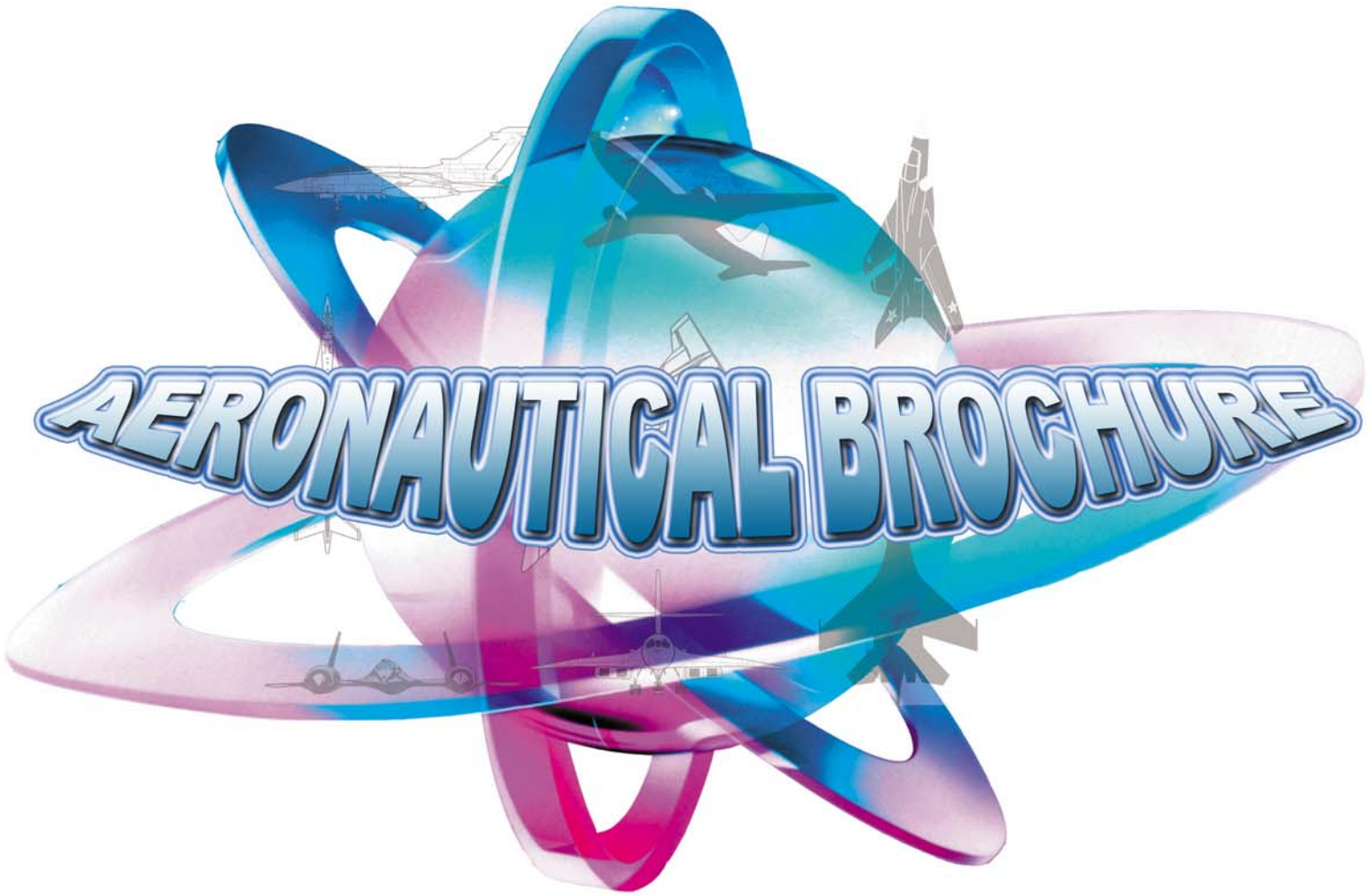
EMR corp.

Products & Accessories Specific To The Aeronautical Industry



EMR corp. 17431 N. 25th Avenue Phoenix, Arizona 85023
Tel: (623) 581-2875 Toll: 1-800-796-2875
Fax: (623) 582-9499 e-mail: sales@emrcorp.com
Web Site: emrcorp.com

EMR Corporation was founded in 1980 by William Lieske, Sr. as an OEM supplier of ferrite and hybrid devices to the land mobile communications and broadcast industries. Bill has been involved in radio communications for more than 60 years. Beginning with a radio amateur license at the age of 13, he went on to work in military radar, public safety, radio communication manufacturing and commercial corporate sales. As the chief engineer, Bill's approach to R.F. systems component design is without parallel in the industry. Bill's work has helped set standards in the U.S. and international land mobile communications and antenna site management industries.

Soon after founding EMR Bill expanded his scope of activities to include the design and manufacturing of cavity resonant devices and complex combination of R.F. filtering products, such as antenna duplexers, hybrid and cavity resonant combining networks and receiver multicoupling.

In early 1992, EMR began manufacturing amplifiers for land mobile and broadcast receiver applications. EMR's product line includes a line of receiver pre-amplifiers, hybrid dividers and amplifiers in various bands for up to 250 watts output power. We also offer a complete line of antenna site and mobile application filtering products covering the R.F. spectrum from 30 MHz to 2.8 GHz.

EMR has built an efficient and effective team of highly trained, motivated, dedicated employees. With our specialized team members providing leadership, top notch engineering and state of the art manufacturing we design and manufacture a wide variety of custom products as well as products for standardized applications. EMR excels in unique designs to meet exact customer requirements.

EMR Corporation provides design, supply and implementation of complete R.F. communication systems. Our corporate philosophy is:

TO PROVIDE HIGH QUALITY PRODUCTS, TECHNICAL EXCELLENCE & PRACTICAL ENGINEERING AT AN ECONOMICAL PRICE

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CIRCULATOR & ISOLATOR APPLICATION NOTES:

- Circulated power is the same as forward handling power.
- To insure stated specifications, loads are dynamically matched to circulators during manufacturing. Isolation and insertion loss specifications are guaranteed only with EMR supplied loads.
- Models with load terminations of 125 watts or higher include matched cable to load and circulator to load termination mounting bracket.
- Higher power models are available, please contact the factory with your requirements.
- Connectors other than N female are available, please contact the factory.
- Models with an “H” after the slash (/) include additional heat sinking.
- Models with an “F” after the slash include a thermally activated 115 VAC forced air cooling fan for applications exceeding a 50% duty cycle (1 minute on 1 minute off). Fans other than 115 VAC are available.
- Isolator models with a “/1S” suffix contain a built-in 2nd harmonic filter.
- Isolators and circulators are manufactured for specific frequencies within the listed frequency ranges. Circulators and Isolators are manufactured across the spectrum from 66 MHz to 2.5 GHz for a variety of domestic and international applications. Please contact the factory for more detailed specifications and requirements.

IM CONTROL PANEL APPLICATION NOTES:

- The following electrical specifications apply to all EMR IM Control Panels:

  VSWR: 1.15:1

  Impedance: 50 Ω

  Temperature Range: -22 to +140º F (U.S.) & -30 to +60º C (metric)

  Connectors: N-Female

  Finish: Textured Gray Enamel. Except for model numbers with the suffix of “/1S” which have a chem film finish
- IM control panels include factory tuned isolator, harmonic filter and 19” rack mounted panel.
- Models with load terminations of 125 watts or higher include matched cable to load and circulator to load termination mounting bracket.
- To insure stated specifications loads are dynamically matched in circulators during manufacturing. Isolator specifications are guaranteed only with manufacturer supplied loads.
- Models with an “H” after the slash (/) include additional heat sinking.
- Models with an “F” after the slash include a thermally activated 115 VAC forced air cooling for applications above 200 watts and exceeding a duty cycle of 50% (1 minute on 1 minute off). Fans using other than 115 VAC are available.
- Low pass filters may be provided in place of 2nd harmonic filters for an additional charge.

AERONAUTICAL
INTERMODULATION CONTROL DEVICES

Model No. List Price	Description	Frequency	Pwr: Input Refl	Bandwidth: Fixed Tunable	Insertion Loss	Isolation	Load Termination	Actual Dimensions Inches Metric	Ship Wt. lbs kg.
AEW7440/3A	Single Isolator, 30 Watt Load	118-136	50 W 30 W	0.5 MHz	0.40 dB	30 dB	30 W	1 3/8 x 3 1/2 x 4 1/8 35 x 89 x 105	4 1.9
AEW8440/23A	Dual Isolator, 15/30 Watt Load	118-136	50 W 30 W	0.5 MHz	.75 dB	60 dB	15/30 W	1 1/2 x 5 1/2 x 5 5/8 39 x 140 x 143	3 1.4
AEW7440/3E	Single Isolator, 30 Watt Load	225-300	50 W 30W	1 MHz	0.40 dB	30 dB	30 W	1 3/8 x 3 1/2 x 4 1/8 35 x 89 x 105	4 1.9
AEW8440/23E	Dual Isolator, 15/30 Watt Load	225-300	50 W 30 W	1 MHz	.75 dB	60 dB	15/30 W	1 1/2 x 5 1/2 x 4 1/8 39 x 140 x 105	3 1.4
AEW7530/0	Single Isolator, 20 Watts	300-400	20 W 10 W	1 MHz	0.30 dB	30 dB	0	1 3/8 x 3 1/2 x 3 35 x 96 x 77	3 1.4
AEW7540/3	Single Isolator, 30 Watt Load	300-400	50 W 30 W	1 MHz	0.30 dB	30 dB	30 W	1 3/8 x 3 1/2 x 4 1/8 35 x 96 x 105	3 1.4
AEW8540/22	Dual Isolator, 15/15 Watt Load	300-400	30 W 15 W	1 MHz	.60 dB	60 dB	15/15 W	1 3/8 x 5 1/2 x 4 1/8 35 x 140 x 105	3 1.4

AEW7440/3A

AEW7440/3E

AEW7540/3

AEW8440/23A

AEW8440/23E

AEW8540/22

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ELECTRICAL SPECIFICATIONS

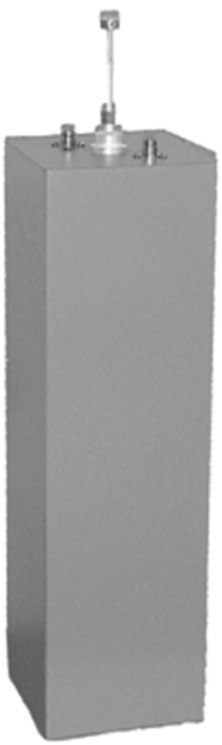
Model Number	AE6454/SBA	AE6467/SBA	AE6467/SBE	AE6554/SBB
Frequency Band (MHz)	118-138	118-138	225-300	375-440
I/P Pwr, @ 1.0 dB	150 W	200 W	200 W	150 W
Insertion Loss	Contact Factory			
Attenuation	Contact The Factory For Performance Plots			
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	1.25:1 or Better	1.25:1 or Better	1.25:1 or Better	1.25:1 or Better
Electrical Length	1/4 λ	1/4 λ	1/4 λ	1/4 λ
Temp Range	- 40 to +140 °F - 30 to +60 ° C	- 40 to +140 °F - 30 to +60 ° C	- 40 to +140 °F - 30 to +60 ° C	- 40 to +140 °F - 30 to +60 ° C

MECHANICAL SPECIFICATIONS

Dim (d x w) Individual Cavity	4" x 4" 102 x 102 mm	7" x 7" 178 x 178 mm	4" x 4" 102 x 102 mm	7" x 7" 178 x 178 mm
Dim (Height)	26" - 32 1/2" 661 - 826 mm	26" - 32 1/2" 661 - 826 mm	26" - 32 1/2" 661 - 826 mm	26" - 32 1/2" 661 - 826 mm
Connectors	N Female	N Female	N Female	N Female
Finish	EMR Gray	EMR Gray	EMR Gray	EMR Gray
Ship Weight: Single Dual Triple	12 lbs. (6.5 kg.) 22 lbs. (10.1 kg.) 28 lbs. (12.8 kg.)	16 lbs. (7.3 kg.) 48 lbs. (21.8 kg.) 65 lbs. (29.5 kg.)	12 lbs. (6.5 kg.) 22 lbs. (10.1 kg.) 28 lbs. (12.8 kg.)	16 lbs. (7.3 kg.) 48 lbs. (21.8 kg.) 65 lbs. (29.5 kg.)

AE6454/SBA

AE6467/SBA & AE6467/SBE



AE6554/SBB

ELECTRICAL SPECIFICATIONS

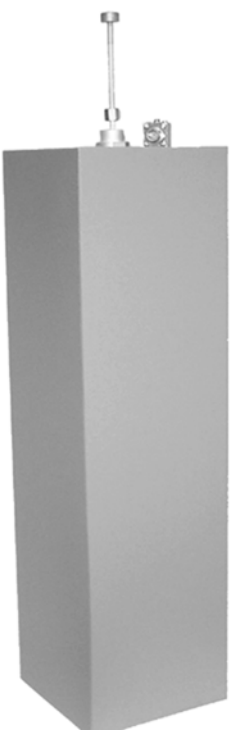
Model Number	AE6454/SNA	AE6467/SNA	AE6467/SNE	AE6554/SNB
Frequency Band (MHz)	118-138	118-138	225-300	375-440
I/P Pwr, @ 1.0 dB	150 W	200 W	200 W	150 W
Insertion Loss	Contact Factory			
Attenuation	Contact The Factory For Performance Plots			
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	1.25:1 or Better	1.25:1 or Better	1.25:1 or Better	1.25:1 or Better
Electrical Length	1/4 λ	1/4 λ	1/4 λ	1/4 λ
Temp Range	- 40 to +140 °F - 30 to +60 ° C	- 40 to +140 °F - 30 to +60 ° C	- 40 to +140 °F - 30 to +60 ° C	- 40 to +140 °F - 30 to +60 ° C

MECHANICAL SPECIFICATIONS

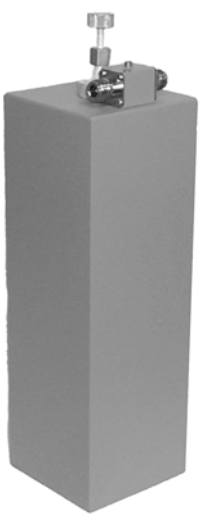
Dim (d x w) Individual Cavity	4" x 4" 102 x 102 mm	7" x 7" 178 x 178 mm	7" x 7" 178 x 178 mm	4" x 4" 102 x 102 mm
Dim (Height)	26" - 32 1/2" 661 - 826 mm	26" - 32 1/2" 661 - 826 mm	26" - 32 1/2" 661 - 826 mm	26" - 32 1/2" 661 - 826 mm
Connectors	N Female	N Female	N Female	N Female
Finish	EMR Gray	EMR Gray	EMR Gray	EMR Gray
Ship Weight: Single Dual Triple	12 lbs. (6.5 kg.) 22 lbs. (10.1 kg.) 28 lbs. (12.8 kg.)	16 lbs. (7.3 kg.) 48 lbs. (21.8 kg.) 65 lbs. (29.5 kg.)	16 lbs. (7.3 kg.) 48 lbs. (21.8 kg.) 65 lbs. (29.5 kg.)	12 lbs. (6.5 kg.) 22 lbs. (10.1 kg.) 28 lbs. (12.8 kg.)

AE6454/SNA

AE6467/SNA & AE6467/SNE



AE6554/SNB



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ELECTRICAL SPECIFICATIONS

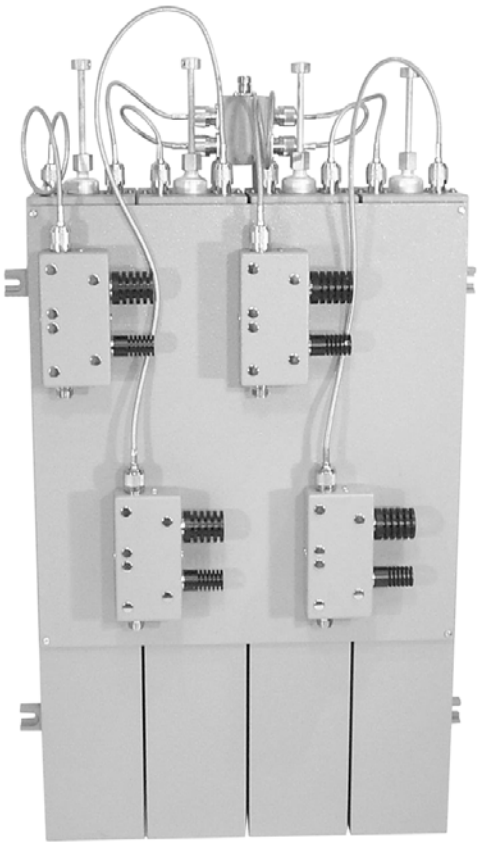
Model Number	AE64442/A	AE64441/A
Frequency Band (MHz)	118-138	118-138
# of Channels	4	4
Max. Pwr Per Channel	50 W	50 W
Min. Frequency Spacing	200 KHz	200 KHz
Max. Insertion Loss	2.4 dB	2.2 dB
Min. Insertion Loss	1.7 dB	1.55 dB
Isolation Tx/Tx	90 dB	43 dB
Isolation Ant/Tx	70 dB	66 dB
Impedance	50 Ω	50 Ω
Max. VSWR In/Out	1.1:1 / 1.25:1	1.5:1 / 1.5:1
Isolator	Dual	Single
Temperature Range	- 22 to +140 °F - 30 to +60 ° C	- 22 to +140 °F - 30 to +60 ° C

MECHANICAL SPECIFICATIONS

Cavity Dim (d x w) Inches Metric	4” x 4” 102 x 102 mm	4” x 4” 102 x 102 mm
Connectors	N Female	N Female
Finish	EMR Gray	EMR Gray
Ship Weight: lbs. kg.	70 31.8	67 30.4

Contact factory for close channel spacing options.

AE64442/A



ELECTRICAL SPECIFICATIONS

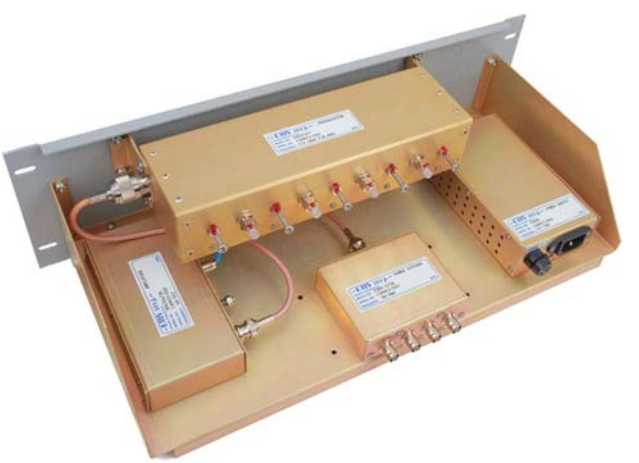
Model Number	AE24104-0/P-5A	AE24104-0/P-5A	AE24108-0/P-5A	AE24108-0/P-5A
Frequency Band (MHz)	118-138	118-138	118-138	118-138
# of Channels	3-4	3-4	5-8	5-8
Pass Band	2-10 MHz	2-10 MHz	2-10 MHz	2-10 MHz
# of Resonators	5	5	5	5
Rx/Rx Isolation	20+ dB	20+ dB	20+ dB	20+ dB
System Voltage	115 VAC	115 VAC	115 VAC	115 VAC
Amplifier Gain	+30 dB	+30 dB	+30 dB	+30 dB
Amplifier Type	Bipolar	Bipolar	Bipolar	Bipolar
Amplifier Noise Figure	3.0 dB	3.0 dB	3.0 dB	3.0 dB
Amplifier 3rd Order IP	+42 dBm	+42 dBm	+42 dBm	+42 dBm
Amplifier 1 dB Comp	+21 dBm	+21 dBm	+21 dBm	+21 dBm
Amplifier Bias Voltage <1>	13.6 VDC	13.6 VDC	13.6 VDC	13.6 VDC
Amplifier Current Draw	200 mA	200 mA	200 mA	200 mA
System NF (typ.)	5.0 dB	5.0 dB	5.0 dB	5.0 dB
Nominal Inpedance	50 Ω	50 Ω	50 Ω	50 Ω
Max. VSWR @ Resonance	1.25:1	1.25:1	1.25:1	1.25:1
Temperature Range	- 22 to +140 °F - 30 to +60 ° C	- 22 to +140 °F - 30 to +60 ° C	- 22 to +140 °F - 30 to +60 ° C	- 22 to +140 °F - 30 to +60 ° C

MECHANICAL SPECIFICATIONS

Dimensions: Inches Metric	5 1/4 x 19 x 10 134 x 483 x 254	5 1/4 x 19 x 10 134 x 483 x 254	5 1/4 x 19 x 10 134 x 483 x 254	7 x 19 x 10 178 x 483 x 254
Connectors: Input Output	N BNC	N N	N BNC	N N
Ship Weight: lbs. kg.	12 5.5	12 5.5	12 5.5	12 5.5

<1> Power options 24, 48 UDC, 115 VAC & 220 VAC.

NOTE: Aeronautical multicoupler available with and without amplifier or power dividers. Options for complex units with additional band pass and pass reject cavities are available. Contact our factory for options.



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ELECTRICAL SPECIFICATIONS

Model Number	AE24104-0/P-5E	AE24108-0/P-5E	AE25104-0/P-5A	AE25108-0/P-5A
Frequency Band (MHz)	225-300	225-300	300-400	300-400
# of Channels	3-4	5-8	3-4	5-8
Pass Band	2-8 MHz	2-8 MHz	2-8 MHz	2-8 MHz
# of Resonators	5	5	5	5
Rx/Rx Isolation	20+ dB	20+ dB	20+ dB	20+ dB
System Voltage	115 VAC	115 VAC	115 VAC	115 VAC
Amplifier Gain	+30 dB	+30 dB	+30 dB	+30 dB
Amplifier Type	Bipolar	Bipolar	Bipolar	Bipolar
Amplifier Noise Figure	3.0 dB	3.0 dB	3.0 dB	3.0 dB
Amplifier 3rd Order IP	+42 dBm	+42 dBm	+42 dBm	+42 dBm
Amplifier 1 dB Comp	+21 dBm	+21 dBm	+21 dBm	+21 dBm
Amplifier Bias Voltage <1>	13.6 VDC	13.6 VDC	13.6 VDC	13.6 VDC
Amplifier Current Draw	200 mA	200 mA	200 mA	200 mA
System NF (typ.)	5.0 dB	5.0 dB	5.0 dB	5.0 dB
Nominal Inpedance	50 Ω	50 Ω	50 Ω	50 Ω
Max. VSWR @ Resonance	1.25:1	1.25:1	1.25:1	1.25:1
Temperature Range	- 22 to +140 °F - 30 to +60 ° C	- 22 to +140 °F - 30 to +60 ° C	- 22 to +140 °F - 30 to +60 ° C	- 22 to +140 °F - 30 to +60 ° C

MECHANICAL SPECIFICATIONS

Dimensions: Inches Metric	5 1/4 x 19 x 10 134 x 483 x 254	5 1/4 x 19 x 10 134 x 483 x 254	5 1/4 x 19 x 10 134 x 483 x 254	5 1/4 x 19 x 10 134 x 483 x 254
Connectors: Input Output	N N	N N	N N	N N
Ship Weight: lbs. kg.	12 5.5	12 5.5	12 5.5	12 5.5

<1> Power options 24, 48 UDC, 115 VAC & 220 VAC.

NOTE: Aeronautical multicoupler available with and without amplifier or power dividers. Options for complex units with additional band pass and pass reject cavities are available. Contact our factory for options.

ELECTRICAL SPECIFICATIONS

Model Number	AE02415/A	AE02415/E	AE02515/A	AE02555/CP-5
Frequency Band (MHz)	118-138	225-300	300-375	300-375
Bandwidth	2-10 MHz	2-10 MHz	3-15 MHz	3-15 MHz
VSWR	1.3:1 or Better	1.3:1 or Better	1.3:1 or Better	1.3:1 or Better
Number of Resonators	5	5	5	5

MECHANICAL SPECIFICATIONS

Dimensions: Inches Metric	11 1/2 x 5 1/2 x 2 293 x 140 x 51	11 1/2 x 5 1/2 x 1 5/8 293 x 140 x 42	11 1/2 x 7 1/2 x 2 293 x 191 x 51	11 1/2 x 7 1/2 x 293 x 191 x 51
Connectors: Input Output	N Female N Female	N Female N Female	N Female N Female	N Female N Female
Ship Weight: lbs. kg.	4 1.9	4 1.9	4 1.9	4 1.9

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ORDERING, TERMS & POLICIES

ORDER PLACEMENT: All prices shown are list price, FOB factory (Phoenix Arizona - USA) and are subject to change without prior notice. Prices include domestic packaging and are exclusive of federal, state or local excise or sales taxes, duty or brokerage charges on export shipments. Unless otherwise negotiated freight will be prepaid and added to the invoice.

OPERATING FREQUENCIES: Operating frequencies and power levels used in preparing EMR products are those provided by the customer. Errors in operating frequencies or power levels made by EMR will be corrected at no charge. Errors due to faulty information from the customer are subject to all shipping charges and any material and/or labor cost incurred by EMR Corporation to correct the order.

TERMS OF SALE: Terms of sales are C.O.D., or Cash with Order unless other terms have been established prior to shipment. Open account status will be extended upon reasonable assurance of credit worthiness. Past due accounts are subject to a late charge of up to 2.0% monthly, beginning 30 days after the date of issuance of our valid invoices.

ORDER ACCEPTANCE: An order is considered contractually valid when a purchase order is accepted by mail, telephone, telegram or facsimile. Cancellations made less than 15 days prior to scheduled ship date may be subject to a cancellation charge.

CLAIMS FOR SHIPPING LOSS OR DAMAGE: All shipments will be made via the customers specified mode of transportation. If coded “best way” the shipment will be consigned to the most economical, reliable commercial carrier. Insurance will be taken unless the customer specifically takes responsibility for shipping loss or damage. Although claims for loss are the responsibility of the consignee, EMR will assist in all ways in making claims and tracking for loss or damage to any of its shipment.

MODIFICATION AND DELAYS: EMR reserves the right to make design changes or modifications to any of its products without specific prior notification provided that such modifications do not materially reduce the value or performance of the equipment concerned. EMR will not be responsible for delays in shipment occasioned by slow or interrupted deliveries to EMR of components, materials or processes necessary to the completion of any project as originally scheduled.

PRODUCT RETURNS: Merchandise returned without having first obtained written acknowledgment from EMR may be rejected. Unless otherwise authorized, credit or refund will not exceeds 90% of originally invoiced amounts, and in no event shall include transportation costs. Return authorizations shall expire in 60 days unless otherwise specifically noted.

MECHANICAL SEALS: EMR provides mechanical seals on many of its products. These seals insure that the unit has not been modified or tampered with once it has left the factory. “Breaking” these seals without consent from an authorized EMR Corporation engineer or technician may void the warranty policy stated below.

STANDARD WARRANTY POLICY: EMR Corporation, hereinafter called EMR, warrants that all equipment of its manufacture shall be free from defects in design, material and workmanship for a period of 5 years from date of shipment unless otherwise covered by special warranty. If any such product, entirely or in part, fails to produce the performance as set forth in the brochure, quotations or literature provided by EMR, such product will be replaced or repaired at EMR’s expense provided that the failure was not the result of alteration, misuse, tampering, misapplication, shipping damage or vandalism. If a product failure is found to be the fault of EMR the cost of transportation to the EMR factory and its return will be born by EMR. A reasonable charge for travel and subsistence costs will be invoiced when on-site repairs are necessary. Should EMR supply components not of its own manufacture, but specified by a customer, the warranty shall reflect the original manufacturers warranty, only.

It is understood that this statement constitutes EMR’s entire and only warranty, there being no other warranties expressed or implied in law or in fact, including implied warranties of fitness. In no event shall EMR be liable for damages, either direct or consequential, that may be occasioned by any defect in material, workmanship or product support.

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