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## Searching mixer info

Posted by F5BQP - 2010/04/15 15:11

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Dear Friends,

I'm searching the technical specs for the microwave mixer model M-9329 from wm (Western Microwave ?)  
Could you help?  
Many thanks in advance for your replies.  
Pierre-François, F5BQP

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## Re:Searching mixer info

Posted by neazoi - 2010/04/16 07:24

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I have seen this mixer on ebay and I was looking for some info too. Do you know what is the official website (if there is one) of Western Microwave? Maybe we can ask them..

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## Re:Searching mixer info

Posted by F5BQP - 2010/04/18 14:30

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Hi Neazoi,

I purchased two on ebay recently, in fact the guy sent me these two in replacement of another model (10Ghz mixer)I purchased and on which he'd a problem, but I cannot find the specs of the one he sent me.  
Western Microwave have been acquired many years ago I believe.

Best 73's  
pf, f5bqp

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## Re:Searching mixer info

Posted by neazoi - 2010/04/19 06:56

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Did they work ok for the 10GHz band you specify?  
Did you use them for up-conversion or down-conversion?

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## Re:Searching mixer info

Posted by F5BQP - 2010/04/19 07:25

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Hi,

Not tested yet, I need to do it shortly, the problem with a mixer is you need to know precisely the input levels for which they have been constructed if you want to have good results.  
My plan is to have an IF on 432Mhz and LO on 9936 Mhz.  
I'm building a 10 Ghz TrVT with some bricks.  
A Miteq LNA, a mw mixer, a 10Ghz circulator, a x16 multiplier, a PLL 621 Mhz source synched on 10 Mhz, a home made PA, a WR75 transfer relay, two Farinon 10Ghz filters (one for the LO on 9936, the other on 10368), few isolators, one HP limiter, and one Filtek 500 Mhz lowpass filter.  
All the TrVT build around bricks.  
The Miteq LNA I got from a friend has a  $NF=0.88$  /  $G=58db$  !

Best 73's  
pf, f5bqp  
(Pierre-François)

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## Re:Searching mixer info

Posted by neazoi - 2010/04/19 07:44

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Ah! there is a publication of mine that is going to pop up in Dubus magazine shortly about a transverter that is made entirely on blocks, you may be interested. The name is SW3ORA check it out when the new Dubus is published.

It would be very nice to post a picture of your transverter for the members to see, even unfinished, we can take many construction ideas.

I think that these mixers are double balanced diode mixers (correct me on this) and they are usually higher level mixers, like every diode mixer. They can withstand much larger signals than gilbert cell mixers. Diode mixers also provide the best phase noise performance. I would follow a trial and error process to find the correct operating point, not too critical.

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## Re:Searching mixer info

Posted by F5BQP - 2010/04/19 08:23

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Hi again,

Good to see there are OMs interested into building TrVTs with bricks.

Yes I believe these mixers are doubled balanced but not sure at 100%.

Also not sure they are 10Gig, nevertheless a friend gave me one 8 ~ 12Gig / 10 to 15dbm so if these ones don't fit I'll use the one from my friend.

I'm not yet a Dubus register but I'll soon.

Best 73's  
pf

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## Re:Searching mixer info

Posted by neazoi - 2010/04/19 08:33

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Well, as I wrote in my publication, we do not all have equipment to print these exotic microwave PCBs so bricks are the next available solution for the experimenter (although more costly).

Make a note here if you test these unknown mixers, it will be of much interest to the members.

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## Re:Searching mixer info

Posted by F5BQP - 2010/05/12 10:15

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Hello,

I could not find yet the specs of this mixer, however I replaced the one I'm using in the design of my future TrVT 10 Ghz and it works exactly the same on the bench.

The mixer I'm using is a 8/12 Ghz MiteQ mixer model number M0812M .

So I presume this Western Microwave mixer M-9329 is similar to the MiteQ M0812M which is a real 8~12 Ghz high level double balanced mixer.

Best 73's  
pf

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## Re:Searching mixer info

Posted by neazoi - 2010/05/12 10:27

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This is very interesting, I bet these two are interchangeable as far as concern the frequency range, although I am susceptible about the other characteristics, like optimum drive levels. But the most wanted one, which is the frequency range seems to be fine.

Thank you for your work, If you have more future results It would be very nice to post them here.

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## Re:Searching mixer info

Posted by F5BQP - 2010/05/12 14:00

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I assume it's also a high level mixer in the range 10 to 15dbm as both react very similar when I tune the level input (Lo/Rf/If); the MiteQ M0812M is effectively a high level double balanced one according to its specs.

pf

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## Re:Searching mixer info

Posted by neazoi - 2010/05/13 06:53

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If it is a diode based mixer, which is probably the case, it should be a high level low noise mixer anyway.

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## Re:Searching mixer info

Posted by F5BQP - 2010/05/13 07:58

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Yes it is!

On the bench it works fine.

Now I need to attack the build of the transmit part, and all the control section (sequencer, amp control, PS, etc...).

For the control section I'll use the W6PQL modules, cheap, reliable and simple...

Best 73's

pf

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## Re:Searching mixer info

Posted by neazoi - 2010/05/13 08:03

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Take care when using these hybrids. Most of these contain BeO which is highly toxic! Take care not to brake them in any way.

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## Re:Searching mixer info

Posted by F5BQP - 2010/05/13 08:14

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Yes I know that BeO is highly toxic.

But from which hybrids are you talking about?

pf

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## Re:Searching mixer info

Posted by neazoi - 2010/05/13 08:16

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I guess you are talking about these?  
<http://www.w6pql.com/1296/index.htm>

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## Re:Searching mixer info

Posted by F5BQP - 2010/05/13 08:23

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No no, I'm talking about all the control modules, Latching relay driver module, sequencer, High current DC FET Switch, etc... For the control of the TrVT 10Ghz I'm building.  
For the power amp I'm going to use a TIM1011-15

I already have MRF286 since more than 10 years.

Best 73's  
pf

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