

## Re: 6 ghz probe

**Source:** <http://sci.tech-archive.net/Archive/sci.electronics.design/2004-09/6192.html>

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**From:** Mike Monett ([mrmonett\\_at\\_yahoo.com](mailto:mrmonett_at_yahoo.com))

**Date:** 09/24/04

Date: 24 Sep 2004 08:27:13 -0700

John Larkin <[jjlarkin@highSNIPlandTHIStechPLEASEnology.com](mailto:jjlarkin@highSNIPlandTHIStechPLEASEnology.com)> wrote in message news:<[7fl6l09tka94do2ptflg69bu421qocinpi@4ax.com](mailto:7fl6l09tka94do2ptflg69bu421qocinpi@4ax.com)>...  
> *Somebody, MM maybe, was asking about this...*

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=25415&item=3841925490&rd=1>

> *John*

Thanks, John,

I referred to the 9 GHz Tek P6150 and the 6 GHz HP 54006A in a post, and commented on the US\$2,280 price for the HP probe.

You added a comment about using Caddock resistors:

> *Caddock makes a cute little serpentine-element axial resistor that pokes directly into an SMA female, making an instant probe. The 450 or 950 ohm guys will make a 10:1 or 20:1 probe good to about 6 GHz.*

> *John*

However, we have gone way past the old HP and Tek probes, and are now talking about reaching 18GHz with the Cascade Microtech and 26GHz with the GGB Picoprobe.

I did receive a reply to my query on the Cascade Microtech probe:

Price and Delivery:

FPM-10X 10x dc - 18 GHz 500 ohms 0.03 pF <30 ps Price \$2420 each  
FPM-20X 20x dc - 18 GHz 1000 ohms 0.02 pF <30 ps Price \$2420 each  
FPM-100X 100x dc - 18 GHz 5000 ohms 0.02 pF <30 ps Price \$2970 each

Delivery: 3 weeks

Here are answers to some additional questions:

1. Do you have SPICE models for these probes?

A. See attached for additional information regarding FPM electrical behavior.

2. Where do you get resistors with such low stray capacity?

A. No comment

3. Does the low capacity also mean they have very low power dissipation capability?

A. Yes

4. How much power can they dissipate?

A. Enough to meet the voltage ratings in the data sheet (10v)

As you can see, the replies are somewhat limited. The answer to question #2 about the resistor stray capacity is interesting. Since I was unable to find any patents that discussed this for either Cascade Microtech or GBB, this leads me to believe the technique is well known and probably documented in some article, such as IEEE Transactions.

Mike