

# 4 1/2" Probe Cards

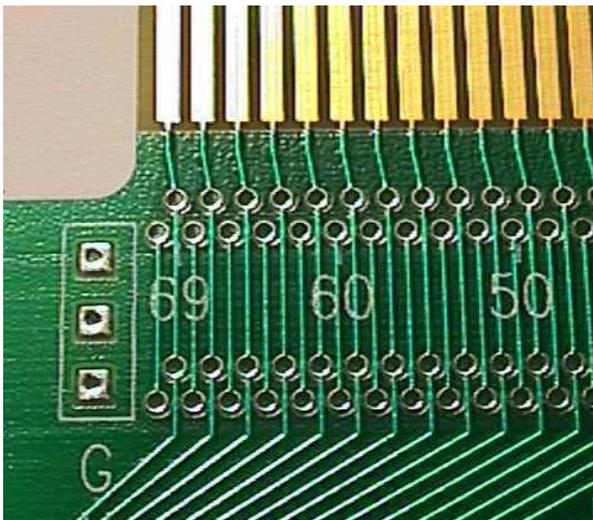
## 4 1/2" PROBE CARDS

Accuprobe supplies a wide range of 4 1/2" probe cards for use in semiconductor, hybrid, and other probing applications. Suitable for mounting metal and ceramic blades, z-adjustable probes, blade spring probes, or holding epoxy ring configurations, these flexible cards are the core platform for cantilever probe solutions.

## SA SERIES PROBE CARDS

The SA series of probe cards are the perfect solution for fixed pattern probe test fixtures for device test with z-adjustable, metal and ceramic blade probes. All probe cards in the SA family are similar in layout and design except that four models are offered with 48, 70, and 88 pin edge connectors with an equal number of probe mounting lands in the probe mounting array. The exception being that Model SA4548 has 60 probe lands that can be used for the flexible assignment of probes. The probe cards are designed to accommodate patch wiring to assign probes to specific measurement system channels. However, when used with programmable measurement systems, the cards are ready to go with traces in place from the probe lands directly to the edge connector.

The probe cards are fabricated from FR-4 material and can be optionally supplied in polyimide or other advanced circuit board materials. The layouts are carefully designed to minimize probe to probe leakage and every card has a photo-mask to



SA4570 Patch Wiring Area



protect the probe card's surface from contaminants. Every probe card is reinforced with a stiffener that is laminated to the underside of the probe card. This attention to design, construction and electrical performance separates Accuprobe cards from the competition.

## SM4548 PROBE CARD

While similar to the SA4548 probe card, the SM4548 includes a ground plane and two common rings for assignment to bussed power and grounds as dictated by the test application. Unlike the SA4548 which has 60 probe lands, the SM4548 has 48 probe lands directly connected to the 48-pin edge connector. The SM4548 probe card is ideally suited to sensitive test applications, high-frequency testing using ceramic blade probes, as well as probing smaller geometry devices.

## PA SERIES PROBE CARDS

Similar to the SA series, the PA series probe cards have an open patch wiring / component mounting area between the probe array and the edge connector.

## BX SERIES PROBE CARDS

The BA and BB series probe cards provide square land arrays suitable for probing rectangular

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perimeter pads. The BC4570 cards has a circular pad array for higher density probing using smaller blade probes, as well as power and ground rings to minimize noise for sensitive probing applications.

## PR EPOXY RING PROBE CARDS

The PR series of probe cards have been designed to support epoxy ring probe arrays. With 48, 70, 88, 128, or 160 IO positions these cards can comfortably support epoxy arrays from 20 to 300 needles. Accuprobe's standard PR series probe cards typically provide one or more concentric bus rings to serve as power or ground planes as determined by the test application. Provision is also made for series and or parallel passive components on each card. Some cards have room for the addition of active signal processing circuitry. The epoxy ring cards hosts an inner ring that is similar to the shape of the device to create a nearly uniform probe length from the inner ring to the contact pad. A uniform probe length results in balanced contact force (BCF) on the device under test (DUT).

## PROBE CARD PROTECTORS

Probe card protectors provide a safe and secure way to protect and store probe cards when not in use. The protector covers provide a clear view of the contents and seal the container from dust and other contaminants. The PCP's are stackable or they can be stored in a rack.



Probe Card Protectors

## GENERAL SPECIFICATIONS

Design Standard: MIL-STD-275D

Card Material:

Standard	NEMA Type FR4
Special Order	Polyamide
Max Temp:	
FR4	130° C (260° F)
Polyimide	240° C (464° F)

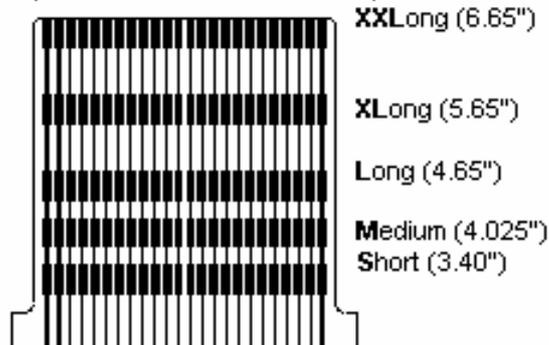
Stiffener Material: NEMA Type FR4

Resistance Trace to Trace: >200 MW @10 V.DC

Capacitance Trace to Trace:<4 pF

Connector Contacts: Gold Plated 50 μinches

## TYPICAL RECTANGULAR CARD (Center of Rotation - C.O.R.)



4 1/2" Probe Card Sizes

# 4 1/2" Probe Cards

## 4 1/2" probe Card Models

Model	Probe Type	Array Style	IO Connector	Available Sizes	Patch Wiring Area	Ground Plane	Common Rings
BA4570	Blade	Square	70-pin edge	S, M, L	Yes - connected	No	No
BB4570	Blade	Square	70-pin edge	S, M, L	Yes - connected	No	No
BC4570	Blade	Round	70-pin edge	L	Yes - connected	Yes	Two
PA4548	Blade	Round	48-pin edge	L	Yes - open	No	No
PA4570	Blade	Round	70-pin edge	L	Yes - open	No	No
PR4548	Epoxy	Round	48-pin edge	S, M, L	Yes - connected	Yes	Two
PR4570	Epoxy	Round	70-pin edge	S, M, L	Yes - connected	Yes	Two
PR4588	Epoxy	Round	88-pin edge	S, M, L	Yes - connected	Yes	Two
PR45128	Epoxy	Round	128-pin edge	S, M, L	Yes - connected	Yes	Two
PR45160	Epoxy	Round	160-pin plug	L	Yes - connected	Yes	Two
SA4548	Blade	Round	48-pin edge	S, M, L, XL, XXL	Yes - connected	No	No
SA4570	Blade	Round	70-pin edge	S, M, L, XL, XXL	Yes - connected	No	No
SA4588	Blade	Round	88-pin edge	S, M, L	Yes - connected	No	No
SM4548	Blade	Round	48-pin edge	L, XXL	Yes - connected	Yes	Two

## 4 1/2" Probe Card Numbering Guide

<b>SA</b>	<b>45</b>	<b>70</b>	<b>T</b>	<b>1</b>	<b>A</b>	<b>L</b>

Model	Size	I/O	Stiffener	Hole Type	Hole Size		Length	
			X - None	1 - Round	E/W	N/S	S	
			N - Thin	2 - Square	1"	A	1	M
			T - Thick	3 - Custom	1.25"	B	2	L
					1.5"	C	3	XL
					1.75"	D	4	XXL
					2"	E	5	
					2.25"	F	6	
					2.5"	G	7	
					2.75"	H	8	
					3"	J	9	

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