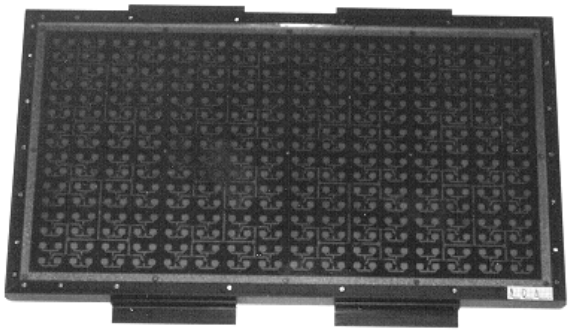
MICROSTRIP PATCH ANTENNAS

MICROSTRIP / STRIPLINE ANTENNAS

Our **PAS series** microstrip patch antennas are ideally suited as primary radiators, reflector feeds and conformal array elements. **PAS series** patch antennas are optimized for large instantaneous bandwidths (>10%) and high radiating efficiencies. These antennas are available in the form of single radiating elements as well as planar and cylindrical arrays for low beamwidth and omnidirectional coverage requirements. Single microstrip elements are made for prime focus feeders, supporting linear, dual lined or circular polarization. The cylindrical array antennas are available for telemetry bands. **PAS series** antennas are available for operating frequency bands from 130 MHz to 30 GHz.



PAS-1415/24

HIGH GAIN ARRAYS

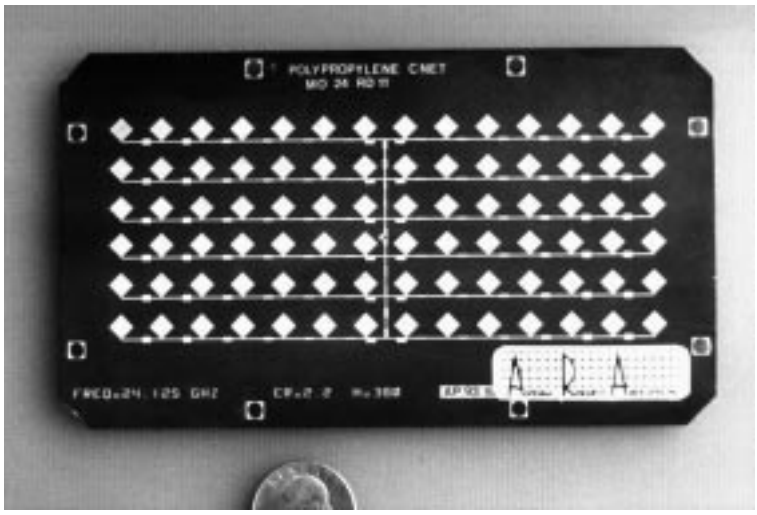
Antenna Research offers a wide range of, high gain, patch antenna arrays. Several designs (**PAS-3035** and **PAS-8289**) are optimized for high gain and wide (>10%) bandwidths. The **PAS-3035** offers a typical gain of 8.5 dBi. The half power beam width of single element high gain antennas is about 60° x 40°. High gain single element radiators can be used for both wireless applications as well as feeds for reflector antennas.

The **PAS-8289** is a multi-element, high gain, wide band array with a typical gain of 13 dBi. The environmentally sealed array is designed for outdoor communication applications in cellular bands. **PAS-99** and **PAS-24** are suitable for the application of Doppler and anti-collision radars.

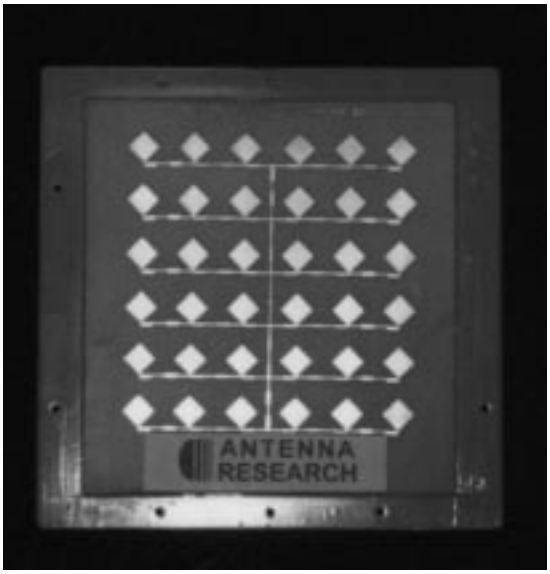
SPECIFICATIONS:

	PAS-28	PAS-3035	PAS-1415/24	PAS-99	PAS-24
FREQUENCY	28 GHz	3.0 - 3.5 GHz	14.1 – 15.2 GHz	9.9 GHz	24.125 GHz
TYPICAL GAIN (DBI)	24	8.5	30	20	24
3 DB BEAMWIDTH					
E-PLANE (DEG)	14	60	4.4	15	14
H-PLANE (DEG)	18	40	2.3	15	18
VSWR	2.0 : 1	2.0 : 1	1.5	2.0 : 1	2.0 : 1
POLARIZATION	Linear	Linear	Linear	Linear	Linear
SIDELOBES	-27 dB	---	-15 dB	-27 dB	-27 dB
CONNECTOR	SMA or Pigtail	SMA female	SMA or Pigtail	SMA/pigtail	SMA/pigtail
DIMENSIONS	5"L x 3"W x 25"H	3.5" Dia. x .65"H	20"L x11"W x 1.25"H	6.375" sq.	5.9" x 3.4" x .25"H
WEIGHT	< 3 oz.	<4 oz.	<3 lbs.	<6 oz.	<3 oz.
OPERATING/STORAGE TEMPERATURE	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C

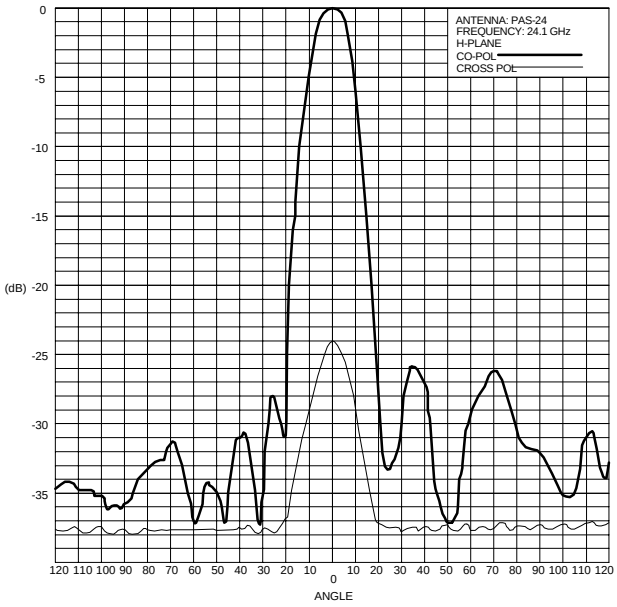
MICROSTRIP PATCH ANTENNAS



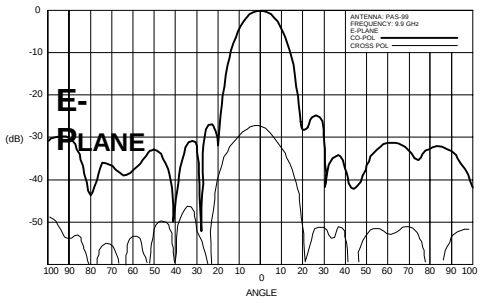
PAS-24



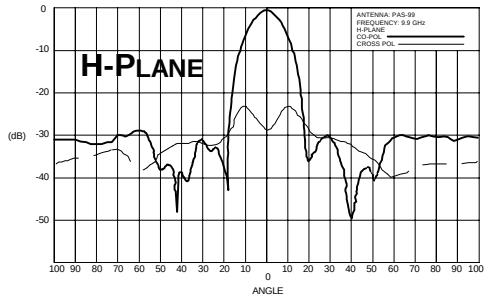
PAS-99



PAS-24 - TYPICAL ANTENNA PATTERN



PAS-99 ARRAY – Typical RADIATION PATTERN



PAS-28

MICROSTRIP PATCH ANTENNAS

SPECIFICATIONS: MICROSTRIP ANTENNAS AND FEEDS

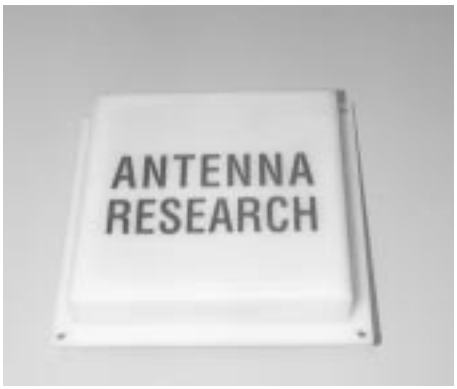
	PAS-CTB/1			PAS-5152	PAS-6465	PAS-1060
	COMMAND	TELEMETRY	BEACON			
FREQUENCY (MHz)	406 - 549	2200 - 2290	5400 - 5900	5100	6500	1060
BANDWIDTH	1%	4%	9%	2%	2%	90
GAIN (DBI)	4	7	7	5	5	4
VSWR	2.0 : 1			1.5 : 1	1.5 : 1	2.0 : 1
POLARIZATION	Linear			**RHCP	**RHCP	Linear
TYPE	Patch Array			Patch	Patch	Patch
SIZE (IN)	13.5 Dia. x 8 L			3.5 x 3.5	3.5 x 3.5	8.5 x 11 x 0.7
AXIAL RATIO	N/A			< 3 dB	< 3dB	N/A
CONNECTOR	3 mm			Type N	Type N	SMA
WEIGHT	3.5 lbs			10 oz.	10 oz.	1 lb.
CW POWER (W)	1	20	20	20	20	20

* Linear, Dual Linear, LHCP optional

Our new PatchComm line of low profile antennas are less conspicuous to their environment while providing maximum efficiency in a small package. Cellular, ISM, DECT, PCS, PCN, WLAN, LMDS and GPS are all supported with a wide range of antenna solutions.

ARA PatchComm antennas are characterized by wide bandwidth and high gain/low profile. All PatchComm antennas are encased in fully weatherized housings constructed of high quality materials. Model UV resistant plastics, aluminum and brass provide for long lasting performance.

For more information, ask for a copy of our catalog: “Antennas and Accessories for Personal Information Systems”.



PAS-241

PAS-8901

PAS-241 with Pigtail
& Azimuth Adjust Mount