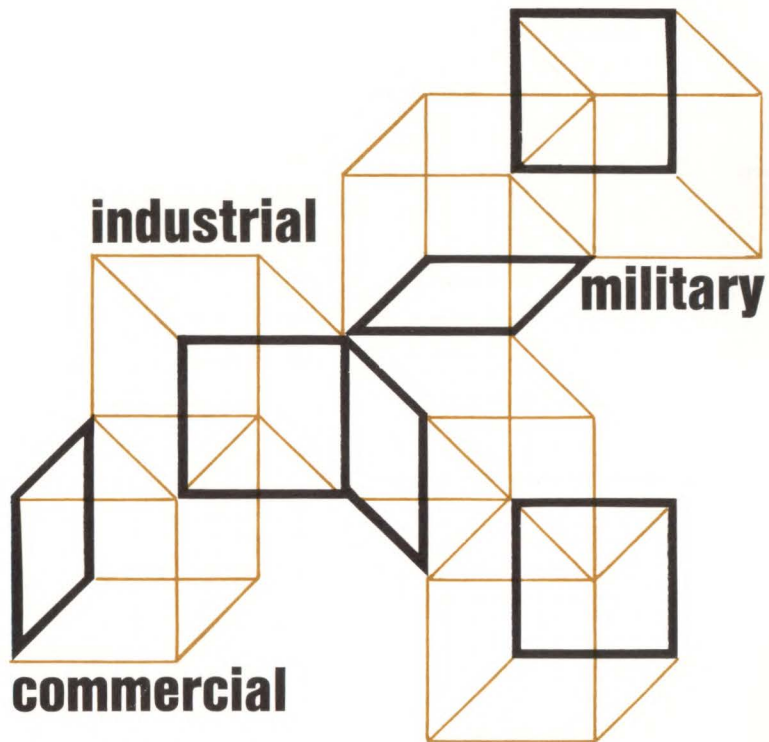


# **Ami** product guide

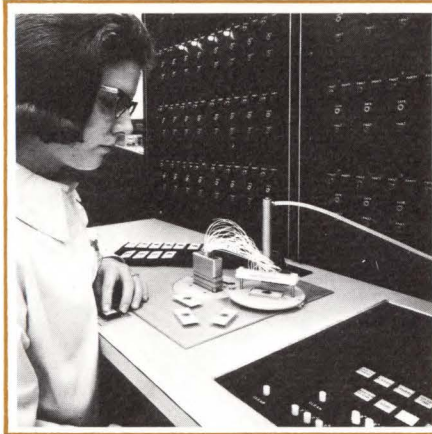
**new  
dimensions  
with mos  
technology**



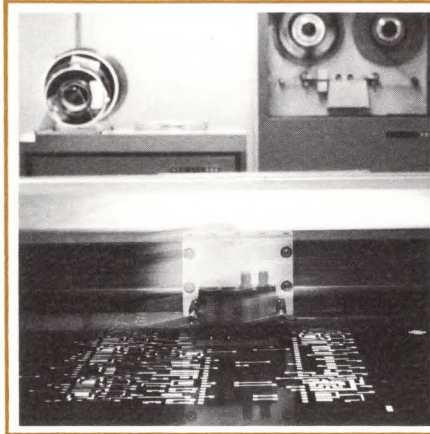
**American Micro-systems, Inc.**

3800 HOMESTEAD ROAD  
SANTA CLARA, CALIF. 95051  
TELEPHONE (408) 246-0330  
TWX: (910) 338-0018

# American Micro-systems, Inc.



*Programmable Automatic Functional Tester (PAFT), designed and built at AMI to meet exacting test requirements for complex arrays, uses customer's program sent by TWX or computer-generated paper tape.*



*Calcomp plotter used in AMI's computer-aided design program to provide a direct translation from logic programs to rubylith artwork.*



*Life testing equipment for high reliability devices such as those used in telemetry systems in NASA's Interplanetary Platform (IMP) satellites. Mounting boards are designed to permit device operation and testing at 125°C.*

Leading specialists in MOS LSI technology  Total capability from custom-circuit development to large-scale production of standard and custom MOS devices  Off-the-shelf shift registers, memories, multiplexers, and logic circuits designed for Military as well as Industrial/Commercial applications  Automated design and production in ultra-clean environments  A well-balanced scientific and engineering team of acknowledged leaders in the field  AMI equals MOS expertise and new dimensions with MOS technology.

# capabilities and facilities

AMI has a total capability which ranges from research in MOS technology to the production of developmental devices and standard products. Its services may be tailored to specific customer requirements at any desired interface point, be it system organization, system partitioning, composite layout, artwork and mask making, processing, packaging, testing, or failure analysis. This approach offers economy of design effort, privacy of design, timely delivery, low production costs, high-level technical competence, and complete control of design philosophies and quality.

To maintain its technological leadership, AMI supports continuing programs devoted to in-depth

studies of system and sub-system designs, to the development of advanced processing methods, and to the improvement of existing design and processing techniques. These programs are augmented by a substantial volume of R&D projects under contract with military agencies and industrial concerns.

American Micro-systems, Inc., is expanding its current facilities in Santa Clara, to include the largest production facility exclusively designed for large-scale integrated MOS circuits. The new 90,400 sq. ft. facility will be on line in mid-1969 and will incorporate the most modern capabilities available in the industry.

# design and manufacturing

The quality and reliability of AMI MOS devices result from:

1. A single, rigorously controlled manufacturing process which insures uniform products with a continuous record of reliable performance.
2. Strictly enforced design rules matched to this process to provide optimum characteristics.
3. Fabrication and assembly in ultra-clean environments.
4. Detailed inspection by qualified MOS specialists throughout the manufacturing process.

As a result of continuing efforts to refine existing methods and develop new techniques, AMI's processing engineers have developed the ultra thick oxide (UTO) process which produces higher yields, higher density, and more reliable circuits than possible with other methods.

Another process has been developed to produce low voltage MOS (LMOS). LMOS devices operate from a +5 volt to -12 volt power supply and interface directly with DTL/TTL logic levels for bipolar IC and hybrid applications.

# reliability and quality assurance

The AMI Product Assurance Division supports all research, development, engineering and manufacturing activities. This group maintains AMI's product integrity by enforcing rigid inspection and test standards ranging from the inspection of vendor's facilities and materials to final testing of the packaged MOS product. All manufacturing operations, tests, and inspections are fully documented to provide complete traceability of raw materials, processes, and devices. As a result, the standards

used at AMI exceed the specifications of even the most demanding system requirements.

AMI's product integrity has been proven in a number of high-reliability applications. Typical is NASA's interplanetary platform (IMP) satellite program. Thousands of AMI MOS devices have been built into space-borne packages and other systems having equal need for the ultimate in circuit reliability.

# custom design

AMI's capabilities and facilities are ideally suited for the development and production of custom-made MOS devices. The complex nature of these large-scale arrays necessitates close cooperation between the customer — the systems designer — and AMI's engineering team in the design, layout, and test procedures for the device. Augmenting the AMI scientific and engineering team are experienced application engineers based at key locations throughout the United States. These "on-the-spot" engineers are ready to acquaint present and potential AMI customers with the many uses of MOS devices and assist the customer in exploiting the MOS technology to the fullest extent in his particular application.

Supporting AMI's extensive custom-design experience (over 400 custom circuits) is an advanced computer-aided design system. A logic simulation capability is available to assist customers in initial design efforts. Rapid and accurate chip design is

routinely accomplished on large-scale computers through AMI's Placement, Routing, and Folding (PRF) program. A large library of proven cells is available to meet most customer requirements with computer-aided design. When special cells are required, AMI's experienced design group immediately generates cells that are tailor-made to the customer's requirements.

An automated plotting facility interfaces with the computer-aided design output to provide rapid and accurate composite drawings and rubylith artwork for the preparation of masks in the photolithography facility. Concurrently, the outputs of the automated design and artwork programs are used as inputs to provide a thorough-going function test sequence for the new designs.

AMI's computer-aided design facility reduces design time, lowers development costs, and optimizes circuit design.

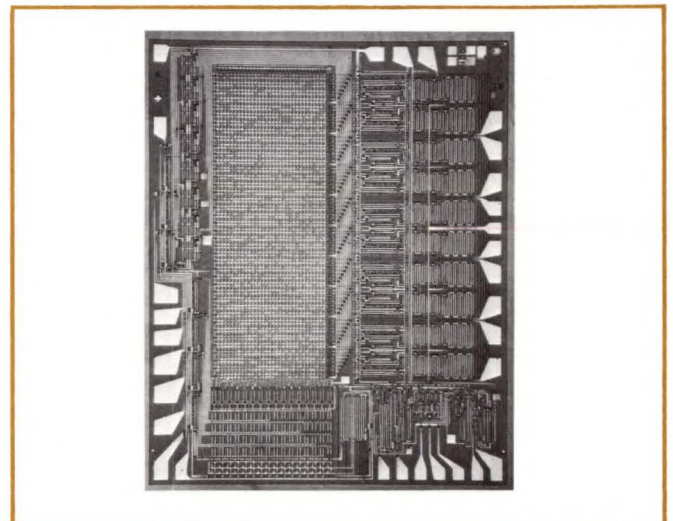
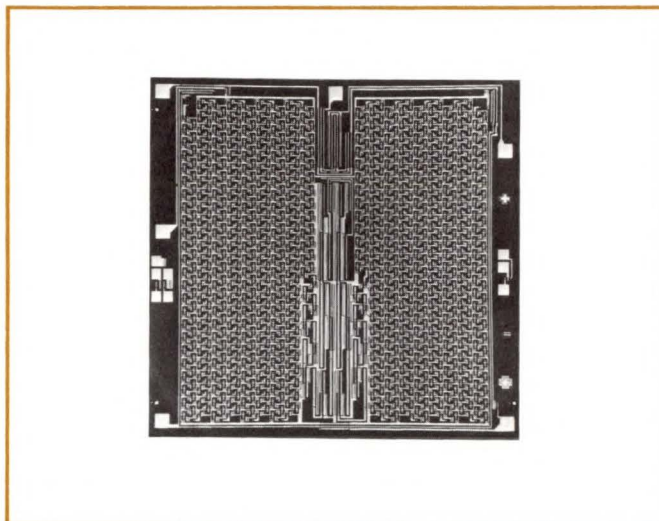
# standard product lines

In addition to its involvement in custom circuits, AMI produces standard, off-the-shelf MOS circuits for a wide spectrum of applications. Generally these standard products fall into the two major categories: 1) Military applications ( $-55$  to  $+125^{\circ}\text{C}$ ) and 2) Industrial/Commercial applications ( $-25$  to  $+75^{\circ}\text{C}$ ). Each of the two categories includes dynamic and static shift registers, memories, multiplexers, standard arrays, and low power arrays.

A family of standard MOS P-channel transistors ( $-55$  to  $+125^{\circ}\text{C}$ ) is also available.

Derived from the AMI custom-circuit capability, these standard arrays are processed and assembled with the same painstaking attention to process control, cleanliness, and total product assurance as the custom arrays.

The standard circuits are listed on the following pages along with packaging information, functions, and pertinent operating parameters.



# shift registers/memories/multiplex arrays/logic circuits

DESIGNED TO MILITARY TEMPERATURE RANGE / -55°C TO + 125°C

## SHIFT REGISTERS — Two Phase

PART NO.	NO. BITS	DESCRIPTION	TYPE PKG.	NO. LEADS	DATA RATE	POWER (1 MHz)	SUPPLY VOLTS	CLOCK VOLTS
DYNAMIC								
RD02C	40	Dual 20	FP	22	1 MHz	48 mW	-12 to -18	-24 to -30
RD05D	100	Dual 50 (PL5R100 Equivalent)	FP	14	1 MHz	120 mW	-12 to -18	-24 to -30
RD05G	100	Dual 50 (PL5R100 Equivalent)	TO	10	1 MHz	120 mW	-12 to -18	-24 to -30
RD07C	100	Dual 50	FP	22	5 MHz	120 mW	-12 to -18	-24 to -30
RD07F	100	Dual 50	TO	12	5 MHz	120 mW	-12 to -18	-24 to -30
RD08D	100	Dual 50 with Stream Select	FP	14	5 MHz	120 mW	-12 to -18	-24 to -30
RD08F	100	Dual 50 with Stream Select	TO	12	5 MHz	120 mW	-12 to -18	-24 to -30
RD10C	100	Dual 50	FP	22	10 MHz	120 mW	-12 to -18	-24 to -30
RD10F	100	Dual 50	TO	12	10 MHz	120 mW	-12 to -18	-24 to -30
RD12C	100	Dual 50, Low $V_T$	FP	22	1 MHz	10 mW	-4.8 to -5.3	-9.8 to -10.3
RD12F	100	Dual 50, Low $V_T$	TO	12	1 MHz	10 mW	-4.8 to -5.3	-9.8 to -10.3
RD12H	100	Dual 50, Low $V_T$	DIP	16	1 MHz	10 mW	-4.8 to -5.3	-9.8 to -10.3
RD13G	198	Triple 66	TO	10	1 MHz	240 mW	-12 to -18	-24 to -30
RD14G	256	Single 256	TO	10	2 MHz	50 mW	-12 to -18	-24 to -30
RD14H	256	Single 256	DIP	16	2 MHz	50 mW	-12 to -18	-24 to -30
RD15D	426	Single 426, Low $V_T$	FP	14	2 MHz	110 mW	-5 to -10	-14 to -16
RD15G	426	Single 426, Low $V_T$	TO	10	2 MHz	110 mW	-5 to -10	-14 to -16
STATIC								
RS03G	80	Dual 40	TO	10	1 MHz	140 mW	-12 to -18	-24 to -30
SP01C	12	Serial/Parallel Converter	FP	22	2 MHz	270 mW	-24 to -30	-24 to -30

## MEMORIES

PART NO.	NO. BITS	DESCRIPTION	TYPE PKG.	NO. LEADS	DATA RATE	POWER (1 MHz)	SUPPLY VOLTS	CLOCK VOLTS
MA01M	2560	256x10 ROM	DIP	40	1 MHz	140 mW	-15 to -17	-15 to -17
MB01I	2048	2048x1 ROM	DIP	28	1 MHz	150 mW	-24 to -30	-24 to -30

## STANDARD ARRAYS

PART NO.	DESCRIPTION	TYPE PKG.	NO. LEADS	PROP. DELAY	POWER (1 MHz)	SUPPLY VOLTS	CLOCK VOLTS
UL02C	Expandable NAND Gate	FP	22	350 ns	40 mW	-12 to -18	-24 to -30
UL03C	Expandable NOR Gate	FP	22	100 ns	120 mW	-12 to -18	-24 to -30
UL04C	Gating and Storage	FP	22	1000 ns	60 mW	-12 to -18	-24 to -30

## LOW POWER ARRAYS

PART NO.	DESCRIPTION	TYPE PKG.	NO. LEADS	PROP. DELAY	POWER (100 kHz)	SUPPLY VOLTS	CLOCK VOLTS
LP04A	Binary	TO	8	3.5 $\mu$ s	0.5 mW	-9 to -30	—
LP05A	3-Input NOR	TO	8	2.0 $\mu$ s	0.1 mW	-9 to -30	—
LP06A	3-Input NAND	TO	8	2.0 $\mu$ s	0.1 mW	-9 to -30	—

## MULTIPLEX ARRAYS

PART NO.	DESCRIPTION	TYPE PKG.	NO. LEADS	R <sub>ON</sub> LEADS	I <sub>DSS</sub> (A)	SUPPLY VOLTS	C <sub>GD</sub> (pF)	BV <sub>DSS</sub> (Volts)
MX02D	6 Channel MUX (MEM 2009 Equivalent)	FP	14	150	1.0	—	1.5	-30
MX03C	10 Channel MUX	FP	22	150	1.0	—	1.5	-30
MX04C	4 Channel MUX	FP	22	50	5.0	-24 to -30	—	-30

\*Last letter of part # identifies package type. Please turn to pages 7 and 8 for package dimensions and lead configurations.

\*\*PC01 and PC01-T are designed for use with the standard array family to facilitate breadboarding.

# shift registers/memories/multiplex arrays/logic circuits

DESIGNED TO INDUSTRIAL-COMMERCIAL TEMPERATURE RANGE / -25°C TO +75°C

## SHIFT REGISTERS — Two Phase

PART NO.	NO. BITS	DESCRIPTION	TYPE PKG.	NO. LEADS	DATA RATE	POWER (1 MHz)	SUPPLY VOLTS	CLOCK VOLTS
DYNAMIC								
RD52C	40	Dual 20	FP	22	1 MHz	48 mW	-12 to -18	-24 to -30
RD55D	100	Dual 50 (PL5R100 Equivalent)	FP	14	1 MHz	120 mW	-12 to -18	-24 to -30
RD55G	100	Dual 50 (PL5R100 Equivalent)	TO	10	1 MHz	120 mW	-12 to -18	-24 to -30
RD57C	100	Dual 50	FP	22	1 MHz	120 mW	-12 to -18	-24 to -30
RD57F	100	Dual 50	TO	12	1 MHz	120 mW	-12 to -18	-24 to -30
RD58D	100	Dual 50 with Stream Select	FP	14	2 MHz	120 mW	-12 to -18	-24 to -30
RD58F	100	Dual 50 with Stream Select	TO	12	2 MHz	120 mW	-12 to -18	-24 to -30
RD60C	100	Dual 50	FP	22	3 MHz	120 mW	-12 to -18	-24 to -30
RD60F	100	Dual 50	TO	12	3 MHz	120 mW	-12 to -18	-24 to -30
RD62C	100	Dual 50, Low $V_T$	FP	22	1 MHz	10 mW	-4.8 to -5.3	-9.8 to -10.3
RD62F	100	Dual 50, Low $V_T$	TO	12	1 MHz	10 mW	-4.8 to -5.3	-9.8 to -10.3
RD62H	100	Dual 50, Low $V_T$	DIP	16	1 MHz	10 mW	-4.8 to -5.3	-9.8 to -10.3
RD63G	198	Triple 66	TO	10	1 MHz	240 mW	-12 to -18	-24 to -30
RD64G	256	Single 256	TO	10	1 MHz	50 mW	-12 to -18	-24 to -30
RD64H	256	Single 256	DIP	16	1 MHz	50 mW	-12 to -18	-24 to -30
RD65D	426	Single 426, Low $V_T$	FP	14	1 MHz	110 mW	-5 to -10	-14 to -16
RD65G	426	Single 426, Low $V_T$	TO	10	1 MHz	110 mW	-5 to -10	-14 to -16
STATIC								
RS53G	80	Dual 40	TO	10	1 MHz	140 mW	-12 to -18	-24 to -30
SP51C	12	Serial/Parallel Converter	FP	22	1 MHz	270 mW	-24 to -30	-24 to -30

## MEMORIES

PART NO.	NO. BITS	DESCRIPTION	TYPE PKG.	NO. LEADS	DATA RATE	POWER (1 MHz)	SUPPLY VOLTS	CLOCK VOLTS
MA51M	2560	256x10 ROM	DIP	40	1 MHz	140 mW	-15 to -17	-15 to -17
MB51I	2048	2048x1 ROM	DIP	28	1 MHz	150 mW	-24 to -30	-24 to -30

## STANDARD ARRAYS

PART NO.	DESCRIPTION	TYPE PKG.	NO. LEADS	PROP. DELAY	POWER (1 MHz)	SUPPLY VOLTS	CLOCK VOLTS
UL52C	Expandable NAND Gate	FP	22	350 ns	40 mW	-12 to -18	-24 to -30
UL53C	Expandable NOR Gate	FP	22	100 ns	120 mW	-12 to -18	-24 to -30
UL54C	Gating and Storage	FP	22	1000 ns	60 mW	-12 to -18	-24 to -30

## LOW POWER ARRAYS

PART NO.	DESCRIPTION	TYPE PKG.	NO. LEADS	PROP. DELAY	POWER (100 kHz)	SUPPLY VOLTS	CLOCK VOLTS
LP54A	Binary	TO	8	3.5 $\mu$ s	0.5 mW	-9 to -30	—
LP55A	3-Input NOR	TO	8	2.0 $\mu$ s	0.1 mW	-9 to -30	—
LP56A	3-Input NAND	TO	8	2.0 $\mu$ s	0.1 mW	-9 to -30	—

## MULTIPLEX ARRAYS

PART NO.	DESCRIPTION	TYPE PKG.	NO. LEADS	R <sub>ON</sub> LEADS	I <sub>loss</sub> (A)	SUPPLY VOLTS	C <sub>GD</sub> (pF)	BV <sub>DSS</sub> (Volts)
MX52D	6 Channel MUX (MEM 2009 Equivalent)	FP	14	150	1.0	—	1.5	-30
MX53C	10 Channel MUX	FP	22	150	1.0	—	1.5	-30
MX54C	4 Channel MUX	FP	22	50	5.0	-24 to -30	—	-30

# mos "P" channel transistors

TEMPERATURE RANGE -55°C TO +125°C

TYPE	FUNCTION	V <sub>T</sub> (Volts)	V <sub>T1</sub> - V <sub>T2</sub> (mV)	Y <sub>fs</sub> (μmho)	I <sub>DS(ON)</sub> (mA)	R <sub>ON</sub> (Ω)	C <sub>gd</sub> (pF)	BV <sub>DSS</sub> (Volts)	BV <sub>GSS</sub> (Volts)	I <sub>DSS</sub> (nA)
DM01B	Dual Matched <50mV V <sub>GST</sub> g <sub>m</sub> = 800μmho R <sub>ON</sub> = 1250Ω	-4.5	< 50	800	4.6	1250	0.4	-36	> ±70	0.50
DM02B	Dual Matched <100mV V <sub>GST</sub> g <sub>m</sub> = 800μmho R <sub>ON</sub> = 1250Ω	-4.5	<100	800	4.6	1250	0.4	-36	> ±70	0.50
DM03B	Dual Matched <150mV V <sub>GST</sub> g <sub>m</sub> = 800μmho R <sub>ON</sub> = 1250Ω	-4.5	<150	800	4.6	1250	0.4	-36	> ±70	0.50
DM05A	Dual W/Protective Diode g <sub>m</sub> = 2700μmho R <sub>ON</sub> = 250Ω	-4.3	50	2700	22.0	250	0.3	-41	-41	0.03
DM06A	Dual W/O Protective Diode g <sub>m</sub> = 2700μmho R <sub>ON</sub> = 250Ω	-4.3	50	2700	22.0	250	0.3	-41	> ±70	0.03
DD07K	Single W/Protective Diode g <sub>m</sub> = 5400μmho R <sub>ON</sub> = 125Ω	-4.3	—	5400	44.0	125	0.6	-41	-41	0.05
DD08K	Single W/O Protective Diode g <sub>m</sub> = 5400μmho R <sub>ON</sub> = 125Ω	-4.3	—	5400	44.0	125	0.6	-41	> ±70	0.05
DD09K	Single W/Protective Diode g <sub>m</sub> = 2700μmho R <sub>ON</sub> = 250Ω	-4.3	—	2700	22.0	250	0.3	-41	-41	0.03
DD10K	Low V <sub>T</sub> Single W/Prot. Diode g <sub>m</sub> = 8000μmho R <sub>ON</sub> = 125Ω	-2.0	—	8000‡	33.0‡	125‡	0.8	-20	-20	0.05
DD11K	Single W/Protective Diode g <sub>m</sub> = 1400μmho R <sub>ON</sub> = 700Ω	-4.6	—	1400	10.0	700	0.3	-41	-41	0.30
DD12J	Hi g <sub>m</sub> Single W/Protective Diode g <sub>m</sub> = 17000μmho R <sub>ON</sub> = 32Ω	-4.3	—	17,000	35.5‡	32	2.3	-41	-41	0.04
DD13K	Hi g <sub>m</sub> Single W/Protective Diode g <sub>m</sub> = 17000μmho R <sub>ON</sub> = 32Ω	-4.3	—	17,000	35.5‡	32	2.3	-41	-41	0.04

NOTE: DM is a dual-discrete. DD is a single-discrete.

Y<sub>fs</sub> and I<sub>DS</sub> (ON) measured at: V<sub>G5</sub>=V<sub>D5</sub>= -15 volts; R<sub>(ON)</sub> measured at: V<sub>G5</sub>= -15 volts, V<sub>D5</sub>= -0.1 volts. Exceptions as indicated.  
‡Y<sub>fs</sub> and I<sub>DS</sub> (ON) measured at: V<sub>G5</sub>=V<sub>D5</sub>= -10 volts; R<sub>(ON)</sub> measured at: V<sub>G5</sub>= -10 volts, V<sub>D5</sub>= -0.1 volts.

## mos course

In line with the efforts to acquaint its customers with MOS devices and their applications, AMI conducts an intensive Engineering Course in MOS technology at regular intervals. This course is instructed by AMI staff members—experts in MOS.

The five-day course is tailored to provide systems and circuit design engineers with a comprehensive background in complex MOS arrays.

Material supplied by AMI includes an engineering course manual and set of lecture notes. The manual covers the theoretical background and the practical aspects of MOS technology and the application of MOS circuits in new and existing systems.

The basic course outline is as follows:

- Basic Theory of P-MOS Devices
- Implementation of Digital Logic Functions
- Implementation of Linear Functions

## applications

Multiplexing and analog switching applications are "naturals" of the MOS Technology because of the high "off" resistance and the approximately zero offset voltage. However, the major advantage of MOS is that large, complex logic arrays can be built at a much lower cost than possible with other technologies. The process is ideally suited for the implementation of economical large read-only (ROM) and random-access (RAM) memories. For the first time, content-addressable memories (CAM) become an economic reality.

Applications for large-scale custom arrays continue

### Partitioning

- Theoretical MOS Design Equations and Graphs
- Design Procedures
- Array Topology
- Design Automation
- MOS Specifications and Applications
- Large-Scale-Array Testing
- Reliability of MOS Large-Scale-Arrays
- Design of Medium Complexity
- Standard Cell—Class Participation
- Plant Tour and Discussions

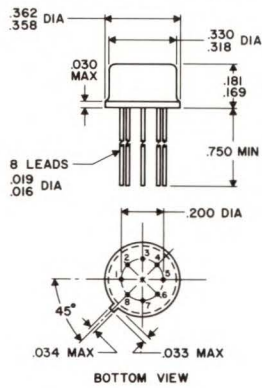
Enrollment fee for the five-day course — including the engineering course manual and a set of lecture notes — is \$500 per attendee.

For further information about the AMI MOS technology engineering course and a schedule of upcoming sessions, complete the attached, self-addressed reply card and mail it to AMI.

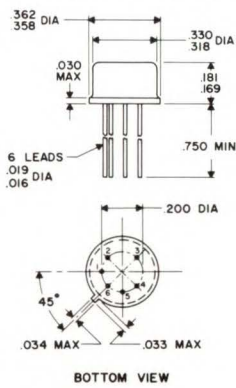
to grow at a rapid rate, and the ease of designing and fabricating such arrays with MOS technology makes this approach ideal for complex digital systems. MOS arrays are particularly suitable for digital applications such as timers and counters of all types from consumer products to precision artillery fuzes; communications, data-transmission and switching equipment; tape recorders; business machines; industrial controls; small scientific computers; computer peripheral equipment; and instrumentation. Linear applications include analog switching devices, low-power amplifiers, and active-filter networks.

# packages

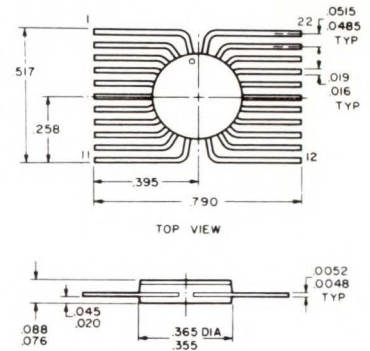
**A PACKAGE, 8 LEAD**



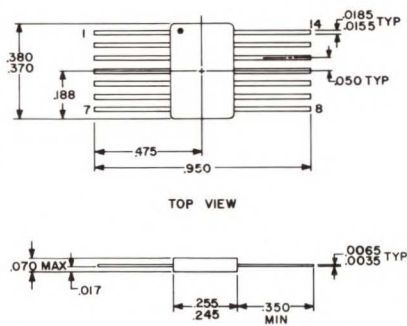
**B PACKAGE, 6 LEAD**



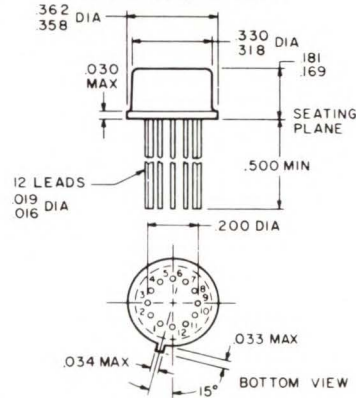
**C PACKAGE, 22 LEAD**



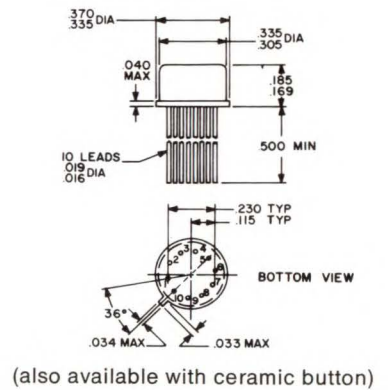
**D PACKAGE, 14 LEAD**



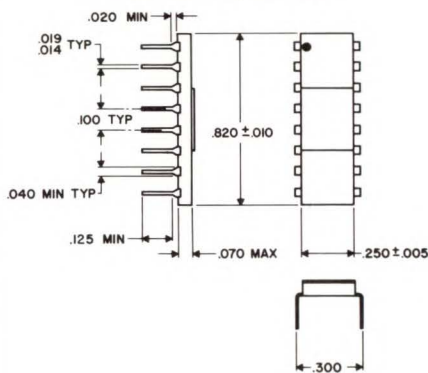
**F PACKAGE, 12 LEAD**



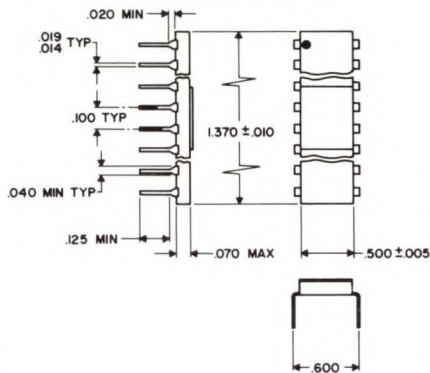
**G PACKAGE, 10 LEAD**



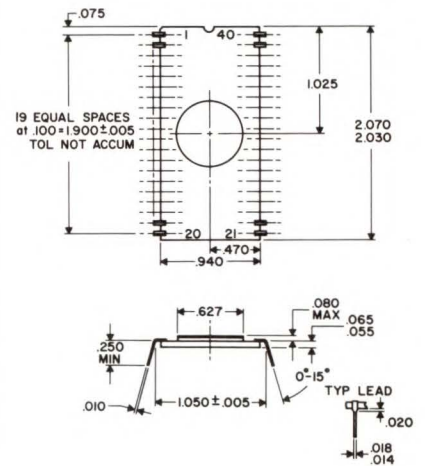
**H PACKAGE, 16 LEAD**



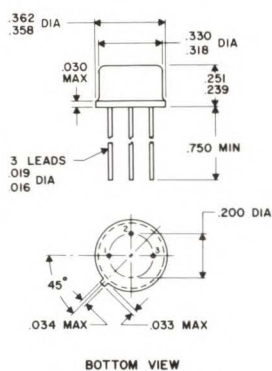
**I PACKAGE, 28 LEAD**



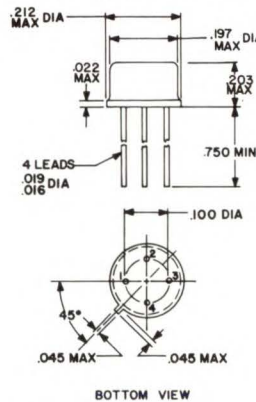
**M PACKAGE, 40 LEAD**



**J PACKAGE, 3 LEAD**



**K PACKAGE, 4 LEAD**



For special parameter selections and/or special packaging, consult nearest sales representative.





## field application engineers

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 Tel. (303) 388-4391

### FLORIDA

William R. Lehmann Company  
 1010 Executive Center Drive  
 P.O. Box 20275  
 Orlando, Florida 32814  
 Tel. (305) 841-4901

### MARYLAND

J. A. Dougherty Sales Company  
 320 Hillen Road  
 Towson, Maryland 21204  
 Tel. (301) 832-0431

### MASSACHUSETTS

Circuit Sales Company  
 One Militia Drive  
 Lexington, Massachusetts 02173  
 Tel. (617) 861-0567

### MICHIGAN

Lowry Dietrich Company  
 600 Michigan Bldg.  
 Detroit, Michigan 48226  
 Tel. (313) 961-4540

### MINNESOTA

Technical Associates, Inc.  
 6121 Excelsior Blvd.  
 Minneapolis, Minnesota 55416  
 Tel. (612) 929-6721

### NEW MEXICO

Williams Associates  
 420 Washington Street S.E.  
 Albuquerque, New Mexico 87108  
 Tel. (505) 255-1638

### NEW YORK

Bowser & Sapecky Associates  
 4541 Main Street  
 Buffalo, New York 14226  
 Tel. (716) 839-4170

Bowser & Sapecky Associates  
 4317 E. Genesee Street  
 Dewitt, New York 13214  
 Tel. (315) 446-5920

Bowser & Sapecky Associates  
 806 Main Street  
 Poughkeepsie, New York 12603  
 Tel. (914) 454-8133

### OHIO

Electro Rep., Inc.  
 380 N. Broadway  
 Jericho, New York 11753  
 Tel. (516) 938-5040

### NORTH CAROLINA

Byrd & Barbour Sales, Inc.  
 P.O. Box 30  
 Smithfield, North Carolina 27577  
 Tel. (919) 934-8136

### OHIO

Lowry Dietrich Company  
 333 W. First Street, Room 160  
 Dayton, Ohio 45402  
 Tel. (513) 223-6042

Lowry Dietrich Company  
 316 Marion Bldg.  
 Cleveland, Ohio 41120  
 Tel. (216) 781-1855

### OREGON

Arneson Associates  
 Suite 4C  
 200 N.E. Canyon Road  
 Beaverton, Oregon 97005  
 Tel. (503) 646-3416

### PENNSYLVANIA

Lowry Dietrich Company  
 90 Clairton Blvd.  
 Pittsburgh, Pennsylvania 15236  
 Tel. (412) 892-2992

### TEXAS

Arnold Barnes Company  
 3230 Mercer Street 108A  
 Houston, Texas 77027  
 Tel. (713) 622-3620

Arnold Barnes Company  
 P.O. Box 709/740 South Sherman  
 Richardson, Texas 75080  
 Tel. (214) 235-4541

Arnold Barnes Company  
 D416 Petroleum Center  
 San Antonio, Texas 78209  
 Tel. (512) 828-1323

### UTAH

Williams Associates  
 2469 S. Main Street  
 Salt Lake City, Utah 84115  
 Tel. (801) 466-8709

### WASHINGTON

Arneson Associates  
 5950 Sixth Avenue  
 Seattle, Washington 98108  
 Tel. (206) 762-7664

### FOREIGN REPRESENTATIVES

Pantronics, Inc.  
 1275 Bloomfield Avenue  
 Fairfield, New Jersey 07631  
 Tel. (201) 228-3500

Radio Television Francaise  
 73 Avenue De Neuilly  
 92 Neuilly-Sur-Seine  
 Paris, France  
 Tel. 722 70-40  
 Telex. 21933

## data sheets

- RD02C Dual 20-Bit Register
- RD05D (G) Dual 50-Bit Registers
- RD07C (F) Dual 50-Bit Registers
- RD08D (F) Dual 50-Bit Registers with Stream Select
- RD10C (F) Dual 50-Bit Registers
- RD12C (F) 50-Bit Register Low  $V_T$
- RD12H 50-Bit Register Low  $V_T$
- RD13G Triple 66-Bit Register
- RD14G (H) 256-Bit Registers
- RD15D (G) 426-Bit Register Low  $V_T$
- SP01C 12-Bit Serial/Parallel Converter DC
- RS03G Dual 40-Bit Register DC
- MX02D 6 Channel Multiplexer
- MX03C 10 Channel Multiplexer
- MX04C 4 Channel Multiplexer Switch
- UL02C Quad NAND Gate
- UL03C Expandable Gate
- UL04C Gating and Storage Element
- LP04A Binary
- LP05A 3-Input NOR
- LP06A 3-Input NAND
- RD52C Dual 20-Bit Register
- RD55D (G) Dual 50-Bit Registers
- RD57C (F) Dual 50-Bit Registers
- RD58D (F) Dual 50-Bit Registers with Stream Select
- RD60C (F) Dual 50-Bit Registers Low  $V_T$
- RD62C (F) Dual 50-Bit Registers Low  $V_T$
- RD62H Dual 50-Bit Register Low  $V_T$
- RD63G Triple 66-Bit Register
- RD64G (H) 256-Bit Registers
- RD65D (G) 426-Bit Registers Low  $V_T$
- SP51C 12-Bit Serial/Parallel Converter DC
- RS53G Dual 40-Bit Register
- MX52D 6 Channel Multiplexer
- MX53C 10 Channel Multiplexer
- MX54C 4 Channel Multiplexer Switch
- UL52C Quad NAND Gate
- UL53C Expandable Gate
- UL54C Gating and Storage Element
- LP54A Binary
- LP55A 3-Input NOR
- LP56A 3-Input NAND
- DM01B Dual Matched P-Channel FET
- DM02B Dual Matched P-Channel FET
- DM03B Dual Matched P-Channel FET
- DM05A Medium Conductance P-Channel FET
- DM06A Medium Conductance P-Channel FET
- DD07A Medium Conductance P-Channel FET
- DD08A Medium Conductance P-Channel FET
- DD09K Medium Conductance P-Channel FET
- DD10K Medium Conductance Low Voltage FET
- DD11K Medium Conductance Low Capacitance FET
- DD12J High Conductance P-Channel FET
- DD13K High Conductance P-Channel FET

## distributors

### ALABAMA

Cramer/Huntsville, Inc.  
 2222 North Memorial Parkway  
 Huntsville, Alabama 35801  
 Tel. (205) 536-4493

### CALIFORNIA

Bestronics  
 1728 S. La Cienga Blvd.  
 Los Angeles, California 90035  
 Tel. (213) 870-9657 or 9658

### COLORADO

Waco Electronics  
 4975 Jackson Street  
 Denver, Colorado 80216  
 Tel. (303) 322-7708

### CONNECTICUT

Cramer Electronics, Inc.  
 35 Dodge Avenue  
 North Haven, Connecticut 06512  
 Tel. (203) 239-5641

### FLORIDA

Cramer/Florida, Inc.  
 4141 N.E. 6th Avenue  
 Ft. Lauderdale, Florida 33308  
 Tel. (305) 566-7511

### GEORGIA

Cramer/Atlanta  
 3130 Marjan Drive  
 Atlanta, Georgia 30040  
 Tel. (404) 541-5421

### ILLINOIS

Bodolle Company, Inc.  
 13803 South School Street  
 Chicago, Illinois 60627  
 Tel. (312) 468-1016

### MARYLAND

Cramer/Baltimore  
 922-24 Patapaco Avenue  
 Baltimore, Maryland 21230  
 Tel. (301) 354-0100

Cramer/Washington, Inc.  
 629 Lofstrand Lane  
 Rockville, Maryland 20850  
 Tel. (301) 424-2700

### MASSACHUSETTS

Cramer Electronics, Inc.  
 320 Needham Street  
 Newton, Massachusetts 02164  
 Tel. (617) 969-7700

### NEW JERSEY

Cramer Pennsylvania, Inc.  
 7300 Route 130  
 Pennsauken, New Jersey  
 Tel. (609) 662-5061

### NEW YORK

Cramer/Eastern, Inc.  
 Pickard Bldg.  
 E. Molloy Road  
 Syracuse, New York 13211  
 Tel. (315) 455-6641

Cramer Electronics  
 96-10 23rd Avenue  
 Elmhurst, New York 11369  
 Tel. (212) 478-4000

Cramer International  
 96-10 23rd Avenue  
 Elmhurst, New York 11369  
 Tel. (212) 478-5383

Cramer Rochester, Inc.  
 3259 Winton Road South  
 Rochester, New York 14623  
 Tel. (716) 275-0300

### NORTH CAROLINA

Cramer/Raleigh, Inc.  
 3331 North Blvd.  
 Raleigh, North Carolina 27604  
 Tel. (919) 832-6441

### OHIO

Cramer Tri-States, Inc.  
 666 Redna Terrace  
 Cincinnati, Ohio 45215  
 Tel. (513) 771-6441

Pioneer Standard Electronic, Inc.  
 Pioneer Division  
 5403 Prospect Ave.  
 Cleveland, Ohio 44103  
 Tel. (216) 432-0010

Pioneer Standard Electronic, Inc.  
 Srepc Division  
 314 Leo Street  
 Dayton, Ohio 45404  
 Tel. (513) 224-0871

### TEXAS

Arnold Barnes Associates  
 P.O. Box 709  
 740 South Sherman  
 Richardson, Texas 75080  
 Tel. (214) 235-4541



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## availability

All AMI standard MOS devices are “off-the-shelf” products available for immediate delivery. To support large-quantity deliveries, in-depth inventories are maintained at AMI's plant.

In addition, AMI has a nation-wide network of stocking distributors stocked to provide 24-hour delivery of all standard products. (See listing of the AMI distributors and their locations).

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## terms and conditions of sale

All sales are made in accordance with AMI's STANDARD TERMS AND CONDITIONS. Prices are quoted FOB AMI's plant or distributor's location, and do not include applicable Federal, state or local taxes.

Terms of payment in the USA is thirty (30) days net.

When placing an order, customer has complete privilege to mix circuits within the MOS complex array family or within the MOS FET family. This privilege does not extend to intermixing of families or the combination of Military and Industrial/Commercial products.

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## shipping and packaging

Shipments are made directly from the AMI plant or from local distributors. Unless specifically requested otherwise, AMI will select the most economical and serviceable method of shipment.

All AMI products are carefully packaged in specially designed containers to prevent in-route damage.

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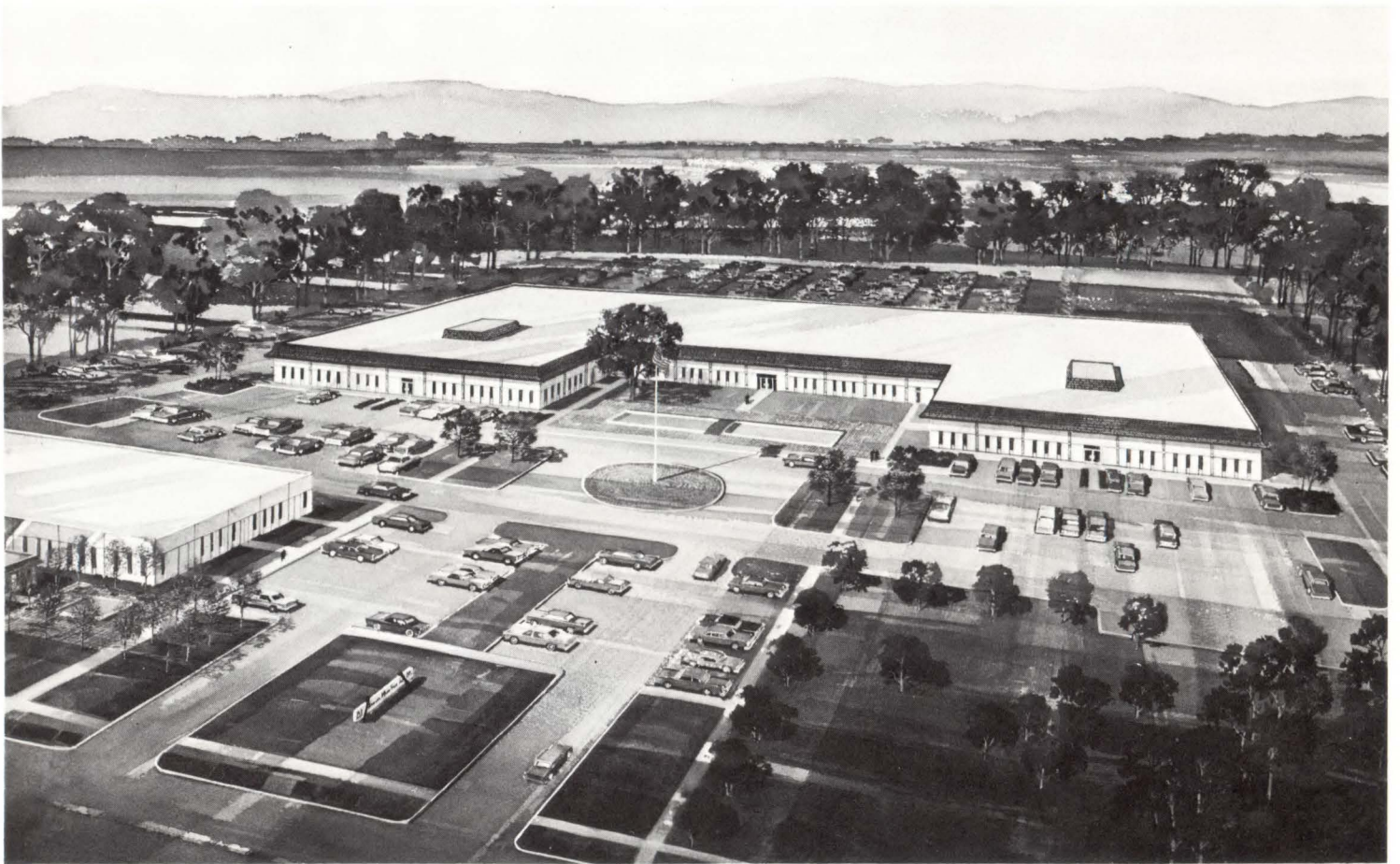
## warranty

AMI warrants its products against defects in materials and workmanship for a period of one year after delivery. This warranty is limited to replacement or repair of products which prove to be defective during the warranty period, provided they are returned to AMI and the defect is found not to be caused by misuse, neglect, improper installation, repair, alteration, or accident. No other warranty is expressed or implied. AMI is not liable for consequential damages.

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New, ultra-modern, 90,400 sq. ft. AMI facility is designed specifically for high-volume production of large-scale integrated arrays.



**American Micro-systems, Inc.**

3800 HOMESTEAD ROAD  
SANTA CLARA, CALIF. 95051  
TELEPHONE (408) 246-0330  
TWX: (910) 338-0018