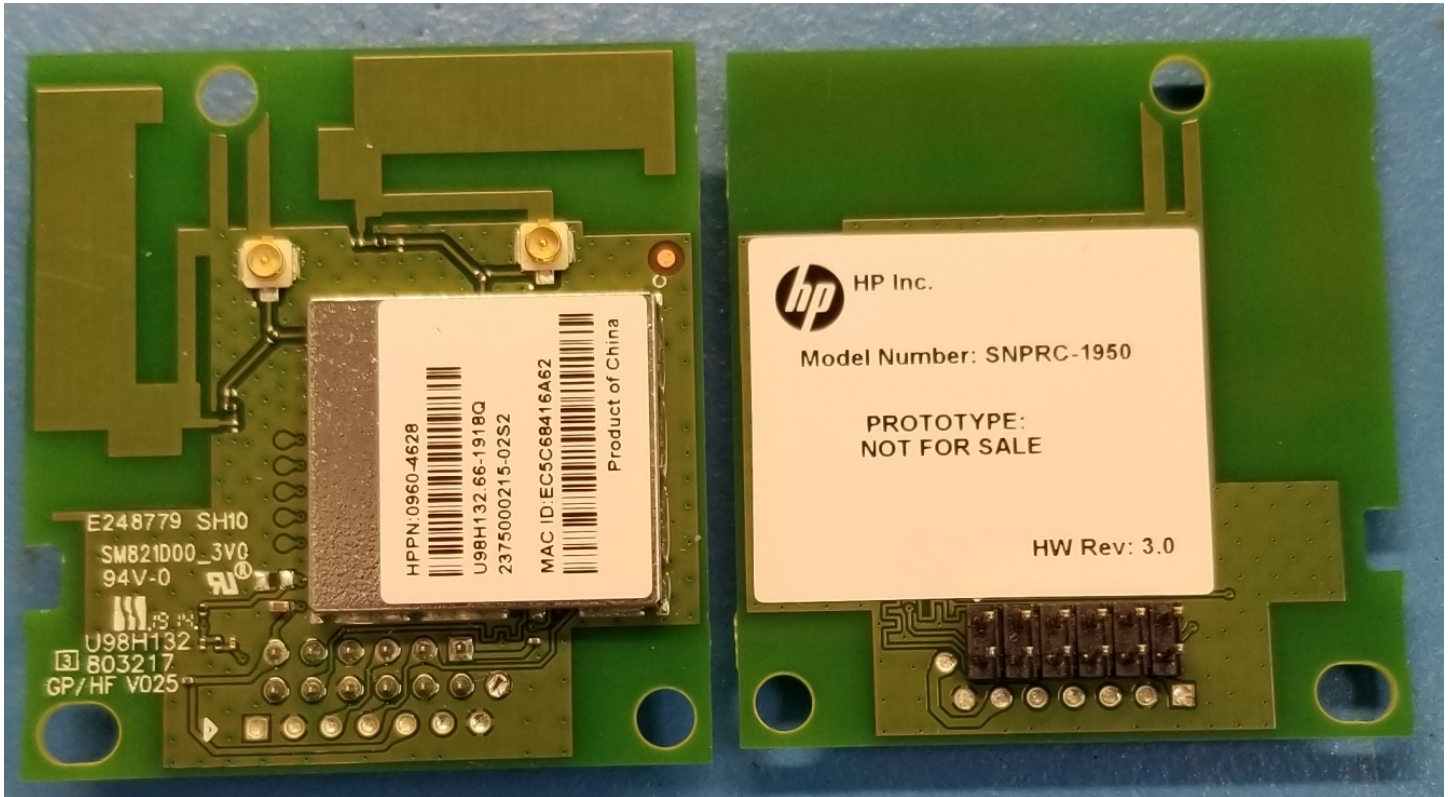


HP WLAN 2.4/5 GHz
PCB Trace Antennas
for the Stingray
Module
SNPRC-1950
V1.3
Antenna Report
Model – 2019_DBX02

24JUN2019

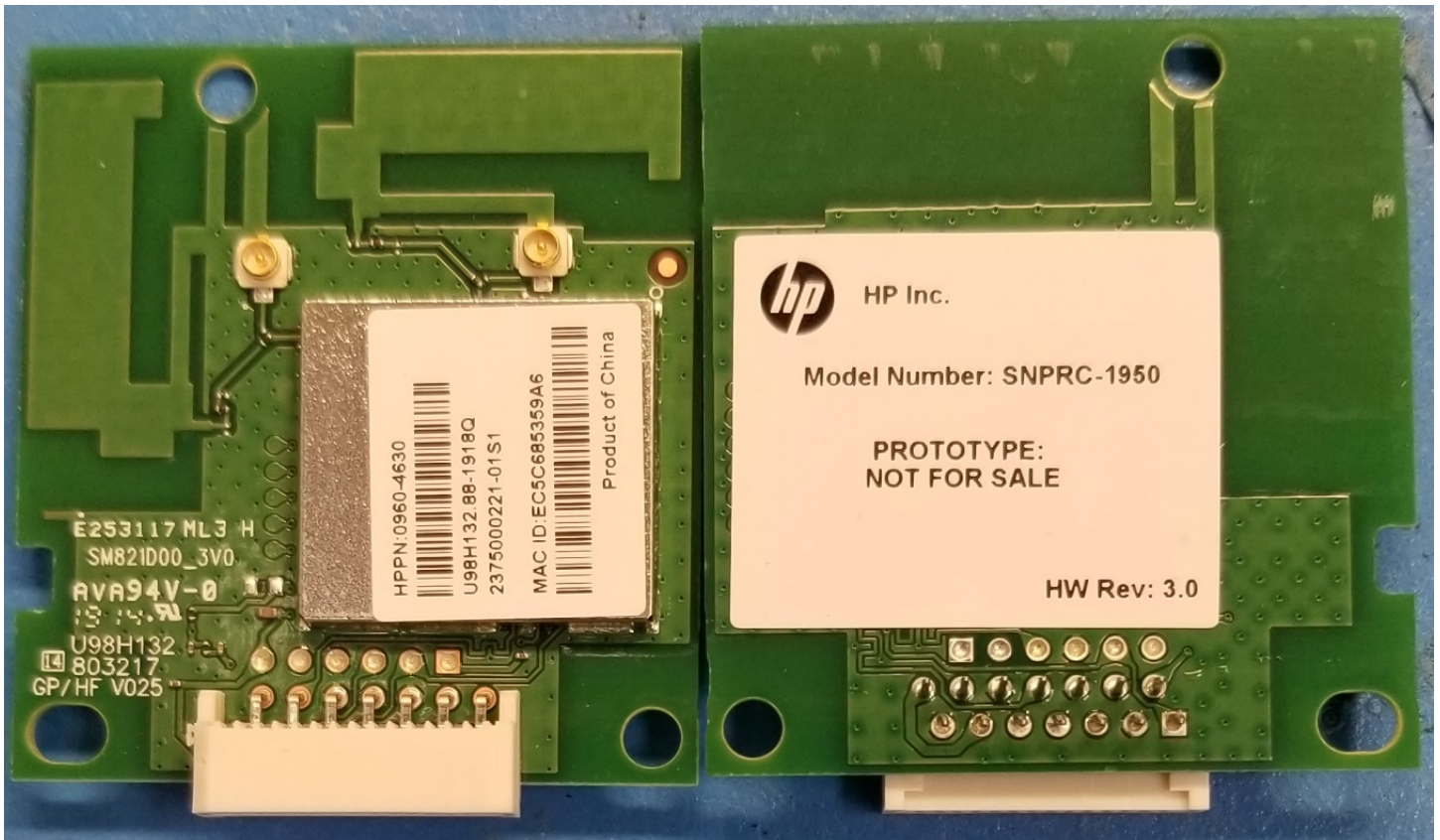
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

1) Stingray Module HW3 Milligrd (Top Side /Bottom Side)



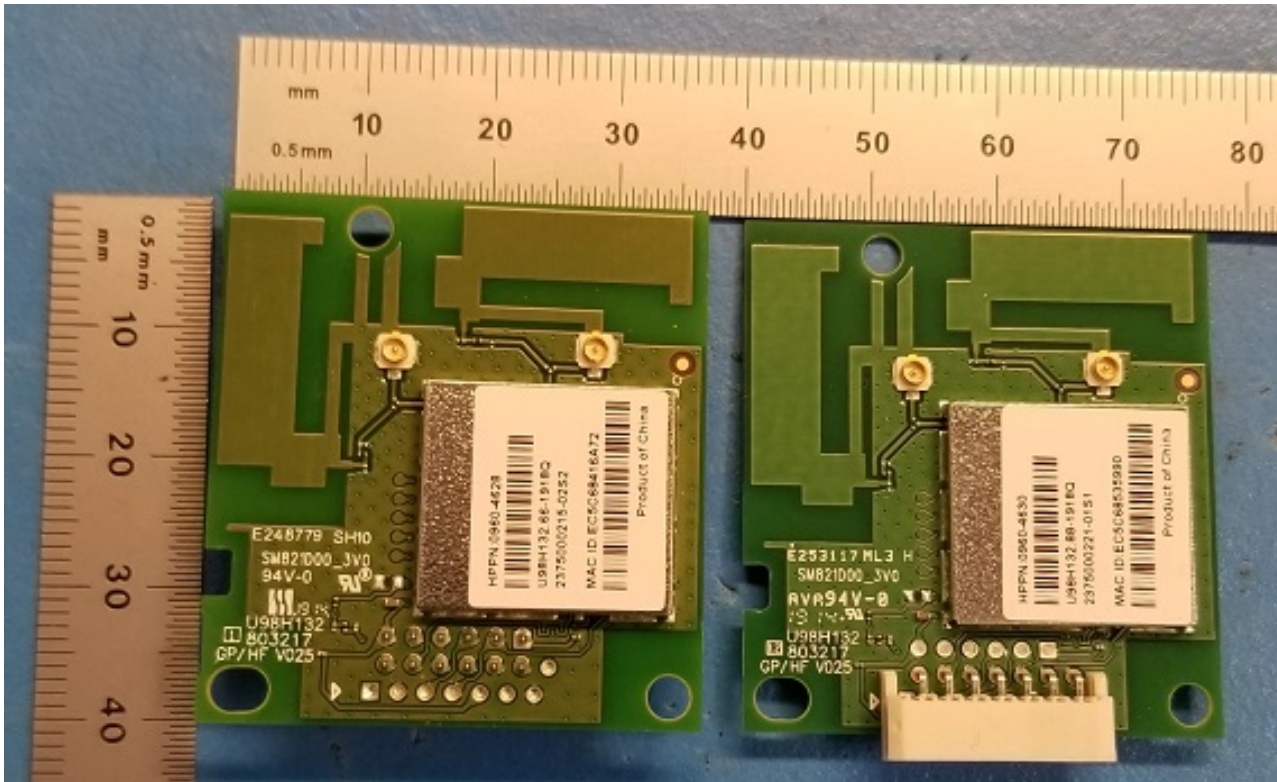
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

2) Stingray Module HW3 FFC Option (Top Side/Bottom Side)



HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

3) Stingray Module Dimensions (all variations) – 37mm x 40mm



HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

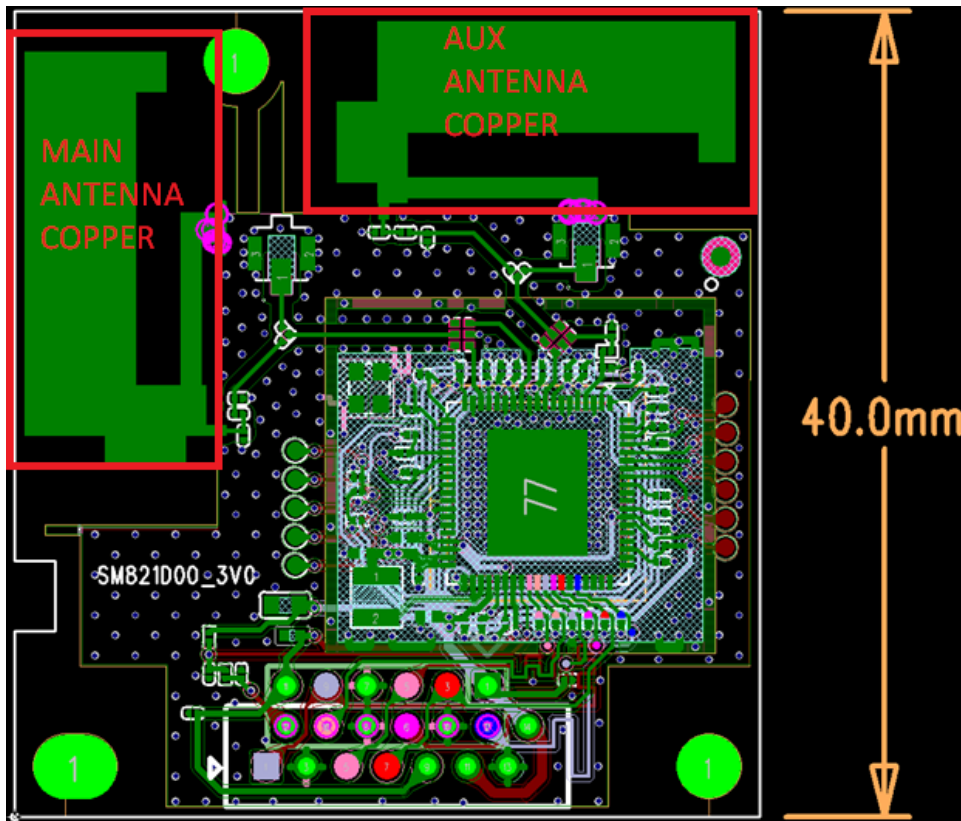
4)Antenna Layout Details for the STINGRAY Module

Antenna 1

**(Main Antenna
below)**

Antenna 2

(Aux Antenna Below)



5) Features:

- Dual 2.4/5 GHz PCB Trace Antenna: Model – 2019_DBX02
- Orthogonal antenna orientation for optimal coverage (Diversity)
- 2.4 GHz:
 - o 2.4-2.5 GHz Frequency Range
 - o VSWR Better than 2.5:1 across Frequency Range
 - o Measured Efficiency > 70% across Frequency Range
 - o Typical Gain 2.4-2.5 GHz: 3.5 dbi
- 5 GHz:
 - o 5.1-5.9 GHz Frequency Range
 - o VSWR Better than 2.5:1 across Frequency Range
 - o Measured Efficiency > 60% across Frequency Range
 - o Typical Gain 5-6 GHz: 4.5 dbi

6) Date of Test:

30 MAY 2019

7) Location of Test:

MVG Microwave Vision Group

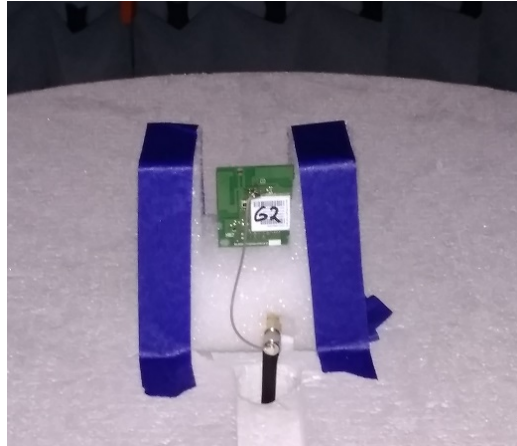
SATIMO SG-64 Chamber

Attn: John Estrada

2105 Barrett Park Dr, Suite 104

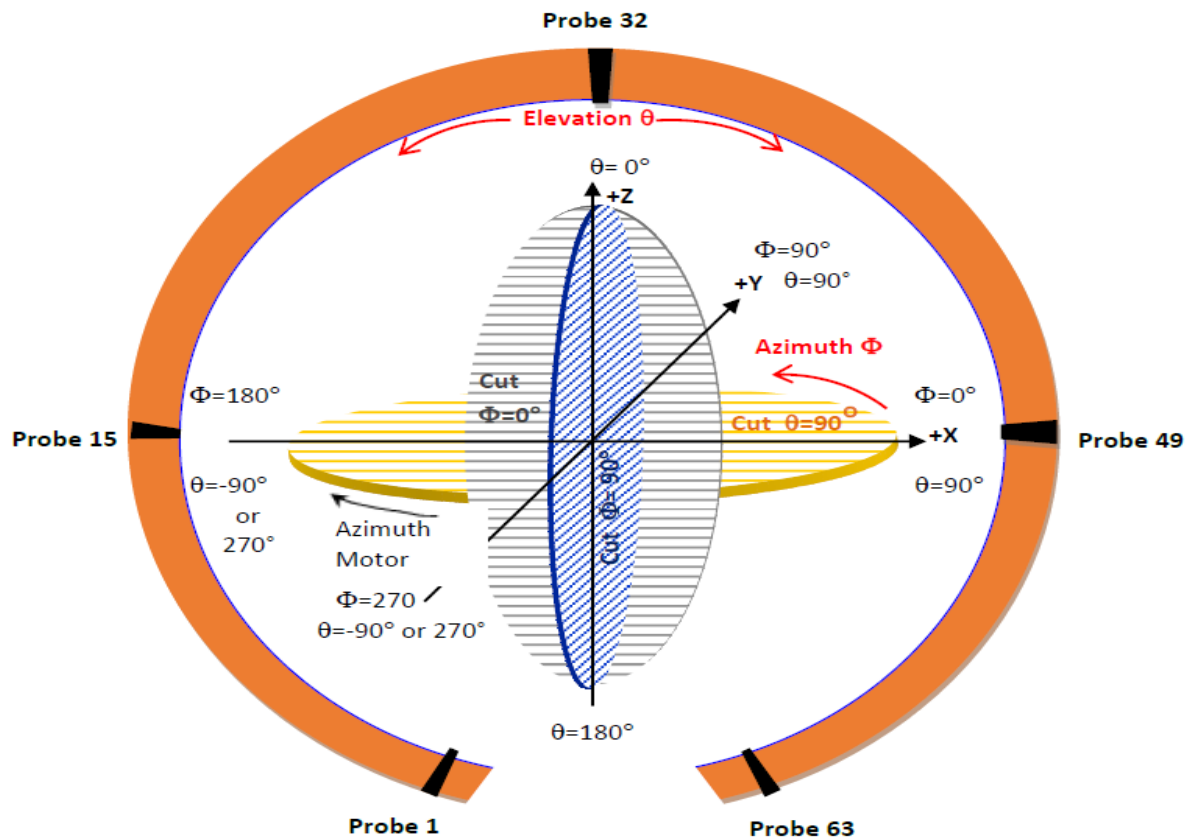
Kennesaw, GA 30144

HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module



8) STINGRAY WLAN Module in Chamber - (Module Front facing the $-Y$ Direction)

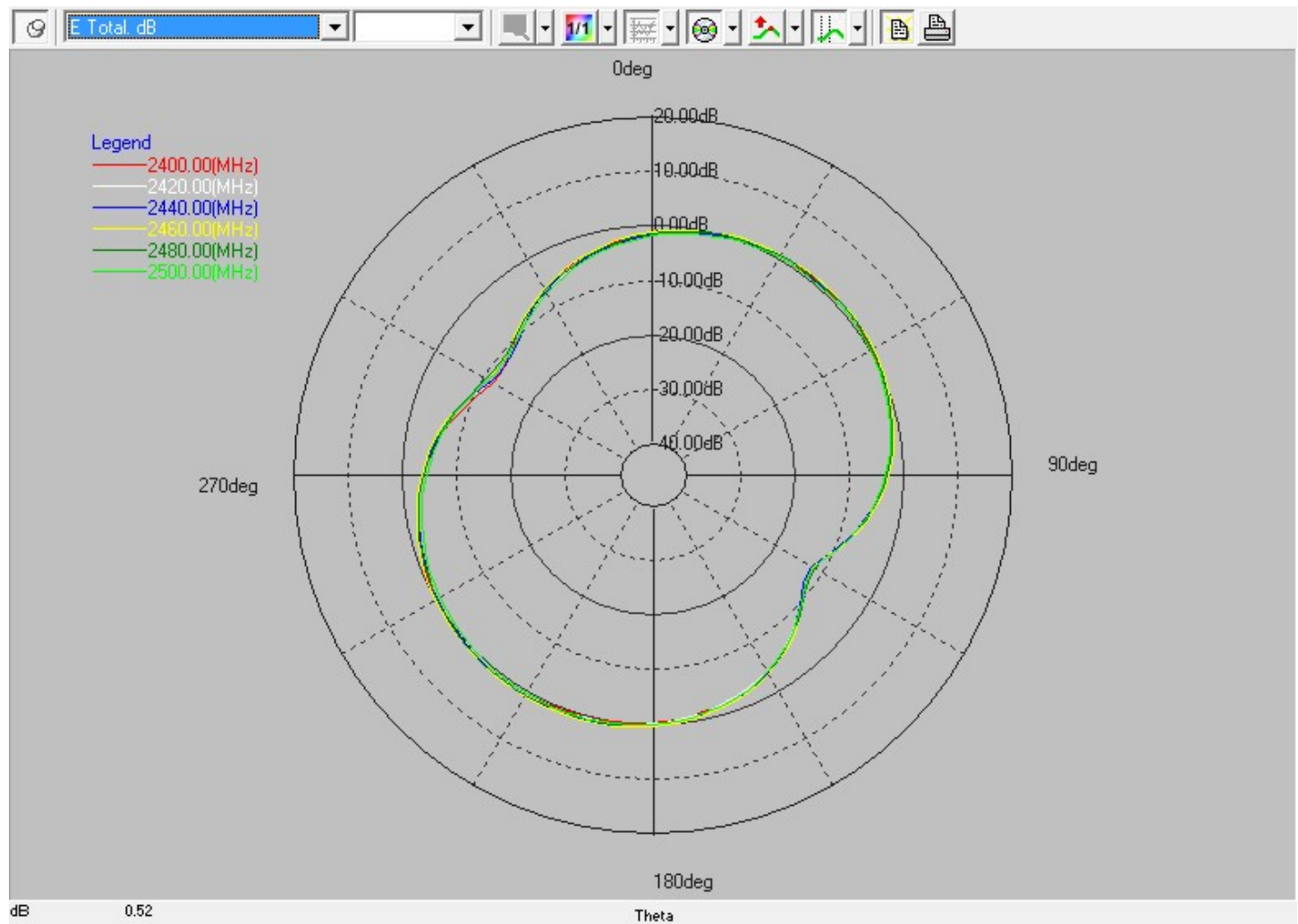
MVG SG64 Coordinate System



STINGRAY Module Antenna Data

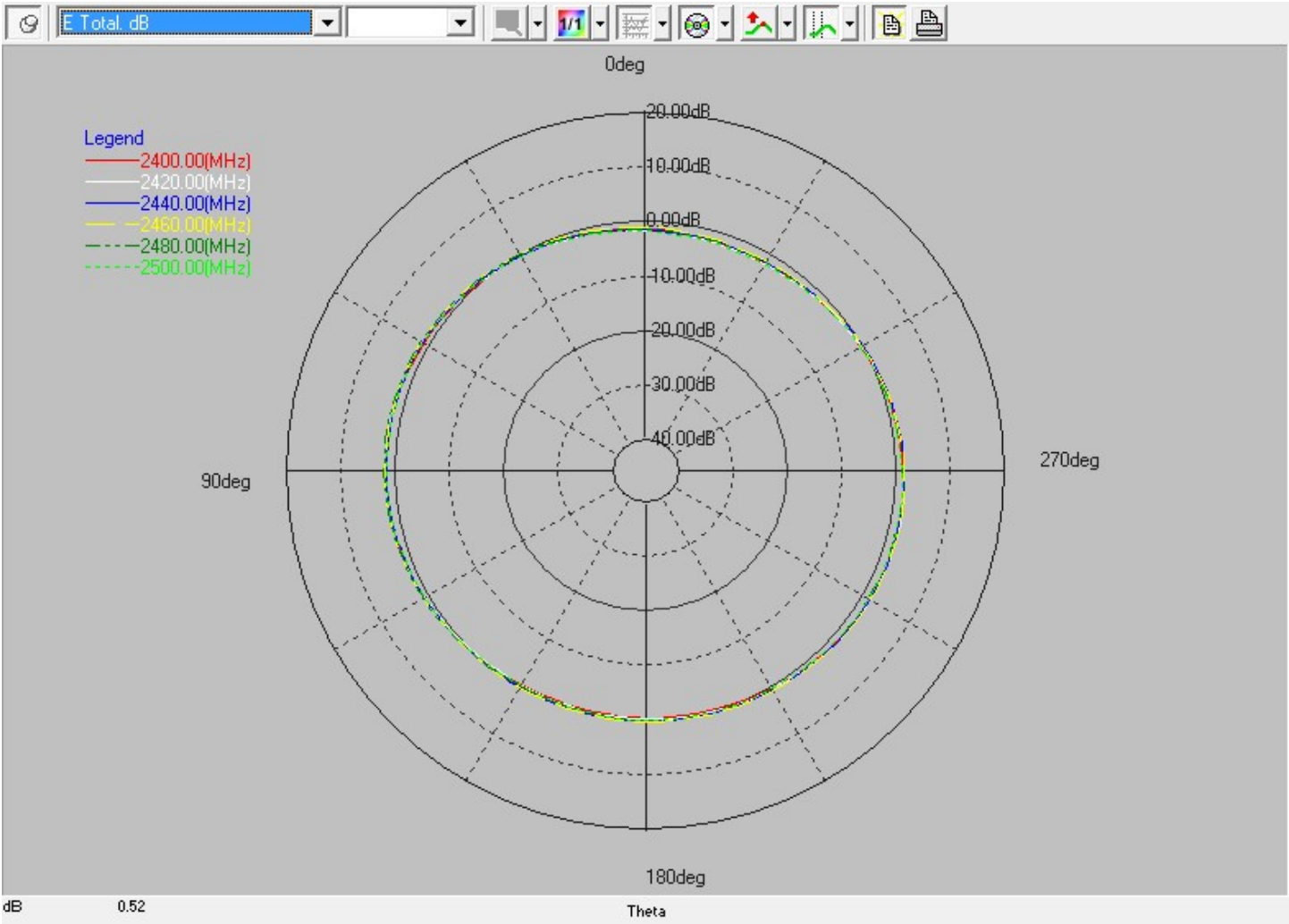
1) STINGRAY Antenna 1 (MAIN) 2.4-2.5 GHz

▲ Phi=0.00deg



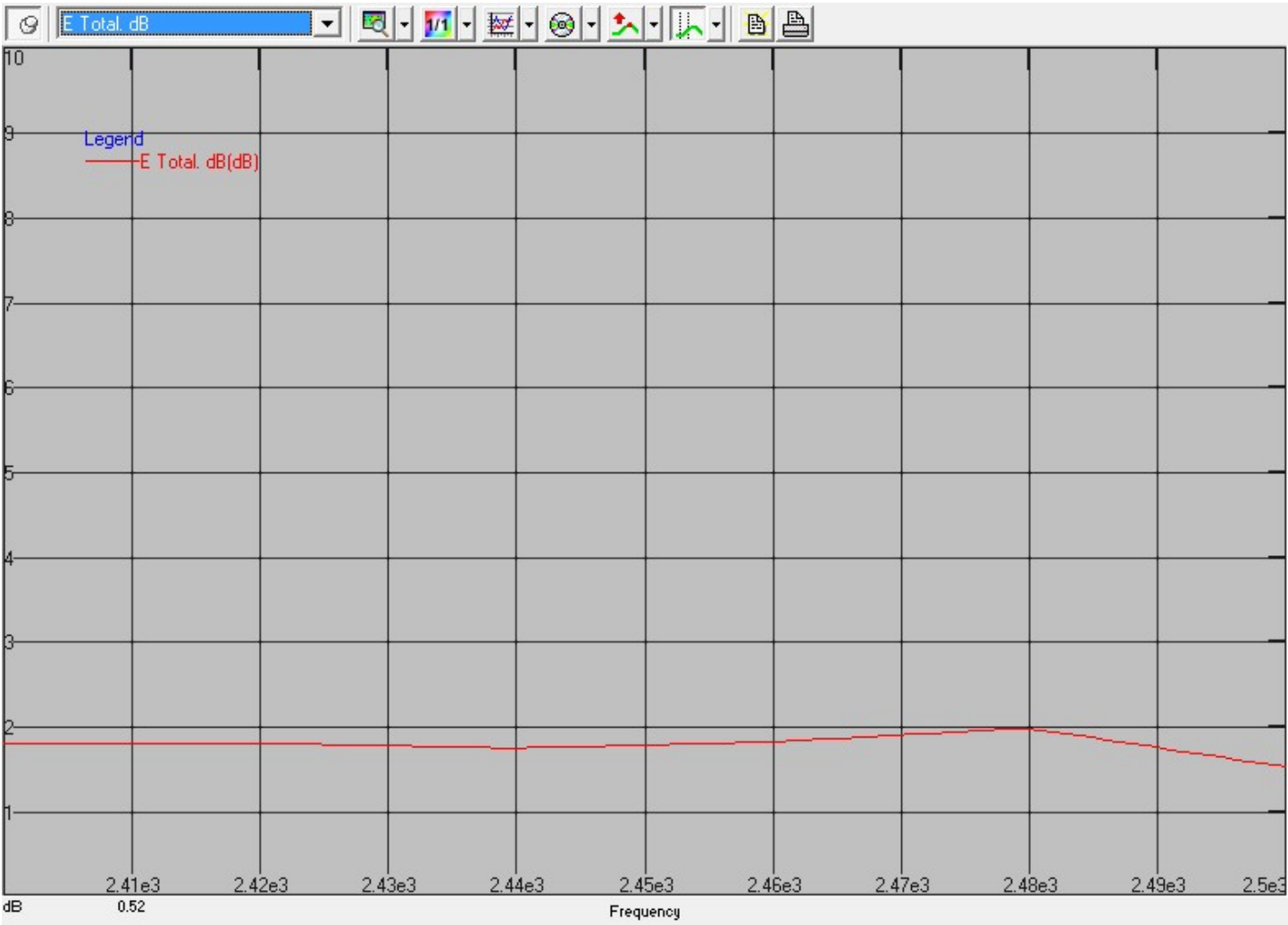
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ Phi=90.00deg



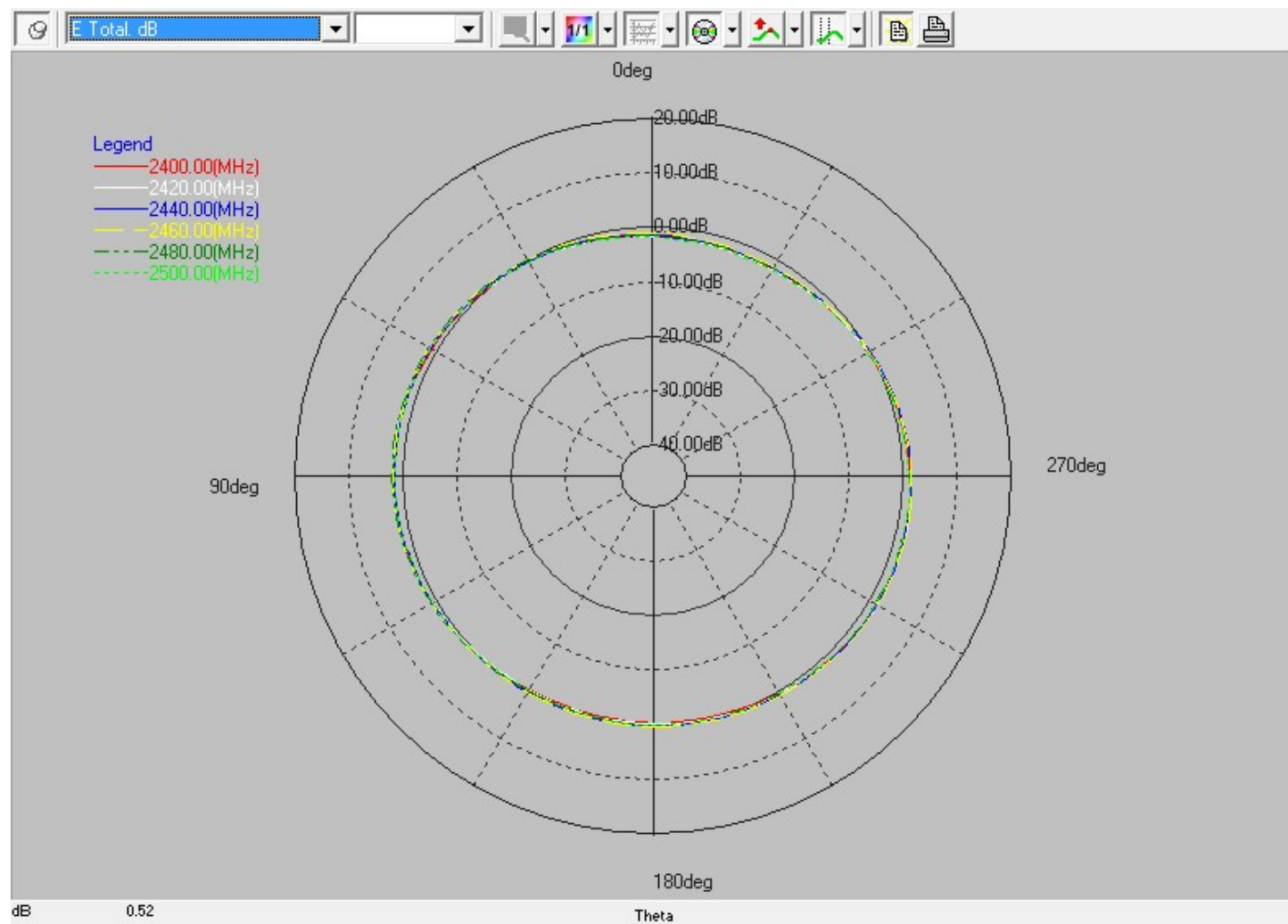
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ NF to FF transform Maximum Maximum



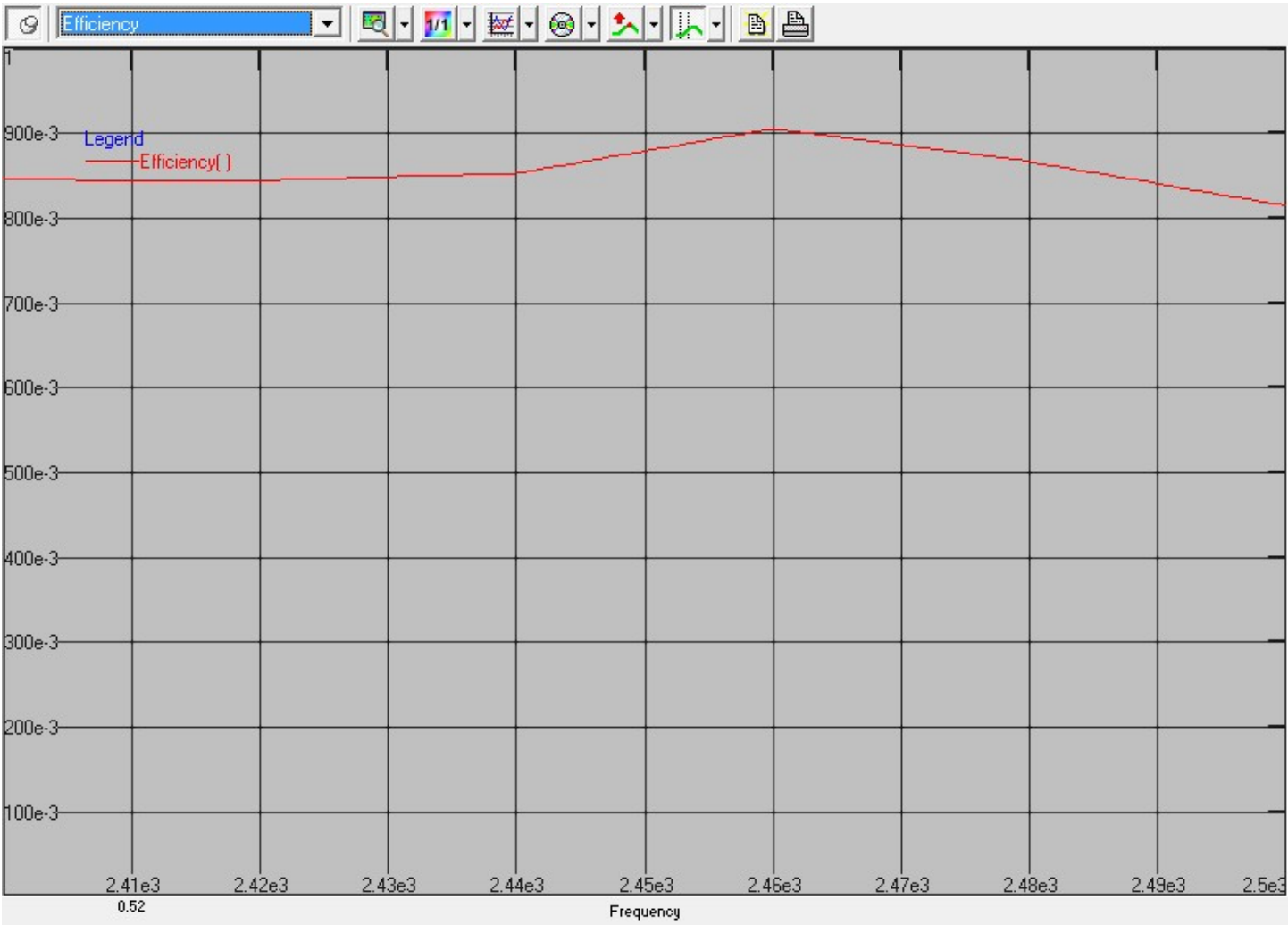
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ Theta=90.00deg



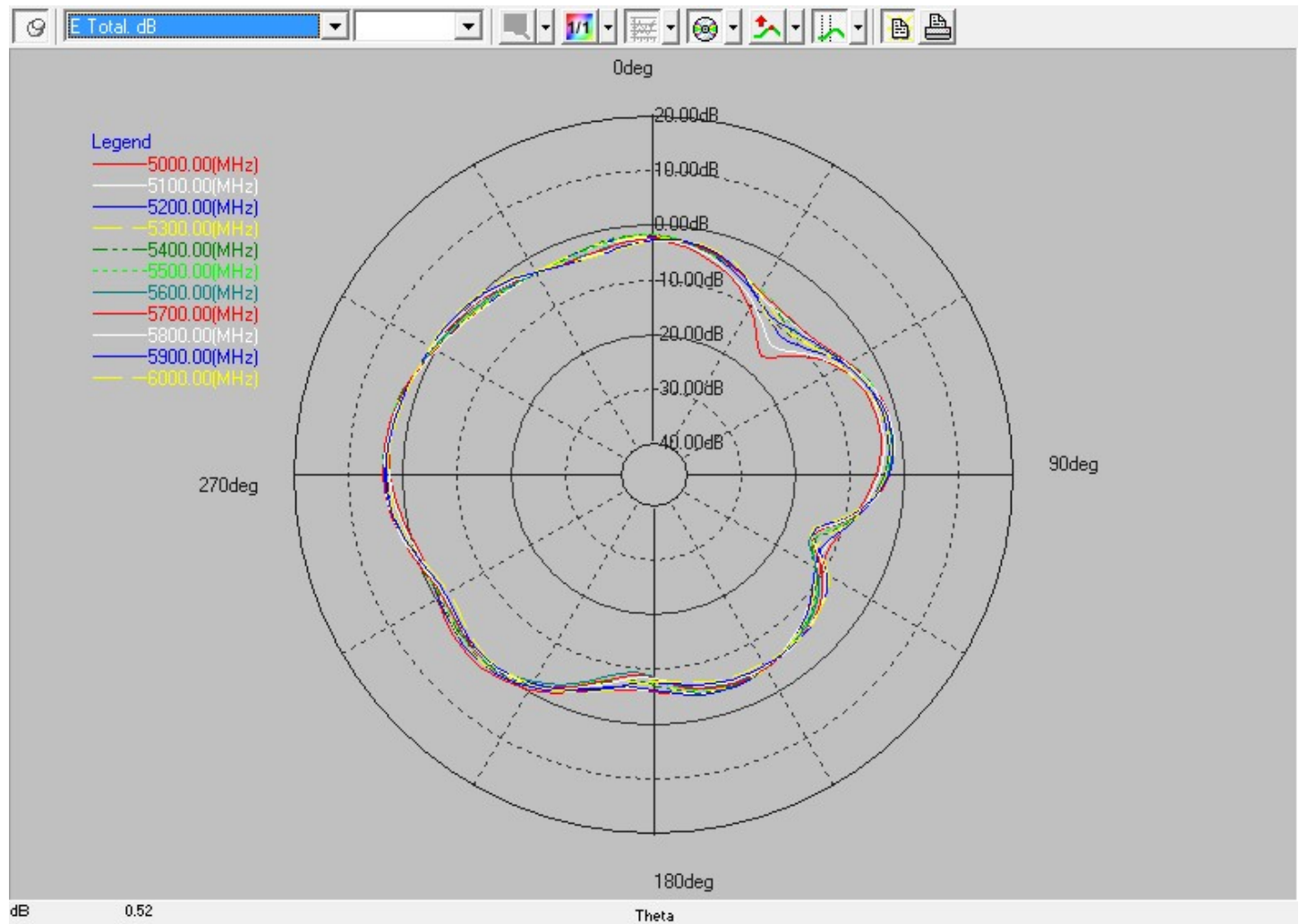
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ NF to FF Transform Efficiency



2) STINGRAY Antenna 1 (MAIN) 5-6 GHz

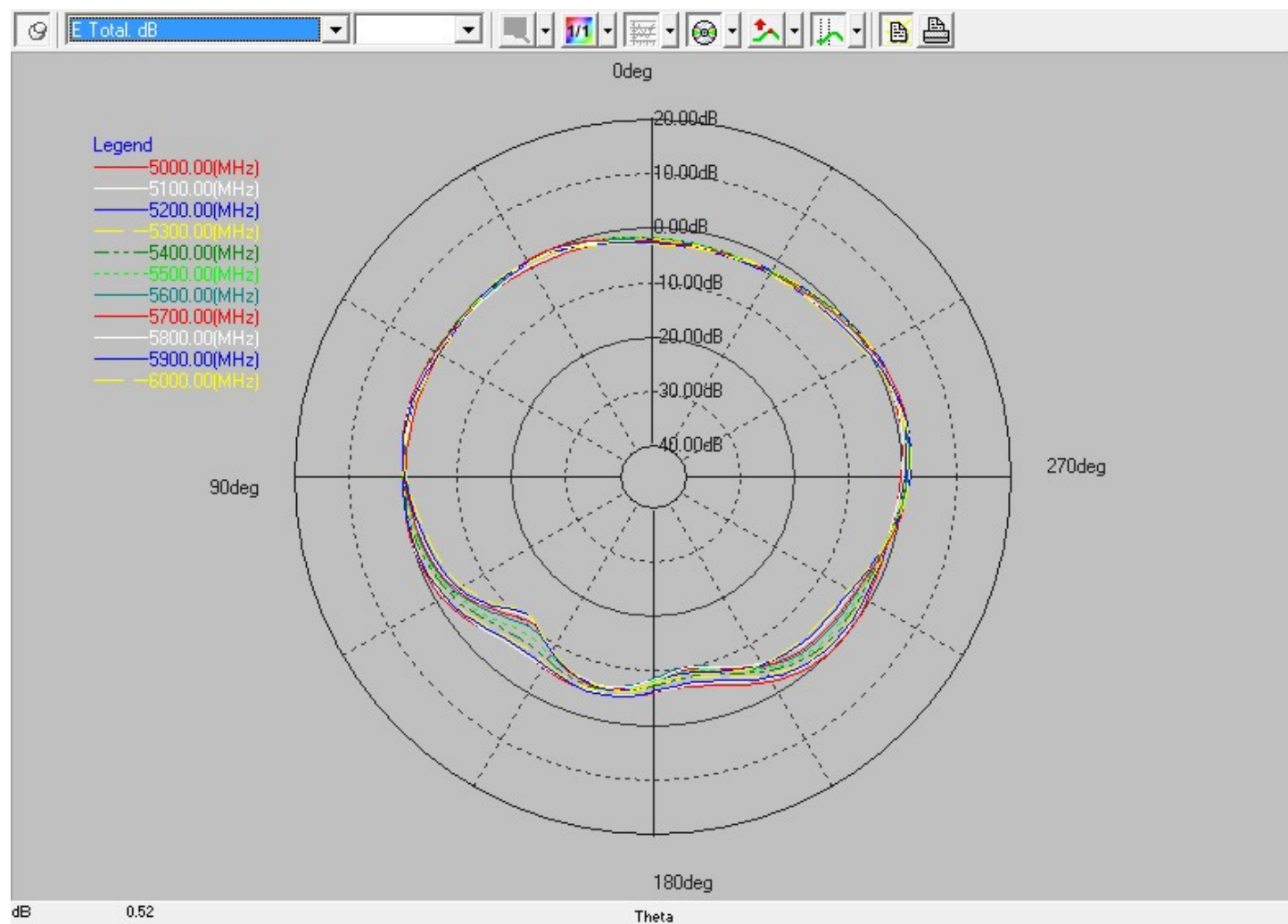
▲ Phi=0.00deg



E Total. dB

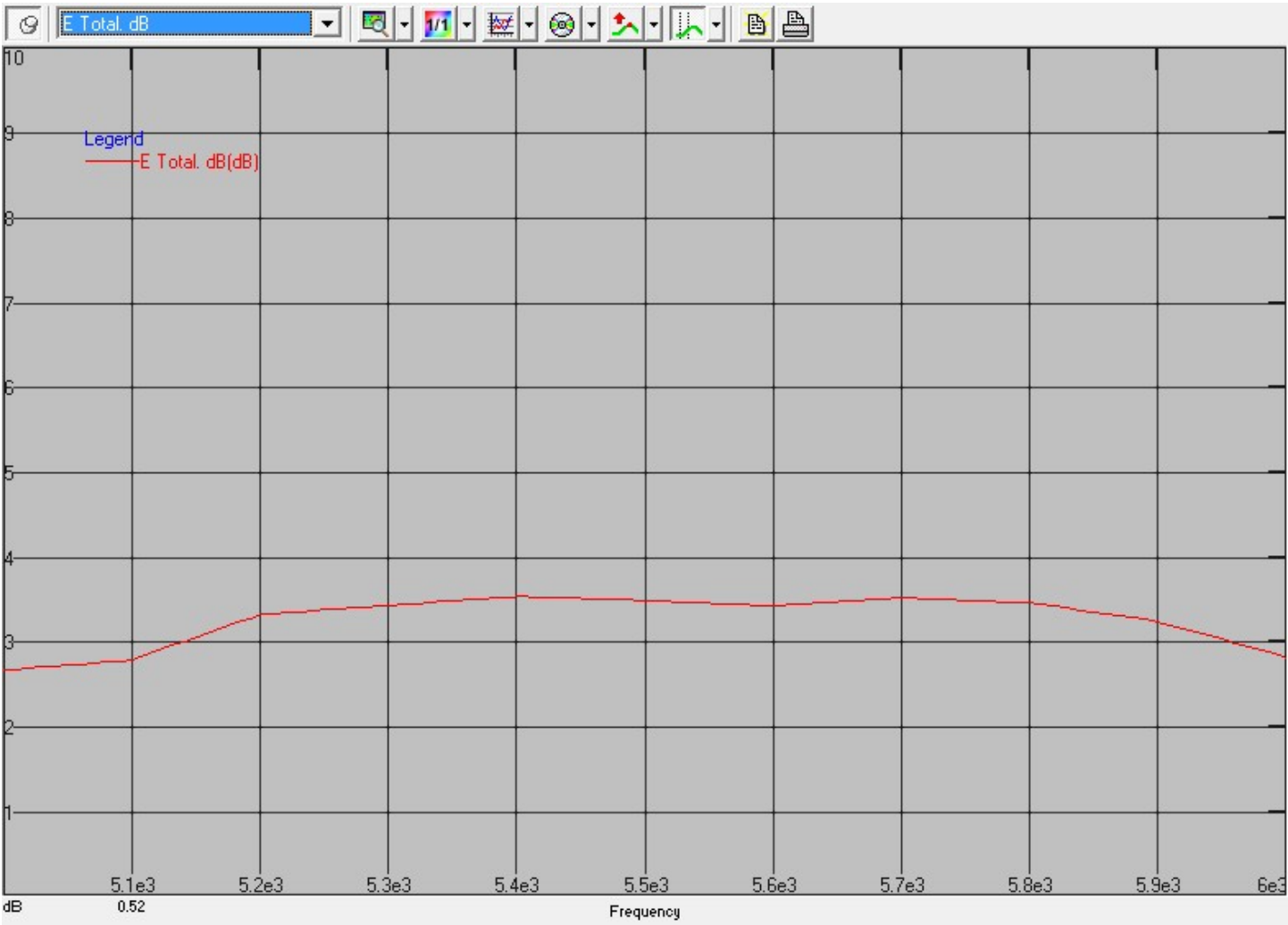
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ Phi=90.00deg



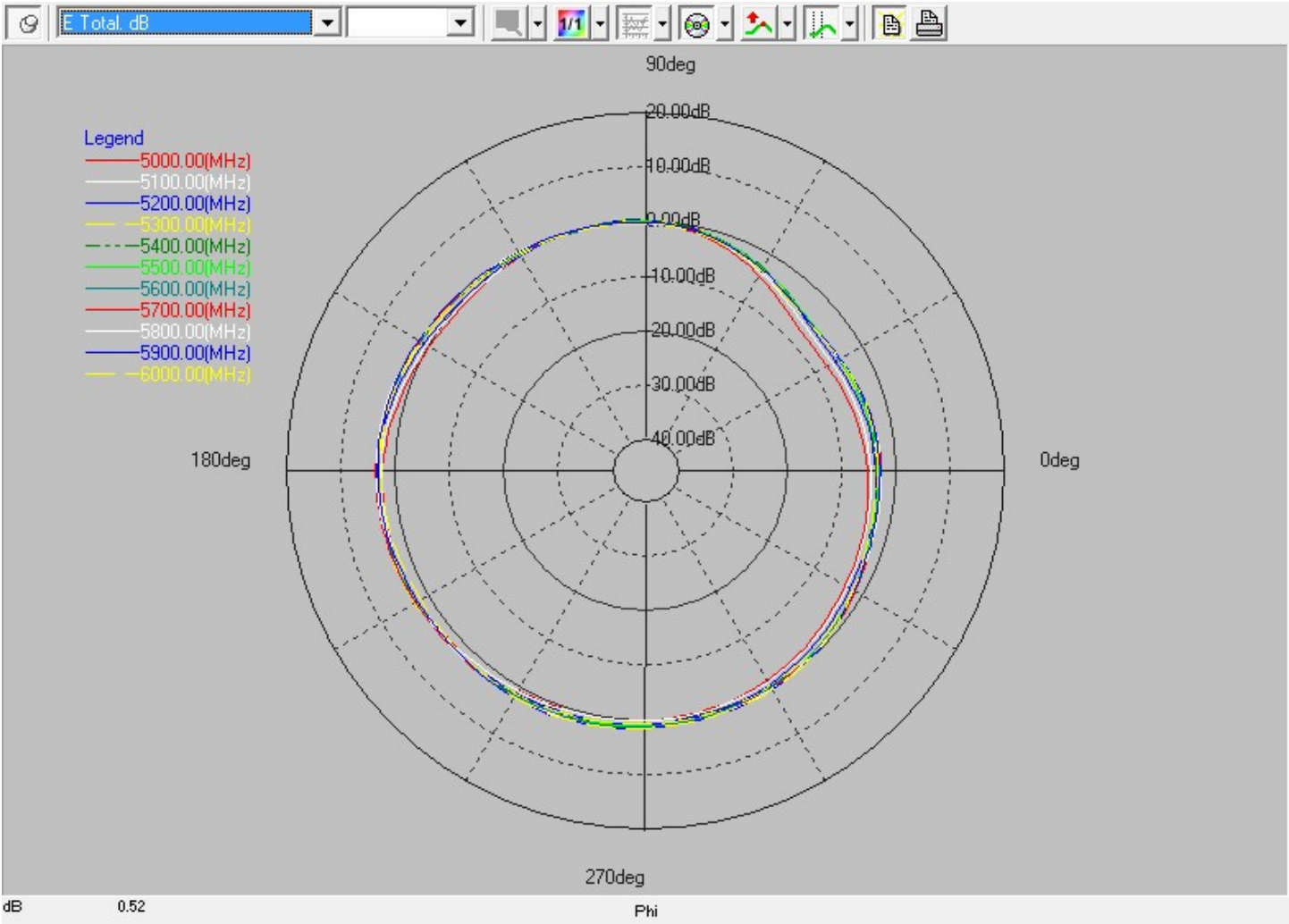
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ NF to FF transform Maximum Maximum



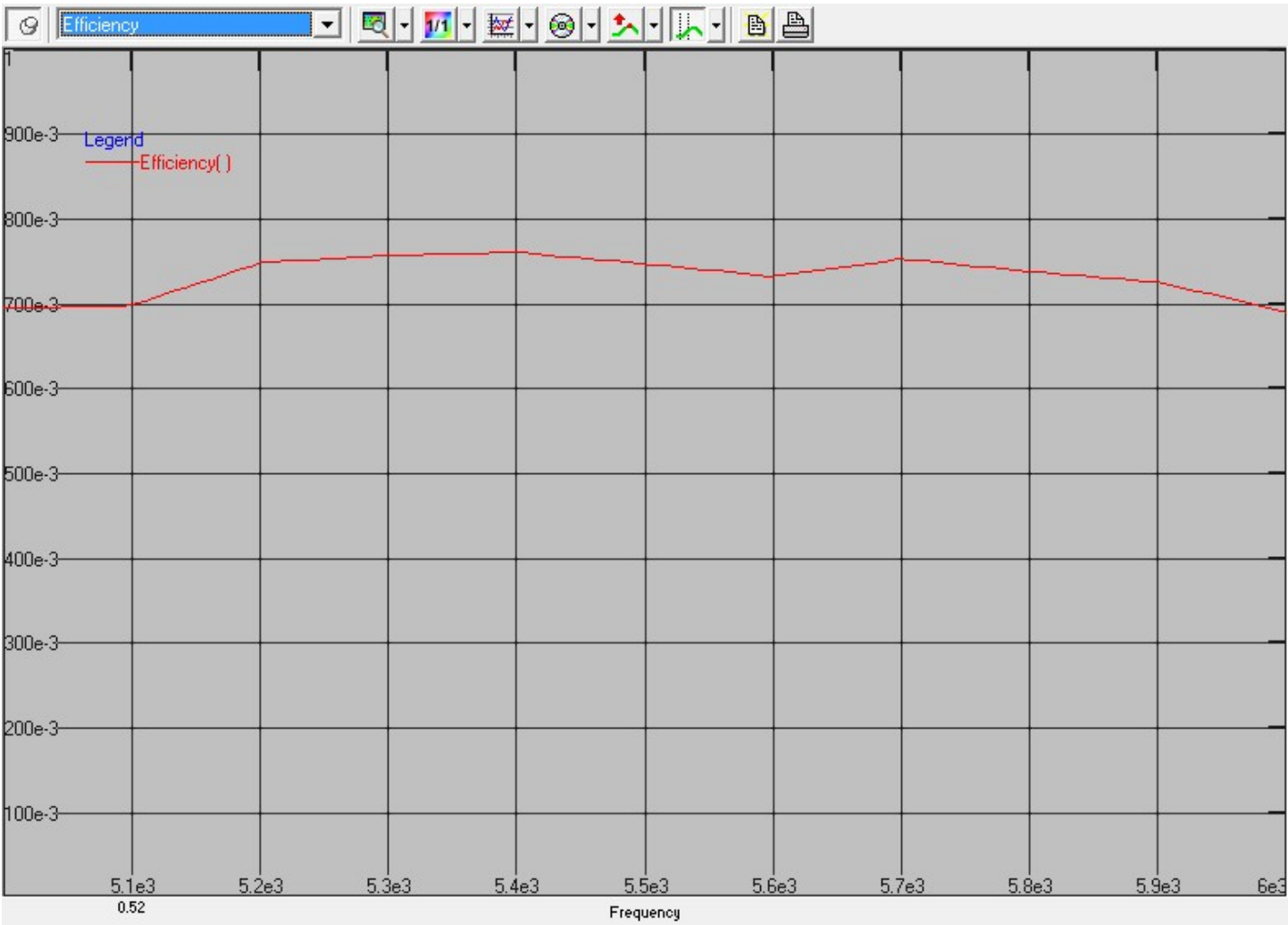
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ Theta=90.00deg



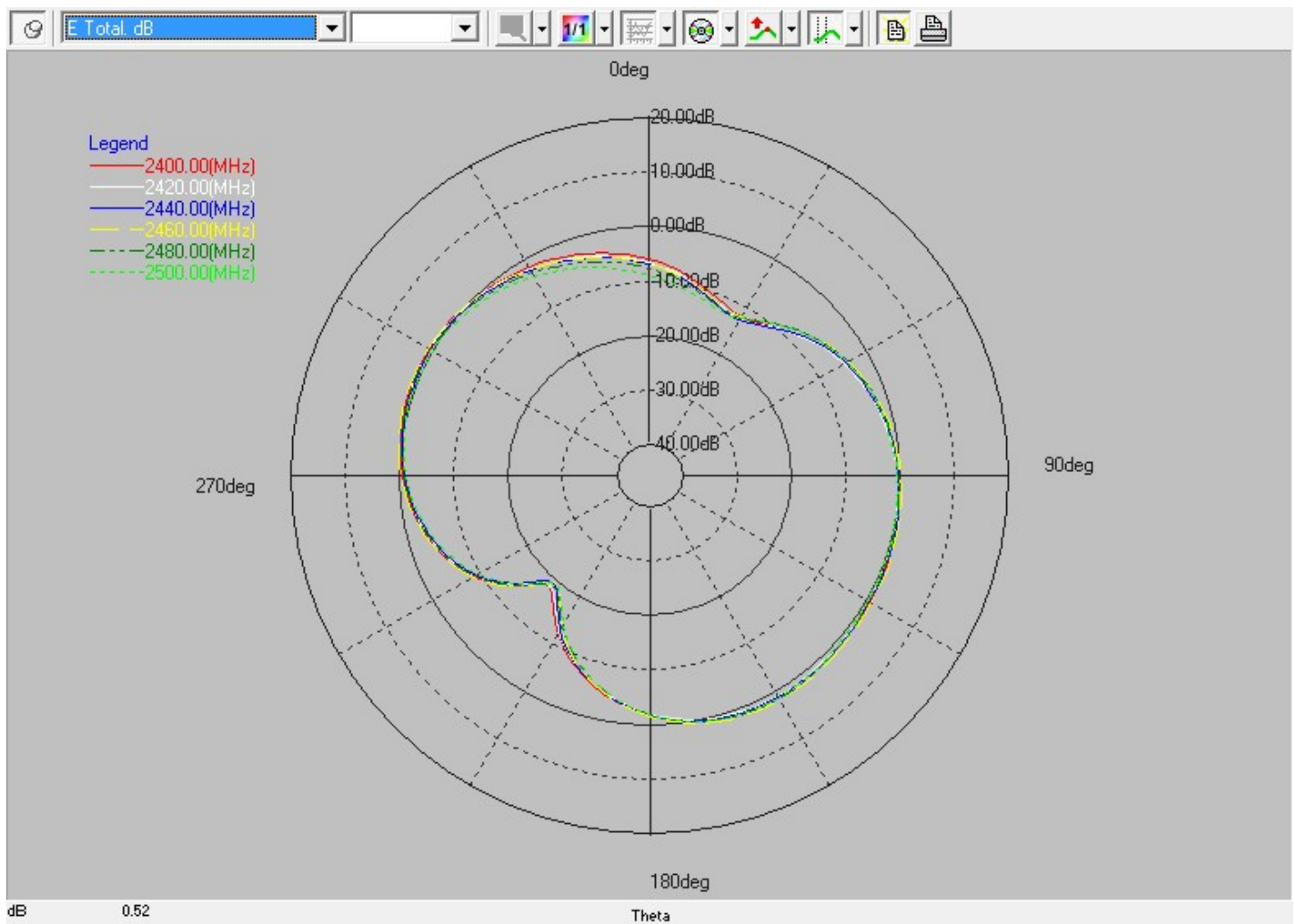
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ NF to FF Transform Efficiency



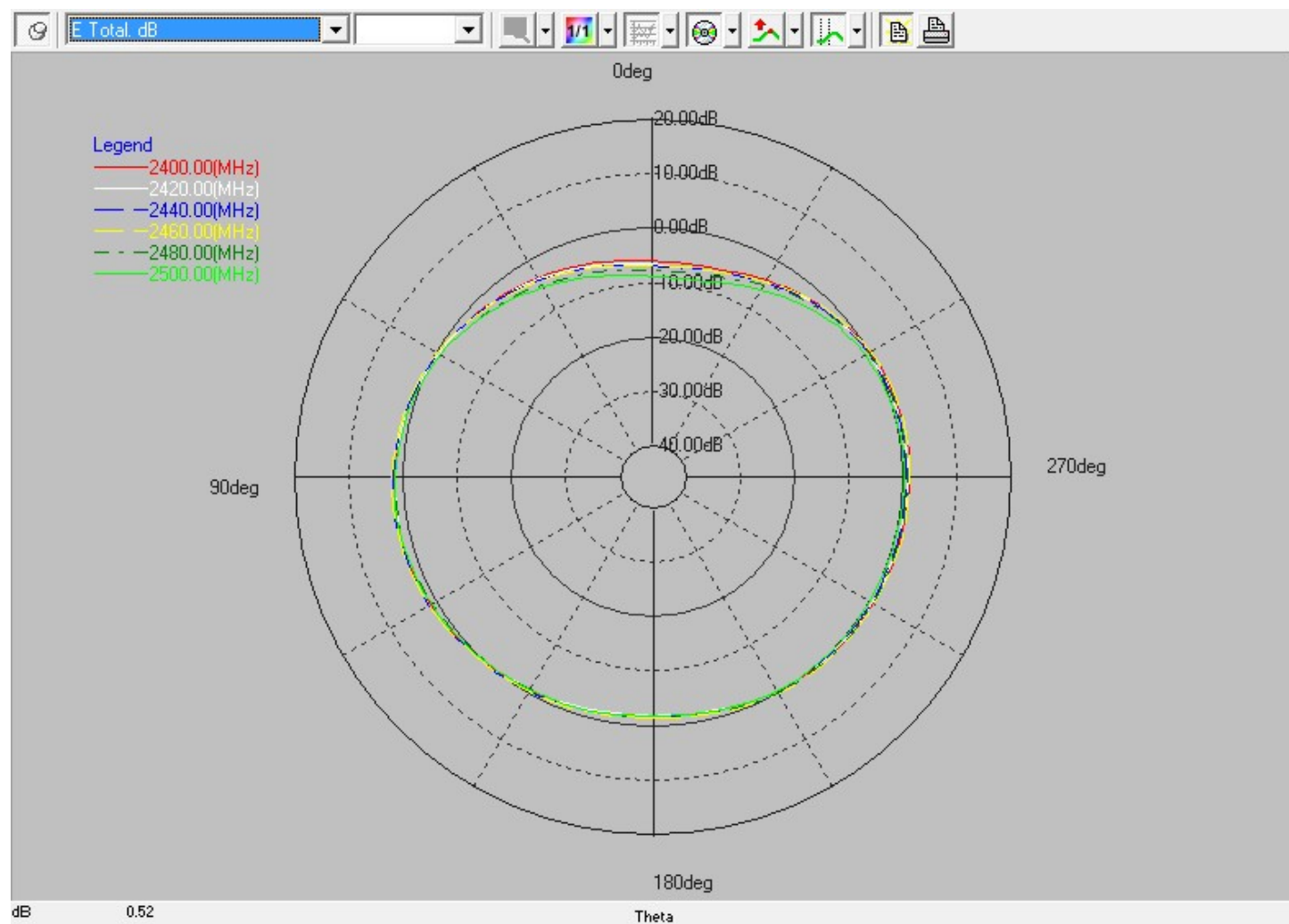
3) STINGRAY Antenna 2 (AUX) 2.4-2.5 GHz

▲ Phi=0.00deg



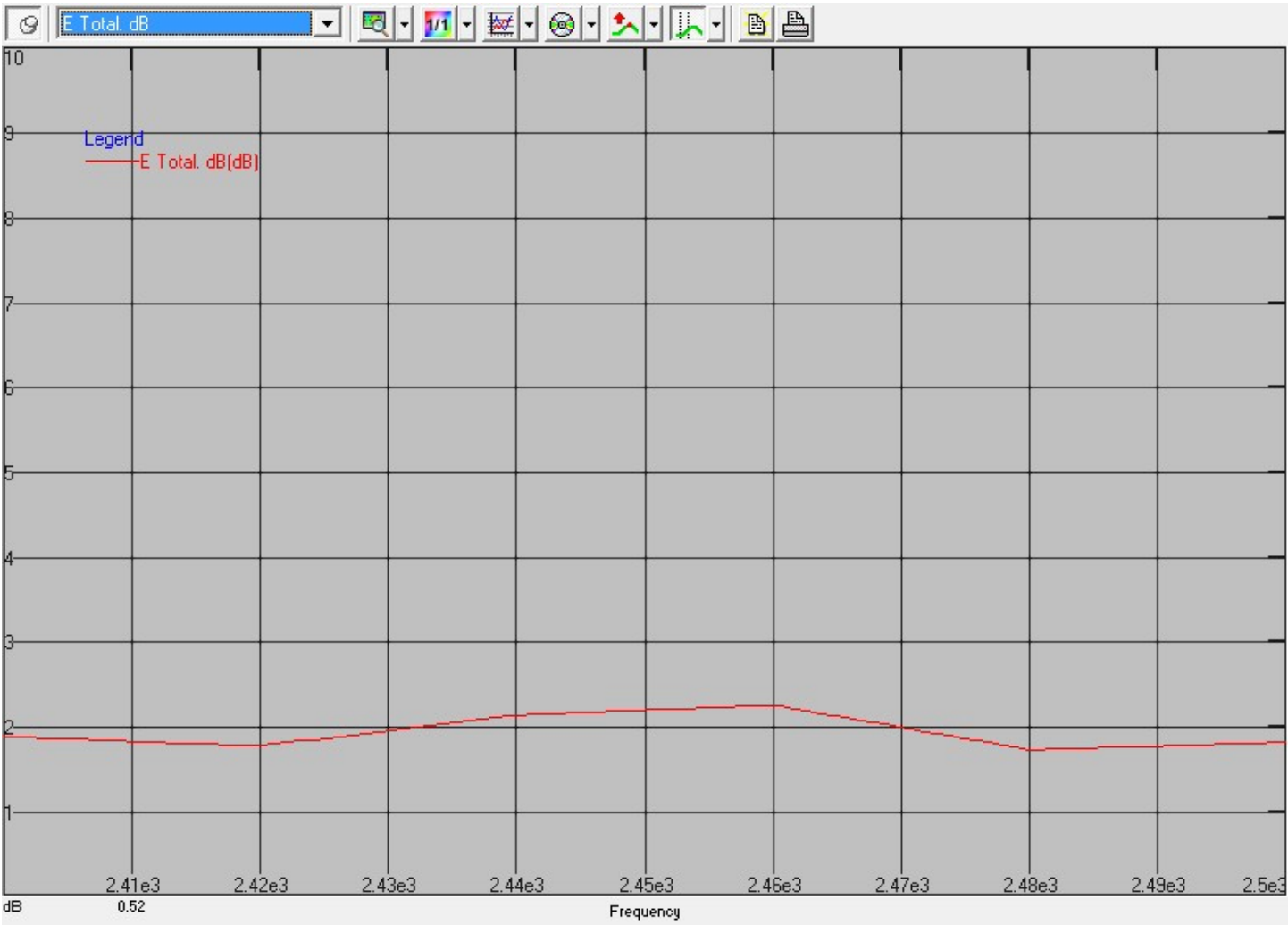
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ Phi=90.00deg



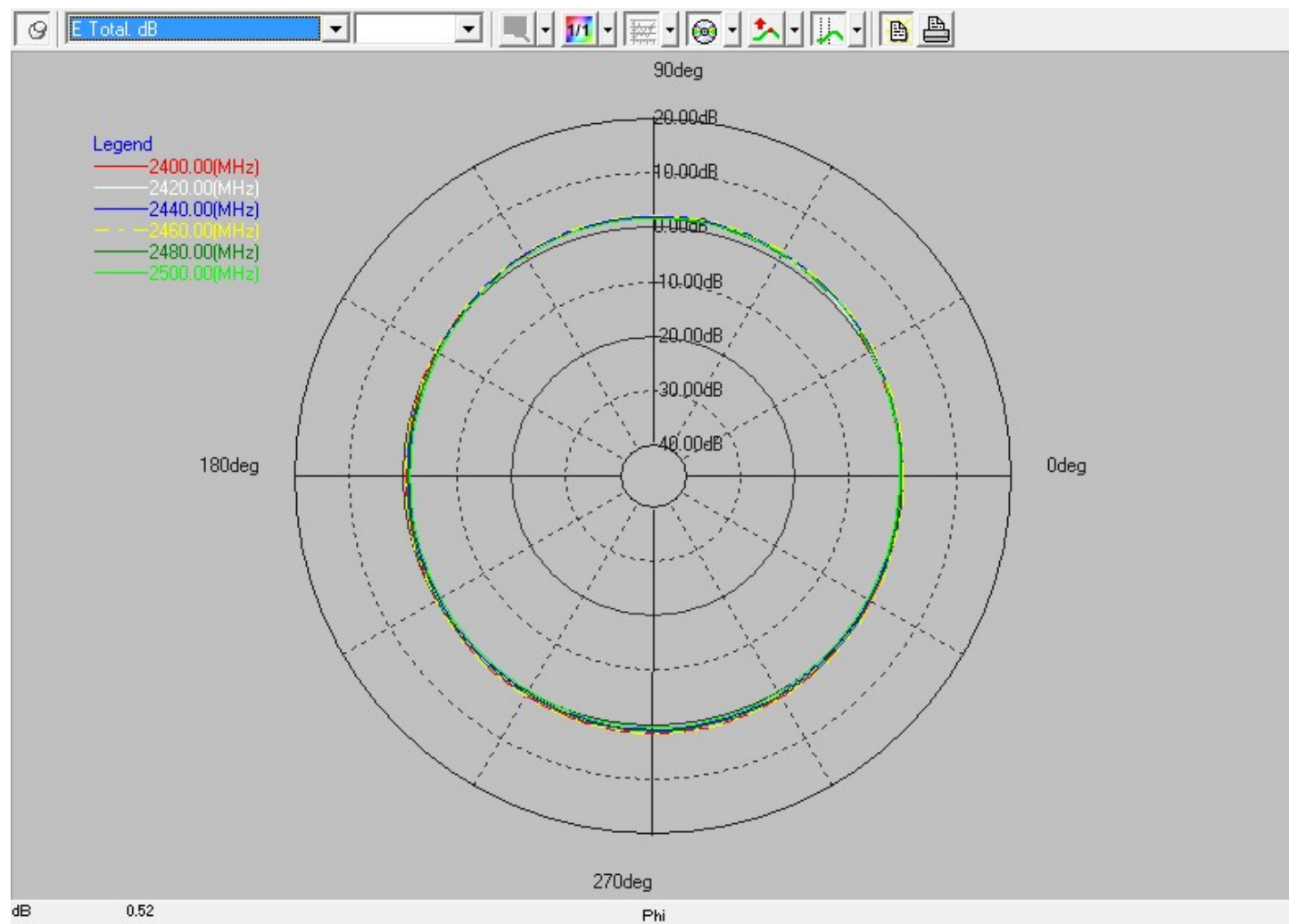
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ NF to FF Transform Maximum Maximum



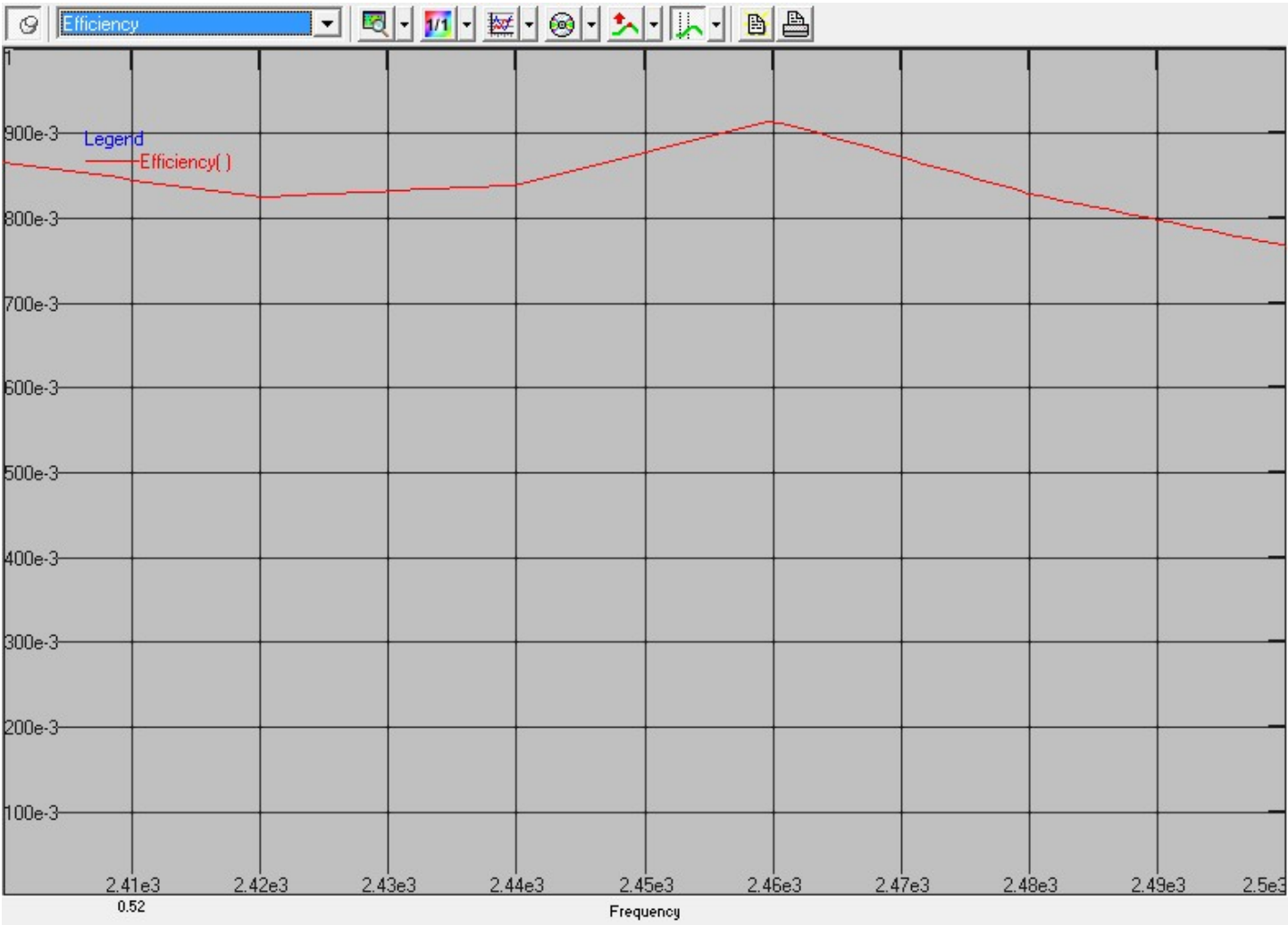
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ Theta=90.00deg



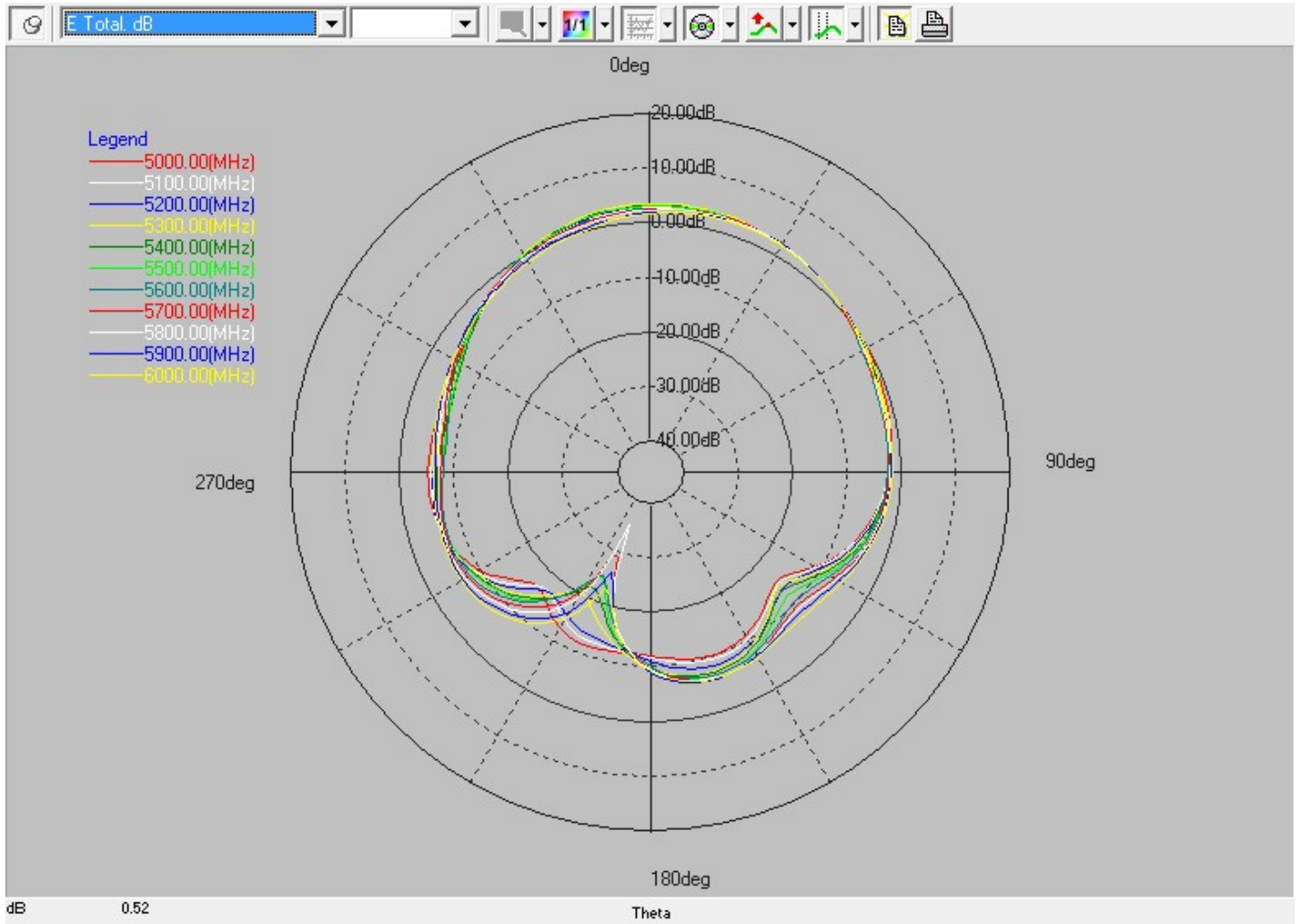
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ NF to FF Transform Efficiency



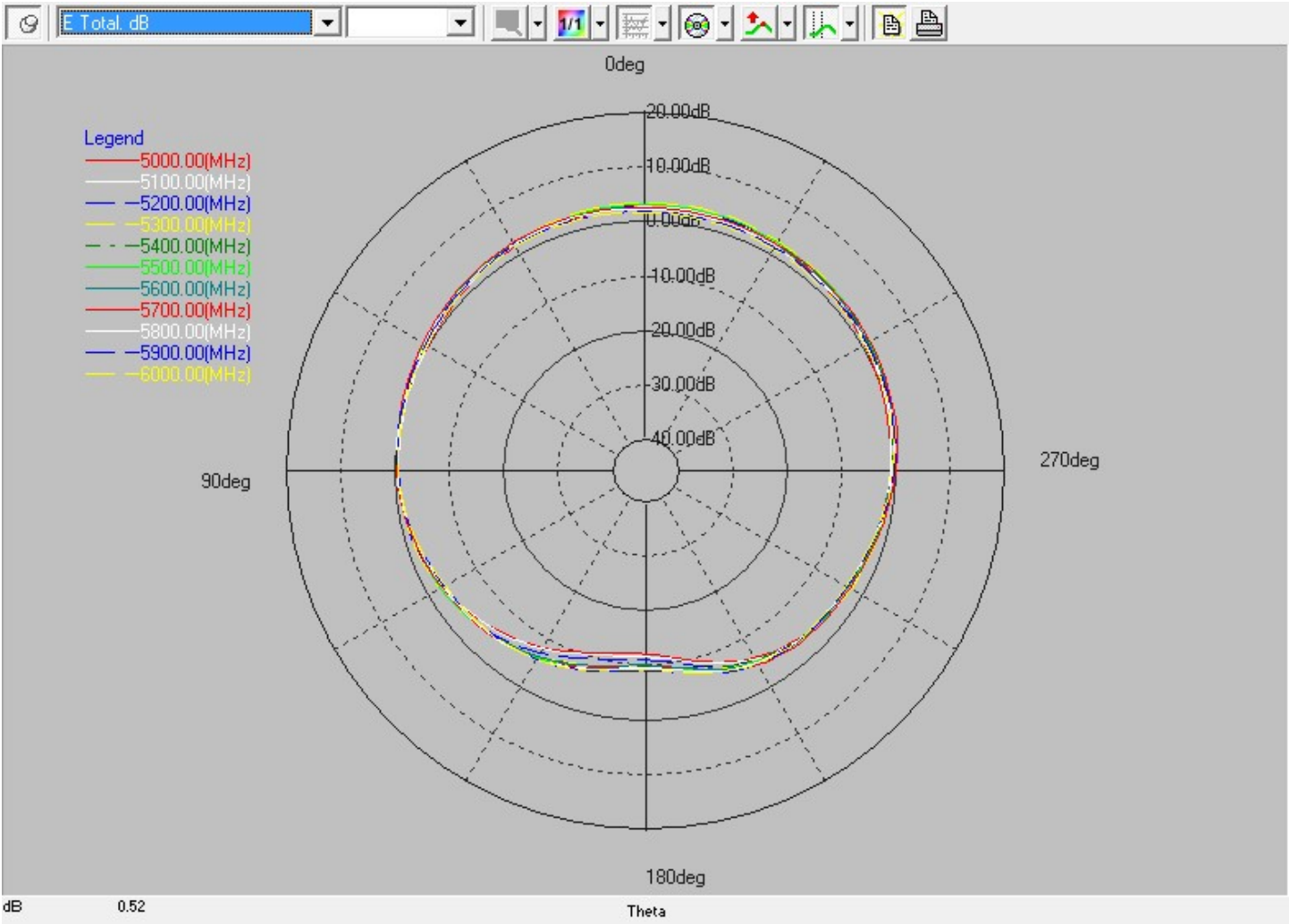
4) STINGRAY Antenna 2 (AUX) 5-6 GHz

▲ Phi=0.00deg



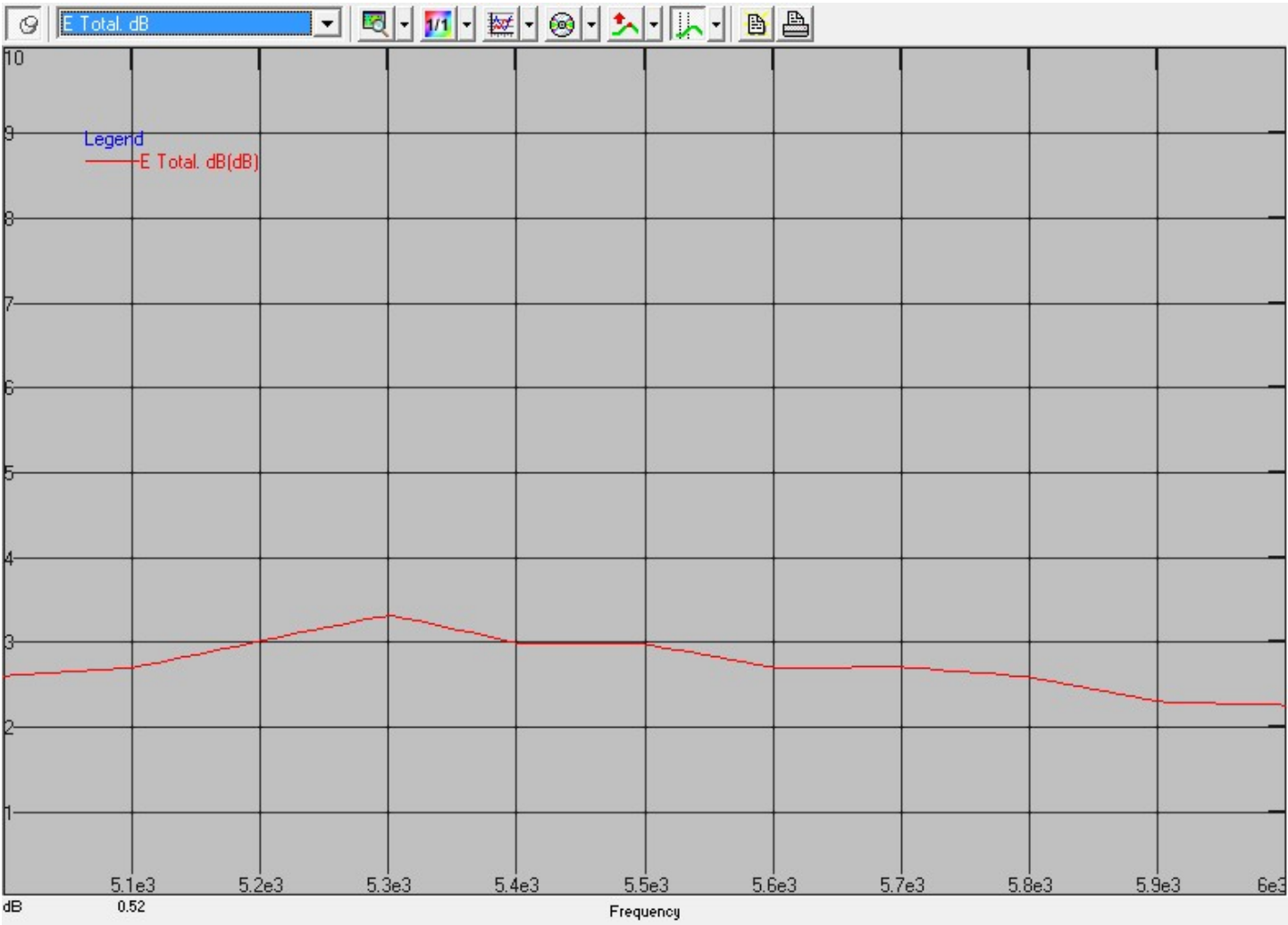
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ Phi=90.00deg



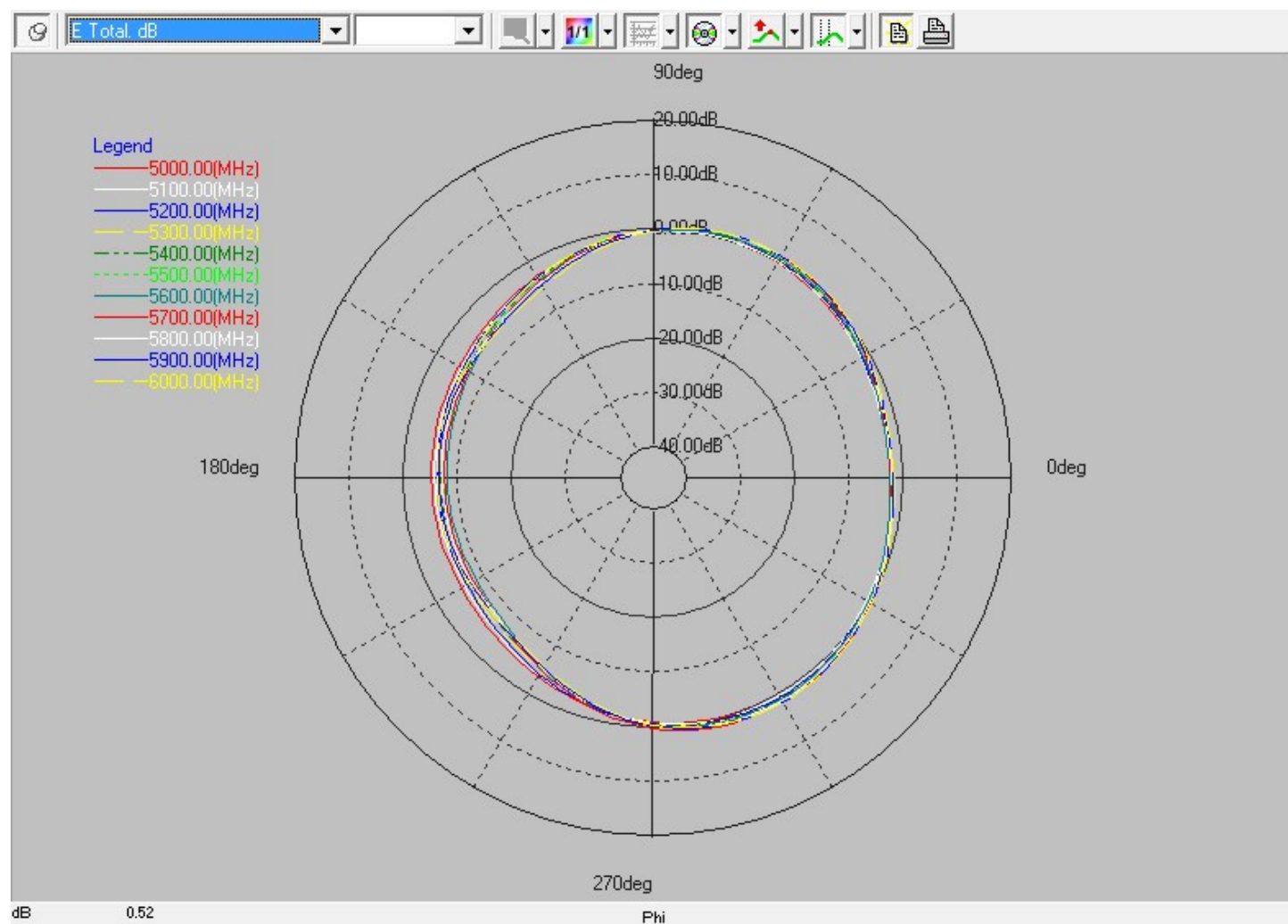
HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ NF to FF Transform Maximum Maximum



HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ Theta=90.00deg



HP WLAN 2.4/5 GHz Trace Antenna Data Sheet - Stingray Module

▲ NF to FF Transform Efficiency

