



The Design Engineers Search Engine

USER'S GUIDE

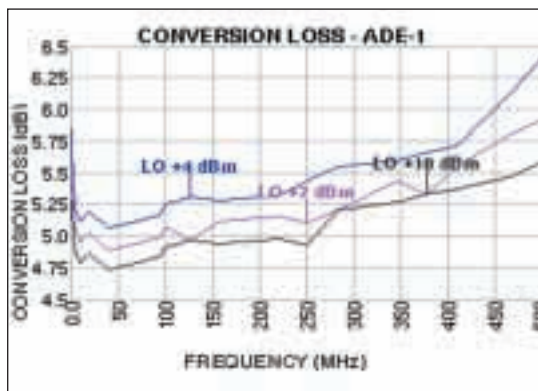




YONI is a unique search engine for Design Engineers that taps the power of the Internet to search Mini-Circuits database, find the most cost effective component that meets or beats your requirements, then delivers actual component performance data to your computer anywhere in the world, any time, free of charge.

The search results provide Actual Measured Performance Data delivered in the form of tables and graphs. NO Simulations...NO Averages!

In about 2 minutes, **YONI** can provide an actual solution you can use...thus avoiding long design delays, higher costs, and frustration.



Ordering And Delivery Information

Refer to the rep listing in this guide for Mini-Circuits worldwide network of sales representatives and distributors ready to serve your needs, supply your orders, and answer your questions promptly and courteously.

Federal supply code: 15542

how to order

Your local representative or distributor is the contact for both sales and service assistance for products listed. These local offices have the latest price and delivery information on all models. They can also provide details on ordering procedures, service information and application engineering data. Your order may be sent directly to Mini-Circuits or to any of the local sales offices listed.

Prices listed are domestic F.O.B. Brooklyn, New York. Mini-Circuits reserves the right to change specifications, models, prices, or designs without prior notice and without liability for such changes. Minimum order **\$100.00**.

shipping instructions

Shipments can be made by either air or surface carriers. If specific shipping instructions do not accompany the order, Mini-Circuits will supply the carrier to be used. For air shipments, Mini-Circuits has arranged for substantial discounts with carriers.

terms

Net 30 days from date of invoice. If credit is not established with Mini-Circuits, shipments will be made C.O.D. (cash on delivery) or prepaid. We also accept most major credit cards. If prepaying, please include freight.

warranty

Limited Warranty and Exclusive Remedy. Each product manufactured by Mini-Circuits is warranted to conform to Mini-Circuits' applicable specifications on the date of shipment, subject to permissible variations and defects defined by The Institute for Interconnecting and Packaging Electronic Circuits, provided that these products are used with compatible components in appropriate environments, within the applications and ranges for which they were manufactured, and in accordance with applicable instructions, and provided further that they have not been subject to improper installation, improper maintenance, abuse, accident, negligence, alteration, misuse or the like. The warranty period is twelve (12) months after shipment, unless another period is specified. The sole and exclusive remedy available under this limited warranty is the repair or replacement of any products which Mini-Circuits determines to be defective or, if Mini-Circuits determines that this exclusive remedy fails its essential purpose, the purchaser will, at its option, be entitled to a refund of the purchase price for the products in question or a credit therefor.

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For a full statement of limited warranty offered by Mini-Circuits and the exclusive rights and remedies thereunder, together with Mini-Circuits limitations of warranties and limitation of liability, please refer to Mini-Circuits sales order form (3/25/98). If you do not have this form, please contact Mini-Circuits representative and one will be provided promptly.

Warning: Since each system utilizing components is unique with different component configurations and attributes and differing requirements and environments, all of which can, among other things, affect product performance, the selection and use of any product offered by Mini-Circuits must be determined by competent engineers and other appropriate professionals who are familiar with the specific system in question. Nothing contained in this brochure shall constitute any professional advice and should not be used as a substitute for competent professional determinations. Since Mini-Circuits has not given any professional advice, it is not responsible or liable for improper selection, use or installation of products offered by Mini-Circuits and, with respect to the systems in which such products are utilized, improper system design or the inadequacy of back-up systems.

Warning: While products offered by Mini-Circuits have the potential to be used as components in (i) devices or systems utilized in air or space flight; (ii) medical devices; or (iii) life support devices or systems, such uses are not authorized, nor will such products be covered by Mini-Circuits' limited warranty, without the prior written consent of Mini-Circuits.

For U.S. Customers

To provide superior customer convenience and fast delivery, our Distribution Center is open 12 hours a day (8AM to 8PM for East Coast and 5AM to 5PM for West Coast customers). For West Coast orders, second day air service is offered at UPS ground rates. And, of course, all prices are the same as quoted from the factory.

For European Customers

To provide superior customer convenience, our Distribution Center in the UK (Wharf Rd., Frimley Green, Camberley, Surrey, GU16 6LF) is open from 8:30AM to 5:30PM. And, exclusive of duty and freight, all prices are the same as quoted from Mini-Circuits' factory.

Contents

The YONI Search Engine "User's Guide"

Introduction To YONI 2

Ordering And Delivery Information 3

Flow Diagram Of YONI Operation 4

How And Where Can I Access YONI? 5-6

Computer System Requirements 5

Internet Access And Web Address 5

"Click" To The YONI Search Engine 5

Registration 6

How Big Is YONI? 6

How Often Is YONI Updated? 6

YONI Component Categories (ie: VCOs, Mixers, etc.) . . . 7

YONI Data Entry Fields 8-10

Minimum Required Data Entry Fields 8

Required Data Entry Field Reminder 9

Optional Data Entry Fields 10

YONI Search Results 11

Display Of Models With Specs And Case Styles . . 11

How To Find Models With The Lowest Price 11

Viewing Actual Performance Data And Case Styles . 12-13

Viewing Tables And Graphs 12

Viewing Case Style Information 13

How To Evaluate, Select, And Order Your Parts 14

How To Evaluate And Select Your Parts 14

How To Order Your Parts 14

What Happens If YONI Draws A Blank? 15-18

Obtaining A Best Possible Match 15

YONI Suggests Alternate Models 16-17

Contacting An Applications Engineer 18

Limitations Of The YONI Search Engine 19

How To Obtain Actual Performance Data

Using The Model Number 20-22

How To Obtain A Copy Of Mini-Circuits

"RF/IF Designer's Guide" 23

Worldwide Sales Offices And Distributors Back Cover

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AMERICAN EXPRESS



VISA



ACCESS



MASTERCARD

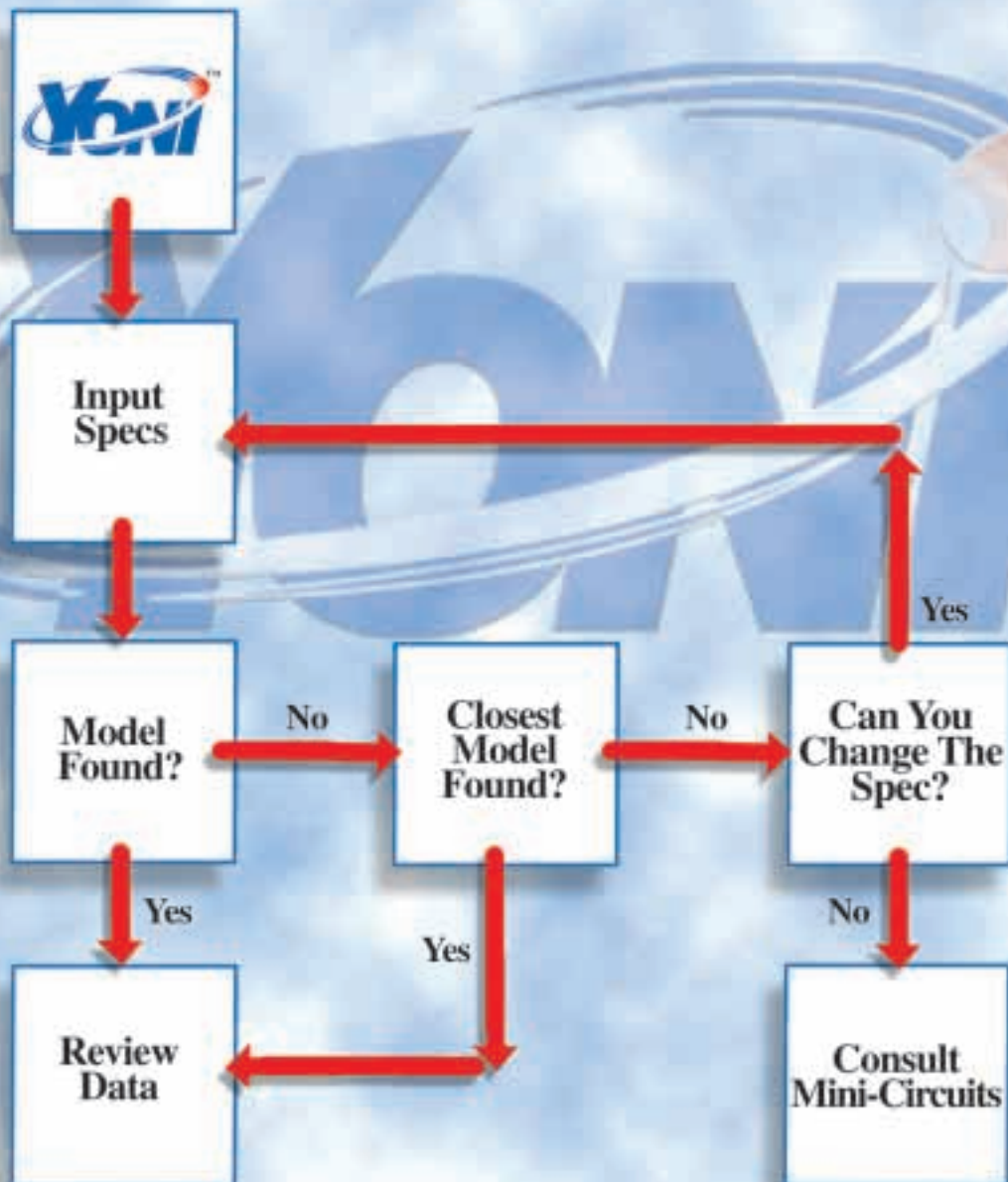


EUROCARD

see us on the web
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Flow Diagram Of Operation.





Mini-Circuits home page at
www.minicircuits.com
“clicks thru” to the
YONI Search Engine

How And Where Can I Access YONI?

Computer System Requirements:

- A computer with appropriate internet web browser software installed (Internet Explorer®, Netscape®, etc.).
- Java Script must be enabled.
- No special downloads, extra software, or plug-ins are required to use “The YONI Search Engine” however, Acrobat® Reader is needed to view Mini-Circuits On-Line Catalog pages.

Internet Access And YONI Web Address

YONI can be accessed anywhere in the world where an internet connection is available. YONI is located on the World Wide Web at www.minicircuits.com, and is free of charge to use.

“Click” To The YONI Search Engine

The Mini-Circuits web address above provides access to Mini-Circuits Home Page which displays a link to “The YONI Search Engine”.

see us on the web
www.minicircuits.com



After registration, begin using YONI immediately.

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We're redefining what **VALUE** is all about!

Browse Online Catalog

Choose Product...

Quick Search

Model Number
Model Series Prefix
Case Type

GO!

Are you a registered user of Yoni?

To access this area, you must be a registered user. To access Yoni, fill out the registration form now, or learn more [About Yoni](#).

Note: Fields marked with a * are required for new users. If you have already registered, just enter the email address.

To access premium content, we ask that you accept a cookie and fill out a brief registration form. Please read our [definition of a cookie](#). If you cannot meet these entrance requirements or prefer not to, you are welcome to visit public areas on our site.

*First Name: _____
*Last Name: _____
Title: _____
Company: _____
*Address: _____
City: _____
State/Province: _____ Zipcode: _____
Country: _____
Phone: _____
*Email: _____

Submit **Reset**

Home
What's New
Application Notes
About Mini-Circuits
Contact Us
Employment Opps.

Quality Policy

Mini-Circuits Quality Policy is to provide products and services to our internal and external customers that will:

Registration

Your first visit will require completion of our quick and easy registration form. Then, you can begin using YONI immediately.

How Big Is YONI?

The YONI Search Engine combs Mini-Circuits large and extensive database containing thousands of models with actual measured performance data. The database includes Mini-Circuits standard catalog items, plus additional "Engineering Designs" (ED) that were developed to custom performance specifications.

How Often Is YONI Updated?

New products, performance data, specification revisions, and new Case Style Drawings and Outline Dimensions are added to YONI on a daily basis as they become available. This provides a jump start to use new product developments and assures a timely search.



Pick a product category to search in YONI.

YONI Component Categories

Upon entering the YONI Search Engine, you will be asked to "Pick a component to search" from the available categories. Select a component category with a single click.

YONI searches are available for categories listed on the screen. Additional search categories will be added in the future.

For the purposes of this User's Guide, we will use the category of "Frequency Mixers" for demonstration.

TIP:

If your Component Type does not appear on the YONI search menu, browse our Online Catalog, and also check the "What's New" feature.



Completion of all minimum data fields (red) are required to proceed with a search.

YONI Data Entry Fields

Minimum Required Data Entry Fields

After picking a component family from the choices given, a "Data Entry Information Page" will be displayed. The completion of all the Minimum Data Requirement Fields on this page are mandatory for YONI to proceed with a successful search. Mandatory data fields are highlighted in red.

Invalid Form Submitted

You did not fill in Conversion Loss. Please go back and insert maximum Conversion Loss (db) that is acceptable.

*If all required fields
are not completed, YONI
will issue a friendly reminder.*

YONI Will Remind You To Complete ALL Required Fields

If a search is attempted with any REQUIRED field left blank, YONI will display a page titled "Invalid Form Submitted". At this point, simply click the "Back" button in your browser to return to the "Data Entry Information Page" and enter the additional REQUIRED specification(s).



Typically, more optional fields completed = tighter component match. Fewer optional fields completed = broader component match.

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We're delivering what **VALUE** is all about!

YONI Frequency Mixer

Choose Product... 3

Quick Search

Model Number
Model Series Prefix
Case Type

GO!

YONI
Parametric Search
for Design Engineers

Home
What's New
Application Notes
About Mini-Circuits
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Employment Opps.

Quality Policy

Mini-Circuits Quality Policy is to provide products and services to our internal and external customers that will:

- meet stated requirements
- exceed expectations
- continuously be improved

Please enter the specification:
(Minimum data requirements listed are highlighted)

LO Power Level:

☐ 0 dBm ☐ 1 dBm ☐ 4 dBm ☐ 6 dBm ☒ 7 dBm

☐ 9 dBm ☐ 10 dBm ☐ 13 dBm ☐ 14 dBm ☐ 15 dBm

☐ 16 dBm ☐ 17 dBm ☐ 20 dBm ☐ 23 dBm ☐ 30 dBm

☐ 27 dBm ☐ 30 dBm

Packaging Style:

☐ Plug-In ☒ Surface Mount ☐ Connector ☐ Not Critical

Electrical Characteristics

Max. Conversion Loss (dB):

RF/LO Freq Low (MHz):

RF/LO Freq High (MHz):

Min. LO-RF Isolation (dB):

Min. LO-IF Isolation (dB):

LO Freq Low (MHz):

LO Freq High (MHz):

IS (dBm):

Search Clear

Max. VSWR, IF port (dB):

IF Freq Low (MHz):

IF Freq High (MHz):

Max. VSWR, RF port (dB):

Max. VSWR, LO port (dB):

RF/LO Freq Low (MHz):

RF/LO Freq High (MHz):

Optional Data Entry Fields

On the same Data Entry Information Page, Optional Data Entry Fields are headed in black. Each "Optional Data Entry Field" that is completed narrows YONI's search to display a subgroup of all components that meet or exceed the entered specs. Hence, to obtain the tightest component match to your specific performance requirements, complete as many Optional Data Entry Fields as possible.

After all the REQUIRED fields and as many OPTIONAL fields as desired are completed, click **Search** located at the bottom of the page to launch the YONI search engine, or click **Clear** to clear all entered data in Data Entry Fields, and start over.

Frequency Mixers LO Power Level 7 dBm

Click on the reference number to see Performance Data and Graphs.

Reference No.	Frequency MHz		Conversion Loss dB		LO-RF Isolation dB			LO-IF Isolation dB			Case Style	Conn-ectors	Notes
	LO-RF	IF	Mid Band	Total Range	L	M	U	L	M	U			
LRMS-1J	0.500-500	DC-500	7.8	8.5	50	25	20	45	23	19	009563	w	
RMS-1	0.500-500	DC-500	7.8	8.5	50	25	20	45	23	19	TT248	w	
ADE-1	0.500-500	DC-500	6.5	7.8	50	35	30	45	25	20	CD636	M	*,L4
ADE-1LH	0.500-500	DC-500	6.5	8.2	50	35	26	40	22	20	CD636	M	
ADE-ED0815/1	0.100-1112	5-1050									CD542	M	U
ADE-ED7841/1	0.100-2000	10-1000									CD542	bu	U
ADE-ED7879/1	0.400-953	0-520									CD542	M	U
ADE-ED7892/1	0.400-900	0-520									CD636	M	U
LRMS-ED4552/1	0.500-985	5-550									009563	w	U
ADE-ED6329/1	0.000-1540	100-1145									CD542	bu	U

L-low range(f_L to $10f_L$) M-mid range($10f_L$ to $f_U/2$) U-upper range($f_U/2$ to f_U)

Pin Connections - see case style outline drawing

Part	LO	RF	IF	Gnd	Ext.	Case	Gnd	Not Used
W	1	4	5	2,3,6	-	-	-	-
M	6	3	2	1,4,5	-	-	-	-
bu	6	2	3	1,4,5	-	-	-	-

Notes:

- 1 - +7dBm LO, up to +1 dBm RF
- Absolute maximum power, voltage and current ratings:
- 4 - a. RF power, 50mW
- b. Peak IF current, 40mA
- U - Non-catalog model. Please consult factory for price and delivery
- General Quality Control Procedures and Environmental Specifications are given in [Mini-Circuits Guarantees Only](#)
- Hi-Pol, MIL description are given in [Hi-Pol and MIL](#)
- Prices and Specifications subject to change without notice.

[Back](#)

YONI will display a list of models (Reference No.) that fall within your requirements, complete with case style number.

YONI Search Results

Display Of Models With Specifications And Case Styles

After you click "Search", YONI will instantly display a list of Mini-Circuits standard catalog models and/or Engineering Design (ED) references from our internal development database. Typically, the TOTAL frequency range for these units will be shown along with guaranteed performance specifications. YONI selected these units because they meet or exceed the performance criteria you entered within the frequency range you specified.

How To Find Models With The Lowest Price

After preliminary evaluation of all models shown, check the price for each model you selected by using our "RF/IF Designers Guide" (see page 23), or the "Browse Online Catalog" feature on the Mini-Circuits home page (see page 22). This feature accesses a "Catalog Model Index" from the "Choose Product..." pull-down menu. Locate your component category in the index, then click on a Model Number to view prices. By using YONI in conjunction with our catalog, you can get relative pricing for the models you selected. For high quantity or "ED" model pricing, contact factory or complete a "Price Quotes" form available by following the "Contact Us" link on the Mini-Circuits home page.

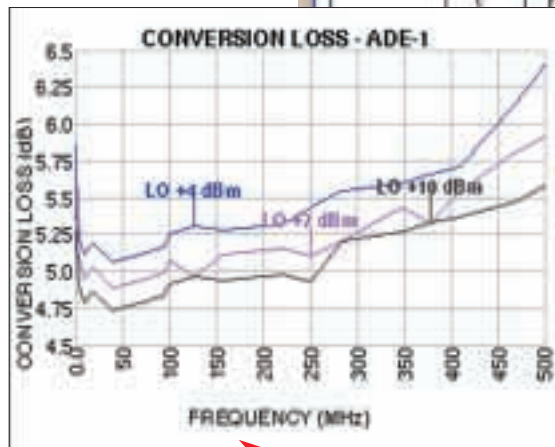
TIP:

To aid your evaluation,
click the Case Style number
corresponding to the
Reference No. to display
complete case style information.

see us on the web
www.minicircuits.com



Spec page displays tables of actual performance data. Graphical data is indexed on the page to be displayed when clicked.



Frequency Mixers

LO Power Level 7 dBm

Pin Configuration
For LO RF IF Gnd Ext. Case Gnd Not Used
1 2 3 4 5

Outline Drawing

Notes:

- +4dBm LO, up to +1 dBm RF
- Absolute maximum power, voltage and current ratings:
- a. RF power, 500mW
- b. Peak IF current, 40mA
- General Quality Control Procedures and Environmental Specifications are given in [Mini-Circuits Quality Guide](#).
- RF-Freq, MFL description are given in [SMA to SMA](#).
- Prices and Specifications subject to change without notice.

Electrical Specifications
ADE-1 LO Power Level 7 dBm

Frequency MHz	Max. Conversion Loss dB	Min. LO-RF Isolation dB	Min. LO-IF Isolation dB
100-500	5.2	58	35

Color range (L to H) - Need range (H/L) to (L/H) - Upper range (H/L) to (L/H)

Typical Performance Data

RF MHz	LO MHz	Conversion Loss (dB)	LO-RF Isolation (dB)	LO-IF Isolation (dB)	IF-RF Isolation (dB)
100	100	5.2	58	35	35
100	200	5.2	58	35	35
100	300	5.2	58	35	35
100	400	5.2	58	35	35
100	500	5.2	58	35	35

Conversion Loss **LO-RF Isolation** **LO-IF Isolation** **VSWR RF Port** **VSWR LO Port** **VSWR IF Port**

Click Above for Actual Performance Data.

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Viewing Actual Performance Data And Case Styles

Viewing Tables And Graphs

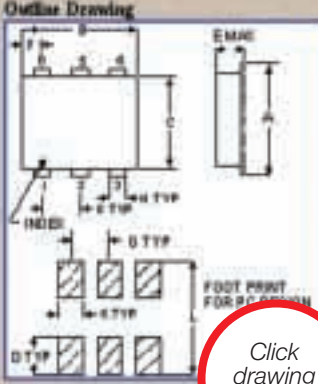
Start with the lowest priced part that meets your requirements and click on the reference number to display a specification page. The resulting page shows *actual performance data* in tabular form and indexes actual graphical performance data available for up to 7 important electrical specifications. Click on the bar for the performance specification you wish to view graphically and a Java Applet Window will appear with corresponding actual performance curves. To view another performance curve, simply click another performance specification bar.

Frequency Mixers

LO Power Level 7 dBm

Pin Configuration
Port LO RF IF Gnd Ext. Case Gnd Not Used
M 1 2 3 4 5

Outline Drawing



Notes:

- +7dBm LO, up to +1 dBm RF
- Absolute maximum power, voltage and current
- 5.0V power, 50mA
- 5.0V power, 40mA
- General Quality Control Procedures and Environmental Specifications are given in [Mini-Circuits Quality Control](#)
- RF, IF, and LO specifications are given in [LO and RF](#)
- Prices and Specifications subject to change without notice.

Electrical Specifications
ADE-1 LO Power Level 7 dBm

Frequency MHz	Max. Conversion Loss (dB)	Min. LO-IF Isolation (dB)	Min. LO-RF Isolation (dB)
LO/RF IF	Mid-Band Total Range	L M U	L M U
5.300-60.000	6.5	7.0	50 20 20 45 20 20
LO range (Hz to 100) Mid-Band range (MHz to 100) Upper range (Hz to 100)			

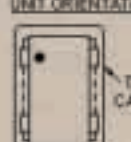
Typical Performance Data

ADE-1		Conversion Loss (dB)			Isolation L-R (dB)			Isolation L-I (dB)		
RF MHz	LO MHz	+4 dBm	+7 dBm	+10 dBm	LO	LO	LO	LO	LO	LO
5.300	30.000	5.85	5.85	5.85	30.300	65.51	67.44	69.34	69.55	69.67
6.000	30.000	5.71	5.80	5.80	30.300	66.50	67.50	69.00	69.84	69.84
10.000	31.000	5.89	5.89	5.89	31.000	68.66	67.51	69.37	69.58	69.67
10.000	30.000	5.22	5.06	4.99						
10.000	40.000	5.19	4.88	4.79						
20.000	50.000	5.19	5.02	4.90						
40.000	70.000	5.86	5.86	5.92						
61.247	90.247	5.35	4.90							
94.823	124.823	5.35	4.99	4.93						
100.000	130.000	5.28	5.03	4.91						
130.395	160.395	5.30	4.90	4.90						
157.950	187.950	5.20	5.11	4.94						
221.116	251.116	5.20	5.08	4.98						
250.300	280.300	5.40	5.00	4.90						
304.380	334.380	5.84	5.20	5.20						
347.411	377.411	5.89	5.40	5.27						
370.304	400.304	5.86	5.30	5.20						
430.880	460.880	5.71	5.84	5.27						
470.000	500.000	5.34	5.81	5.47	500.000	41.16	44.67	44.00	63.59	39.34
500.000	530.000	5.41	5.81	5.50	530.000	41.00	45.02	45.00	63.67	39.50

Case Style - CD036 (inch/mm)

A	B	C	D	E	F	G	H	I	J
380	340	220	100	125	105	100	800		
7.112	7.874	5.585	2.540	3.337	2.667	2.540	20.32		

UNIT ORIENTATION



Package Information:
Type: Plastic (Pb), 18
Lead Size (inches): 12
Device Cavity Pitch (inches): 12
Devices Per Reel: 1000

YONI provides complete
Case Style information.

Viewing Case Style Information

YONI displays complete case style information including:

- Drawings
- Outline Dimensions, Tolerances
- Weight
- Plus Material & Finish, and Mounting information.



Within the component's broad frequency range, evaluate the frequency band needed for your application (example: 50-100MHz as shown in red box).

Frequency Mixers

LO Power Level 7 dBm

Pin Configuration
Part LO RF F In Out Ext. Cases Not Used

Outline Drawing

Notes:

- +7dBm LO, up to +1 dBm RF
- Absolute maximum power, voltage and current ratings:
- a. RF power, 50mW
- b. Peak RF current, 40mA
- General Quality Control Procedures and Environmental Specifications are given in [Mini-Circuits Quality](#)
- RF and LO impedances are given in [RF and LO](#)
- Prices and Specifications subject to change without notice.

Electrical Specifications
ADE-1 LO Power Level 7 dBm

Frequency MHz	Max. Conversion Loss dB	Min. LO-RF Isolation dB	Min. LO-IF Isolation dB
100-500	5.5	7.5	50 20 20 40 25 20

Lower range (10 to 100) Mixed range (100 to 1000) Upper range (1000 to 10000)

Typical Performance Data

ADE-1		Conversion Loss (dB)			Isolation LR (dB)			Isolation LI (dB)			
RF MHz	LO MHz	LO +4 dBm	LO +7 dBm	LO +10 dBm	LO (dBm)	LO +4 dBm	LO +7 dBm	LO +10 dBm	LO +4 dBm	LO +7 dBm	LO +10 dBm
50.000	30.000	5.05	5.05	5.12	10.000	65.51	67.89	69.34	59.64	59.67	59.50
6.000	36.000	5.71	5.58	5.38	10.000	68.50	67.50	69.89	59.84	59.83	59.34
1.000	31.000	6.49	5.28	5.18	10.000	68.80	67.81	69.27	59.50	59.57	59.34
5.000	30.000	5.22	5.06	4.84	10.000	69.30	66.27	67.84	59.16	59.50	59.34
10.000	40.000	5.12	4.46	4.79	40.000	65.27	66.27	66.84	57.06	54.17	52.94
20.000	50.000	5.18	5.00	4.86	50.000	65.90	65.34	64.67	52.17	51.17	50.84
30.000	50.000	5.06	4.69	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
40.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
50.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
60.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
70.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
80.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
90.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
100.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
110.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
120.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
130.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
140.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
150.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
160.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
170.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
180.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
190.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
200.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
220.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
240.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
260.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
280.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
300.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
320.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
340.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
360.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
380.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
400.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
420.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
440.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
460.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
480.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53
500.000	50.000	5.18	4.84	4.84	50.000	65.27	61.20	61.20	48.53	48.53	48.53

Conversion Loss **LO-RF Isolation** **LO-IF Isolation** **VSWR RF Port** **VSWR LO Port** **VSWR IF Port**

Click Above for Actual Performance Data.

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How To Evaluate, Select, And Order Your Parts

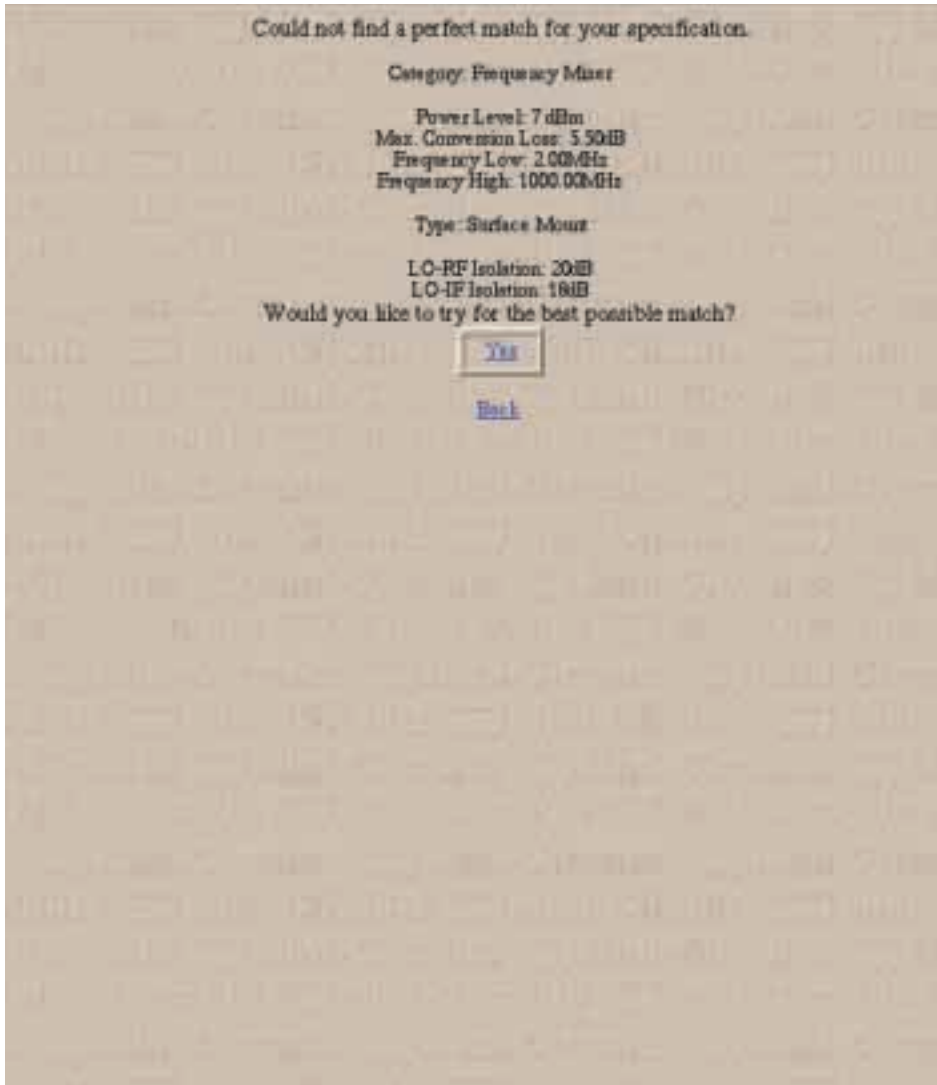
How To Evaluate And Select Your Parts

Within the Tables and Curves, locate the frequency range you specified when you initiated the search and evaluate the corresponding electrical specifications within that frequency band. Evaluate the package style as well.

Repeat this procedure with each model you selected to obtain the optimum price/performance solution for your application.

How To Order Your Parts

To order your parts on the internet, contact Mini-Circuits sales by clicking the "Contact Us" bar at the Home Page and following the "Sales" link, or email: sales@minicircuits.com. Be sure to advise that you selected your model using YONI so we will be confident you selected the optimum model for your application.




If your criteria are not matched, YONI asks, "Would you like to try for the best possible match?".

What Happens If YONI "Draws A Blank"?

SCREEN #1: Obtaining A Best Possible Match

If YONI could not find an exact match for your specification criteria, best possible component matches can be found. In this situation, YONI will display a page listing your stated criteria and will ask: "Would you like to try for the best possible match?".

To view a list of components displaying best possible matches, Click  .



Frequency Mixers

LO Power Level 7 dBm

Click on the reference number to see Performance Data and Graph.

Reference No.	Matched Criteria			Frequency MHz		Conversion Loss dB		LO-RF Isolation dB			LO-IF Isolation dB			Case Style	Connection	Notes
	VIEW	CLIP	REL	LO/RF	IF	Mid-Band	Total Range	L	M	U	L	M	U			
YOM-1000	N.Y.V	..		2.00-1000	DC-1000	7.2	9.3	45	30	25	40	24	20	100-100	s	*1,4
YOM-1500	N.Y.V	..		1.000-2500	10-600	9.0	10.3	40	24	20	40	20	15	100-150	x	*1,4
YOM-2500	N.Y.V	..		1.000-2500	DC-500	8.5	9.8	50	25	20	45	10	8	100-160	±	*1,4
THE-1000	N.Y.V	..		1.000-1500	1-1000	7.0	9.0	40	30	17	45	25	20	100-130	gm	*1,4
ADL-1000	N.Y.V	..		1.000-1000	DC-1000	6.8	9.3	45	30	20	40	22	12	100-140	la	*1,4
YOM-1000	N.Y.V	..		1.000-3000	10-600	8.3	9.8	40	25	25	40	20	20	100-180	±	
YOM-1500	N.Y.V	..		1.000-2500	10-500	8.0	9.8	40	24	20	40	20	15	100-190	la	*1,4
ADR-1000	N.Y.V	..		0.100-1112	5-1050									100-140	la	U
ADR-1000	N.Y.V	..		0.100-2000	10-1000									100-140	la	U
ADR-1000	N.Y.V	..		2.00-1577	0-1400									100-140	la	U
ADR-1000	N.Y.V	..		0.500-1050	0-1000									100-140	la	U
ADR-1000	N.Y.V	..		1.000-1970	0-500									100-140	w	U
ADR-1000	N.Y.V	..		0.000-1540	100-1145									100-140	la	U

L=low range (f_L to $10f_L$) M=mid range ($10f_L$ to $f_U/2$) U=upper range ($f_U/2$ to f_U)

Pin Connections - see case style outline drawing

Part	LO	RF	IF	Grid Ext.	Case Grid	Not Used
w	1	4	5	2,3,6	-	-
x	2	1	3	4,5,6	-	-
gm	4	2	1	3	5	-
la	6	3	2	1,4,5	-	-
lu	6	2	3	1,4,5	-	-
la	11	5	2	1,3,4,6,7,8,9,10,12	-	-

Notes:
 +7dBm LO, up to +1 dBm RF
 unless maximum power, voltage, current, 50mW

If YONI could not match your performance criteria, you can select from alternate models.

YONI Suggests Alternate Models

After clicking [The](#), YONI will display a page listing Models and Engineering Design Reference Numbers with specifications and case styles of components that closely match your entered criteria. A column headed "Matched Criteria" will be displayed. This column is keyed to your specific search criteria and will indicate which of your specifications were met (Y) and which were not (N).

- Y=Search Criteria Meets Spec.
- N=Search Criteria Does Not Meet Spec.
- Blank=Criteria was not defined.


By viewing the specifications of suggested alternate components, and knowing at a glance which specifications meet your criteria and which do not (Y or N), you can determine if alternate units are acceptable for your consideration.

Frequency Mixers

LO Power Level 7 dBm

Pin Configuration
Port: LO RF F-Gnd Ext. Case Gnd Not Used
1 2 3 4 5 6

Outline Drawing



Notes:

- +7dBm LO, up to +1dBm RF
- Absolute maximum power, voltage and current ratings:
- a. RF power, 500mW
- b. Peak RF current, 40mA
- General Quality Control Procedures and Environmental Specifications are given in [Mini-Circuits Quality Control and Environmental Specifications](#)
- 16-Pin, 16L description and pins are in [16-Pin and 16L](#)
- Prices and Specifications subject to change without notice.

Electrical Specifications
SYM-2 LO Power Level 7 dBm

Frequency MHz	Max. Conversion Loss dB	Min. LO-RF Isolation dB	Min. LO-F Isolation dB
LO-RF F	Max. Band Total Range	L M U L M U	L M U L M U
2.00-1000	97-1000	7.2 9.5	45 50 25 40 24 20
Lower range(f ₁ to f ₂) - Midrange(f ₁ to f ₂) - Upper range(f ₁ to f ₂)			

Typical Performance Data

21MA2		Conversion Loss (dB)		ISOL		Isolation L-R (dB)		Isolation L-F (dB)			
RF MHz	LO MHz	LO -4 dB	LO -7 dB	LO -10 dB	LO -13 dB	LO -16 dB	LO -19 dB	LO -22 dB	LO -25 dB		
1.000	12.000	7.55	7.22	7.00	1.000	64.00	67.00	70.00	64.00	67.00	70.00
2.000	22.000	6.99	6.56	6.20	2.000	64.00	67.00	70.00	64.00	67.00	70.00
3.000	32.000	6.14	5.69	5.30	3.000	64.00	67.00	70.00	64.00	67.00	70.00
10.000	42.000	6.01	5.62	5.27	10.000	64.00	67.00	70.00	64.00	67.00	70.00
20.000	52.000	6.10	5.66	5.31	20.000	64.00	67.00	70.00	64.00	67.00	70.00
50.000	62.000	5.94	5.50	5.14	50.000	64.00	67.00	70.00	64.00	67.00	70.00
100.000	72.000	5.96	5.53	5.18	100.000	64.00	67.00	70.00	64.00	67.00	70.00
157.040	107.040	5.96	5.53	5.18	157.040	64.00	67.00	70.00	64.00	67.00	70.00
212.870	352.870	5.96	5.53	5.18	212.870	64.00	67.00	70.00	64.00	67.00	70.00

Case Style - TTT360 (inch, mm) weight: 0.0 grams.

Conversion Loss: LO-RF Isolation: LO-F Isolation: VSWR RF Port: VSWR LO Port: VSWR F Port

Click Above for Actual Performance Data.

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Evaluate the alternate component suggested using Tabular and Graphical displays.

You can review each alternate component's specification page by clicking on the Model or Engineering Design Reference Number. The resulting page will display actual measured performance data in the form of tables, and indexes performance curves.



If YONI could not provide a part to meet your requirements, contact Mini-Circuits for a fast response.

Could not find a perfect match for your specification.

Category: Frequency Mixer

Power Level: 7dBm
Max. Conversion Loss: 2.00dB
Frequency Low: 5.00MHz
Frequency High: 600.00MHz

Type: Surface Mount

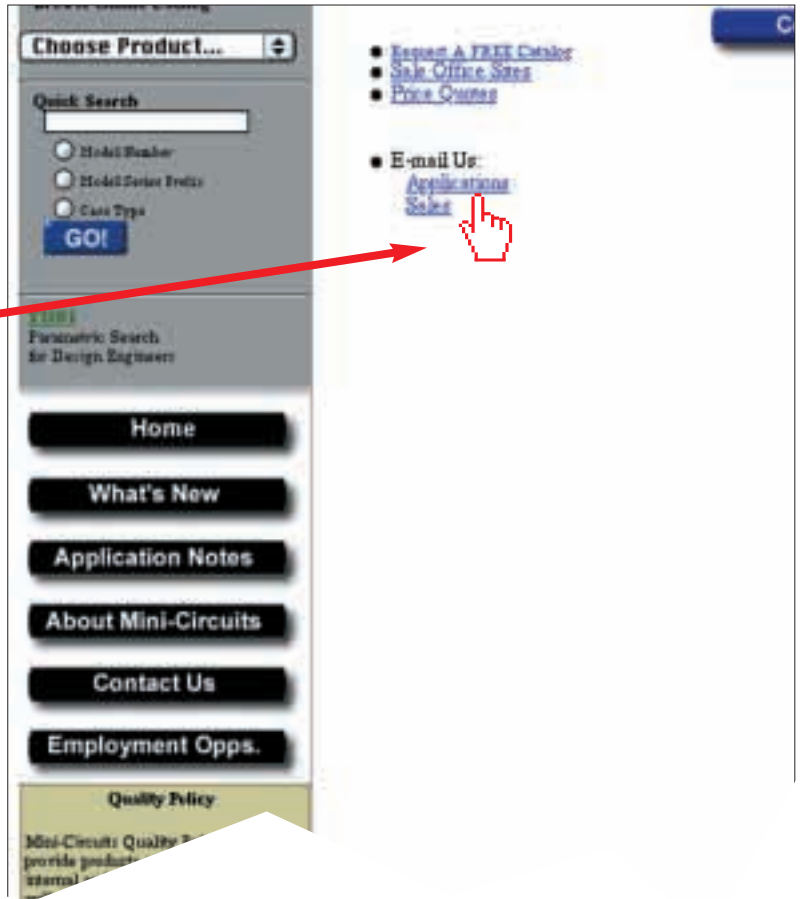
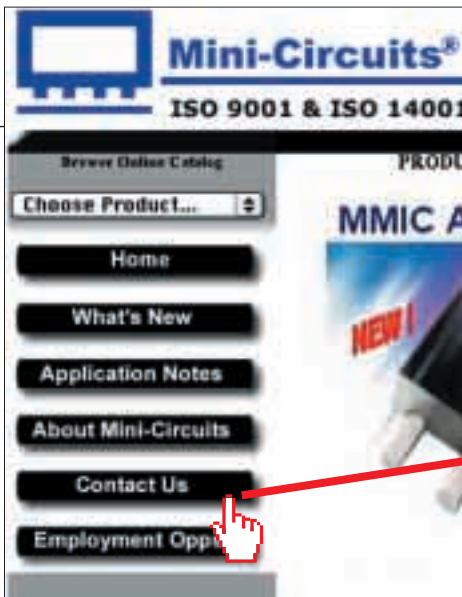
Please fill out the form if you would like to be contacted regarding your requirement in this application.

Your Email Address	<input type="text"/>
*Your Full Name	<input type="text"/>
*Phone Number	<input type="text"/>
*Company Name	<input type="text"/>
*Country	<input type="text"/>
*Special Requirement * = optional	<input type="text"/>

SCREEN #2: Contacting An Applications Engineer

If a component match is not found and YONI could not suggest alternate models, a form will be provided to communicate your requirements to Mini-Circuits (see screen above).

Our team of dedicated applications Engineers are prepared to respond courteously, knowledgeably, and promptly to help find the Mini-Circuits part for your applications.



*To obtain help finding your part in
The YONI Search Engine, click the
"Contact Us" bar on the
Mini-Circuits home page, then
click the "Applications" link.*

Limitations Of The YONI Search Engine

YONI may not locate your part on the search engine if the required frequency range you entered is too narrow. If YONI does not suggest a part, return to the Data Entry Fields (see page 8), broaden the frequency range, and proceed with a new search.

If The YONI Search Engine still cannot find an acceptable part for your requirements, you may contact Mini-Circuits through the "Contact Us" link on the home page. Detail your requirements in the form provided, and an Applications Engineer will contact you within 48 hours.





TIP:

The YONI "Quick Search" option can display spec pages by entering a complete model number or series prefix. It can also provide a detailed case style drawing.

How To Obtain Actual Performance Data Using The Component Model Number

Actual performance data may be obtained via "The YONI Search Engine" using a component model number as well.

Return to Mini-Circuits Home Page at:

www.minicircuits.com

and enter the model number in the "Quick Search" field. Select the "Model Number" circle under the field, then click "GO".

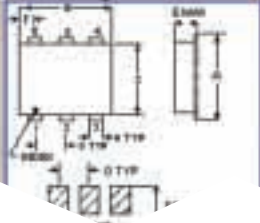
This is an alternate method for accessing the YONI Search Engine to obtain actual performance data, tables, curves, and case style information for component categories that are indexed (see page 7).

Note: This feature works with Internet Explorer version 4.0 or higher or Netscape 4.0 or higher.

Frequency Mixers
LO Power Level 7 dBm

Pin Configuration
Pin 1: LO RF Pin 2: GND Pin 3: RF Pin 4: GND Pin 5: RF Pin 6: GND Pin 7: RF Pin 8: GND

Outline Drawing



Notes:

- 1. ADE-1 is a 100 MHz RF mixer.
- 2. Absolute maximum ratings, voltages and currents must not be exceeded.
- 3. RF power: 100 mW.
- 4. Power: 100 mW.
- 5. Power: 100 mW.
- 6. Power: 100 mW.
- 7. Power: 100 mW.
- 8. Power: 100 mW.
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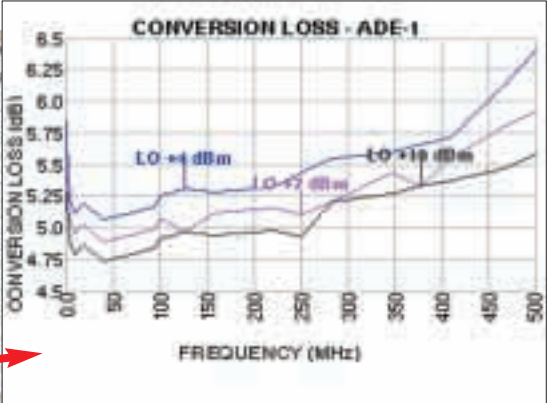
Electrical Specifications
ADE-1 LO Power Level 7 dBm

Frequency (MHz)	Min. Conversion Loss (dB)	Max. LO Power (dBm)	Min. LO Power (dBm)	Min. Isolation (dB)	Min. Isolation (dB)
100	4.5	10	0	10	10
150	4.5	10	0	10	10
200	4.5	10	0	10	10
250	4.5	10	0	10	10
300	4.5	10	0	10	10
350	4.5	10	0	10	10
400	4.5	10	0	10	10
450	4.5	10	0	10	10
500	4.5	10	0	10	10

Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)	Isolation (dB)	LO Power (dBm)	LO Power (dBm)	LO Power (dBm)
100	4.5	10	0	10	10
150	4.5	10	0	10	10
200	4.5	10	0	10	10
250	4.5	10	0	10	10
300	4.5	10	0	10	10
350	4.5	10	0	10	10
400	4.5	10	0	10	10
450	4.5	10	0	10	10
500	4.5	10	0	10	10

CONVERSION LOSS - ADE-1



Mini-Circuits

Click Above for Actual Performance Data.

Conversion Loss | Isolation | LO Power | RF Power | RF Loss | RF Return

Alternate method for obtaining
Actual Performance Data.

If the part entered is indexed in YONI, the resulting page allows you to view actual performance data for the model entered. Tables will be displayed and graphical data may be viewed by clicking the appropriate specification bar.

For YONI navigating instructions, see pages 12 to 14.





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will:

meet stated requirements
exceed expectations
continuously be improved

Harvey Kaylie,
President

Model n

• Dot indicates surface mount mo
mixers

model	pages	ma
AD-1	20	MS
AD-1ASK	70	MS
AD-1H	86	MS
AD-1W	86	MS
AD-1HW	87	MS
AD-1H	76	MS
AD-1HW	76	MS
AD-1H	80	MS
AD-1HW	80	MS
AD-1H	86	MS
AD-1H	70	MS

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Frequency Mixers

Combiners/ Splitters

ifiers

Select "Catalog Model
Index" from the
"Browse Online Catalog"
drop-down menu.

Browse pages for your
component category.

Click the model number to
view specs and prices.

If the Model Number you entered is not indexed in YONI,
return to the Mini-Circuits Home Page and locate your Model
Number in "Catalog Model Index" from the drop-down menu
located in the "Browse Online Catalog" feature.

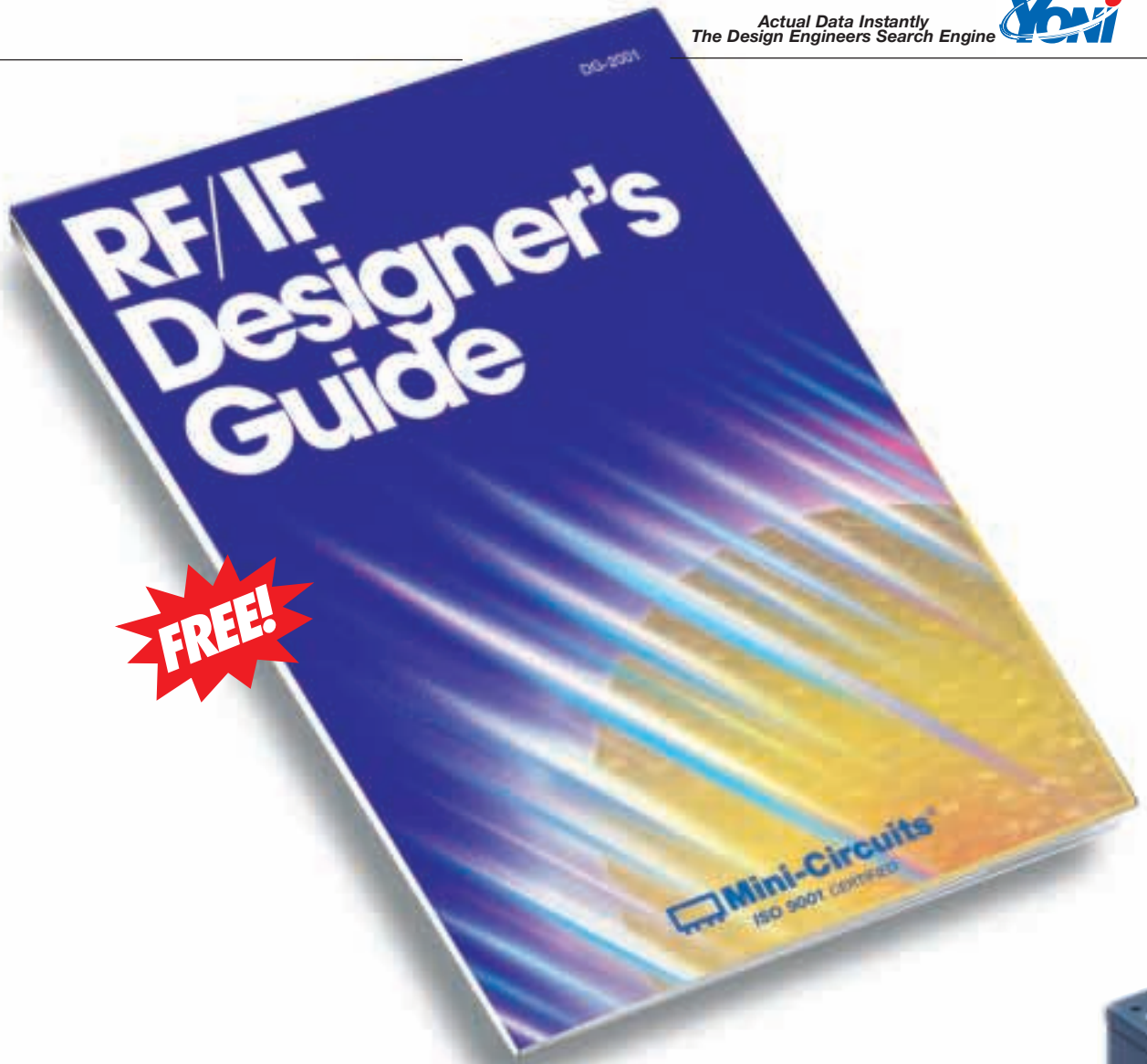
Locate your component category in the index, then Click on a
Model Number to view information from our Online Catalog.



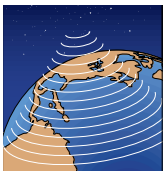
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