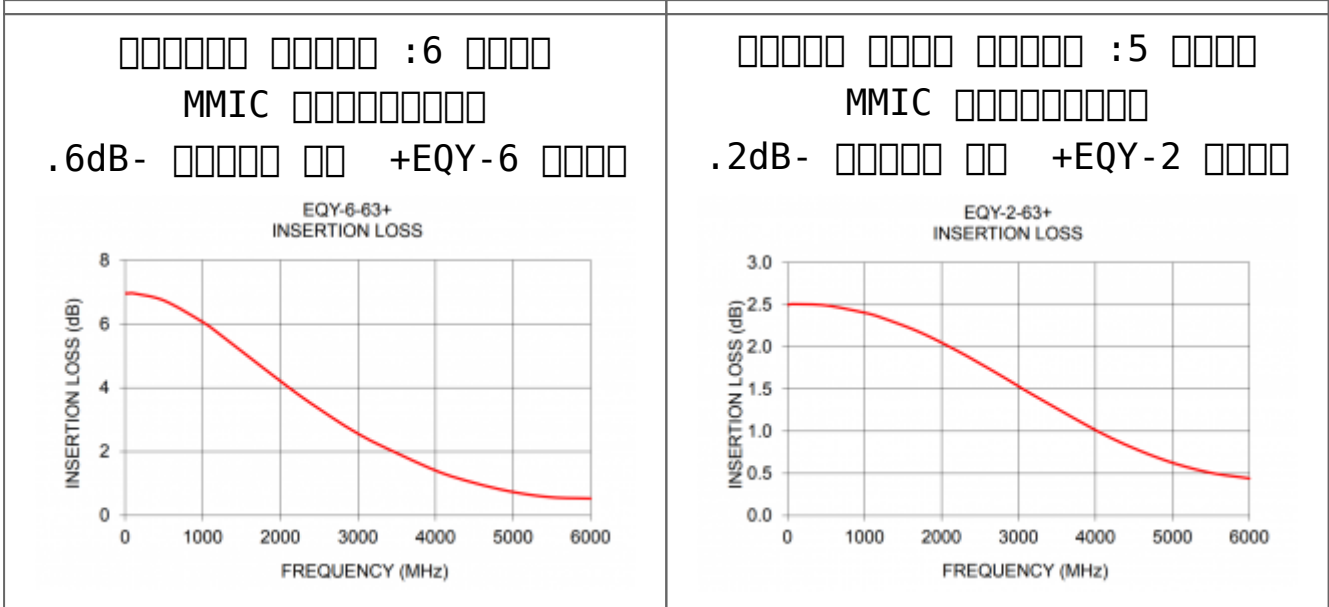
MMIC

Attenuation vs Frequency : 4.0
 +PHA-1 MMIC
 +EQY-6-63
 MMIC

Mini-Circuits EQY

10 1-

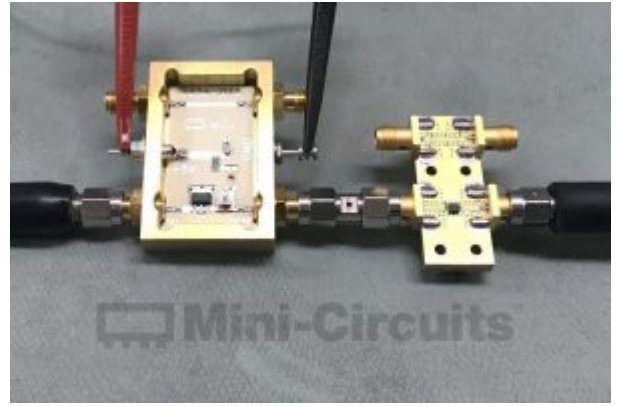
0.5 (5) +EQY-2-63 0.5 0.5 . 6 2 (6) +EQY-6-63 20 (return loss) (dBm 31+)



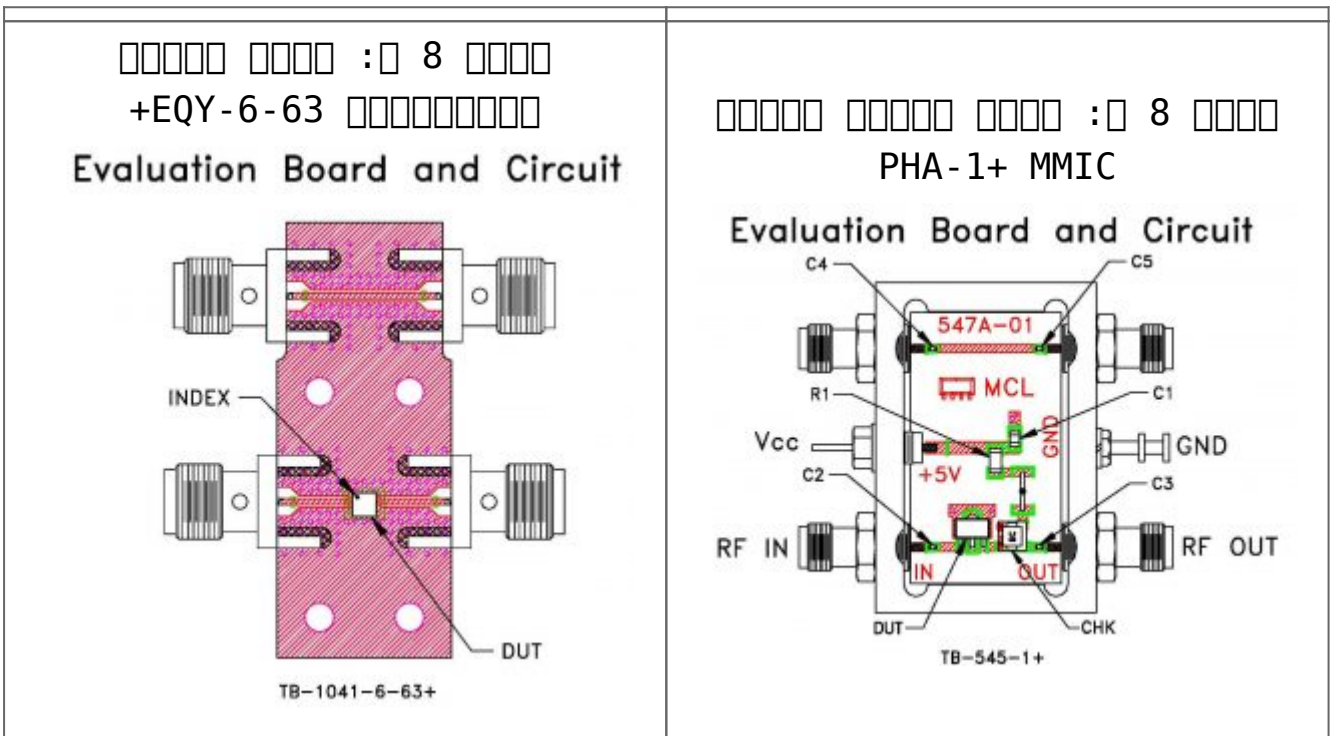
6 GHz - 0.5 GHz +PHA-1 6 10- MHz 100- 16.5 7 +EQY-6-63 .GHz 6 - 0.5- MHz 100- PHA+ 1 10

7 10

(vector network analyzer) +PHA-1 5 +EQY-6-63 8



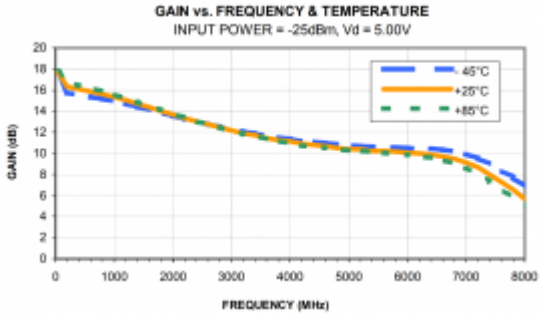
+EQY-6-63 8 +PHA-1 7



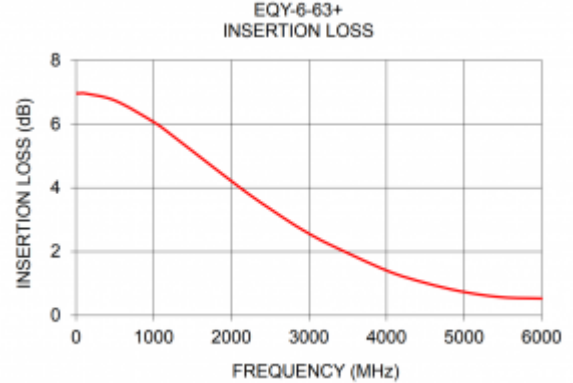
5.0

8- 7
+EQY-6-63
, +PHA-1
6 GHz 0.5

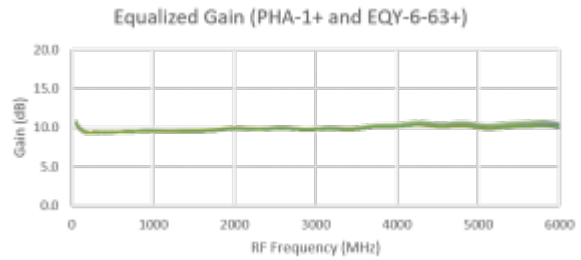
10 dB Gain
 12 dB Gain, PHA-1+ MMIC
 4 dB Gain



9 dB Gain
 EQY-6-63+ MMIC



+EQY-6-63 9 dB Gain +PHA-1 10 dB Gain
 ± 0.6 dB Gain
 10 dB Gain
 6 GHz 0.5 dB Gain



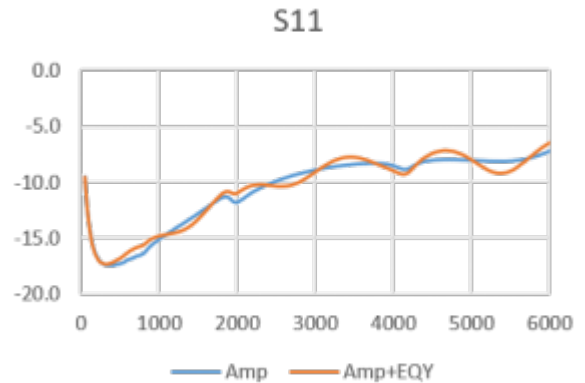
11 dB Gain +EQY-6-63 9 dB Gain +PHA-1 10 dB Gain

11-10 dB Gain
 12 dB Gain
 6 GHz 0.5 dB Gain

Figure 13: Comparison of the magnitude of the transfer function S_{22} for the Amp and Amp+EQY systems. The plot shows the magnitude in dB versus frequency in Hz. The Amp system (blue line) starts at approximately -20 dB at 0 Hz and remains relatively flat until 4000 Hz, where it drops to -30 dB. The Amp+EQY system (orange line) starts at approximately -35 dB at 0 Hz, drops to a minimum of -65 dB at 1000 Hz, and then rises to approximately -15 dB at 6000 Hz.



Figure 12: Comparison of the magnitude of the transfer function S_{11} for the Amp and Amp+EQY systems. The plot shows the magnitude in dB versus frequency in Hz. The Amp system (blue line) starts at approximately -10 dB at 0 Hz and rises to approximately -5 dB at 6000 Hz. The Amp+EQY system (orange line) starts at approximately -10 dB at 0 Hz, drops to a minimum of -18 dB at 500 Hz, and then rises to approximately -5 dB at 6000 Hz.



S21

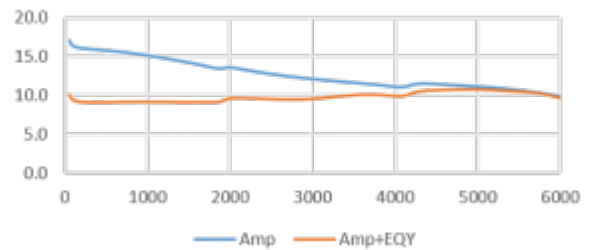


Figure 14: Comparison of the magnitude of the transfer function S_{21} for the Amp and Amp+EQY systems. The plot shows the magnitude in dB versus frequency in Hz. The Amp system (blue line) starts at approximately 16 dB at 0 Hz and decreases to approximately 10 dB at 6000 Hz. The Amp+EQY system (orange line) starts at approximately 9 dB at 0 Hz and remains relatively flat around 10 dB.

6.0

The magnitude of the transfer function S_{21} for the Amp and Amp+EQY systems is compared in Figure 14. The Amp system (blue line) starts at approximately 16 dB at 0 Hz and decreases to approximately 10 dB at 6000 Hz. The Amp+EQY system (orange line) starts at approximately 9 dB at 0 Hz and remains relatively flat around 10 dB. The magnitude of the transfer function S_{21} for the Amp system is approximately 1.3 dB higher than that of the Amp+EQY system at 0 Hz. The magnitude of the transfer function S_{21} for the Amp system is approximately 1.3 dB lower than that of the Amp+EQY system at 6000 Hz. The magnitude of the transfer function S_{21} for the Amp system is approximately 1.3 dB higher than that of the Amp+EQY system at 1000 Hz. The magnitude of the transfer function S_{21} for the Amp system is approximately 1.3 dB lower than that of the Amp+EQY system at 2000 Hz. The magnitude of the transfer function S_{21} for the Amp system is approximately 1.3 dB higher than that of the Amp+EQY system at 3000 Hz. The magnitude of the transfer function S_{21} for the Amp system is approximately 1.3 dB lower than that of the Amp+EQY system at 4000 Hz. The magnitude of the transfer function S_{21} for the Amp system is approximately 1.3 dB higher than that of the Amp+EQY system at 5000 Hz. The magnitude of the transfer function S_{21} for the Amp system is approximately 1.3 dB lower than that of the Amp+EQY system at 6000 Hz.

□□ □□□□□ □□□□□□□□ □□□□□□□□ 6.0

□□□□□□□□□□ □□□□

□□□ , □□□□□□□□□□ □□□□□□ □□□□□□□□ □□□□□□ □□ □□□□□□ □□□□□□□□
: □□□□□□ □□□□□□□□ □□ □□□□□□□□

□□□□□□□□	□□□□
+EQY-2-63	+GVA-62
+EQY-2-63	+GALI-19
+EQY-3-63	+GVA-81
+EQY-5-63	+GVA-63
+EQY-6-63	+PGA-102
+EQY-8-63	+GVA-83
+EQY-10-63	+CMA-84