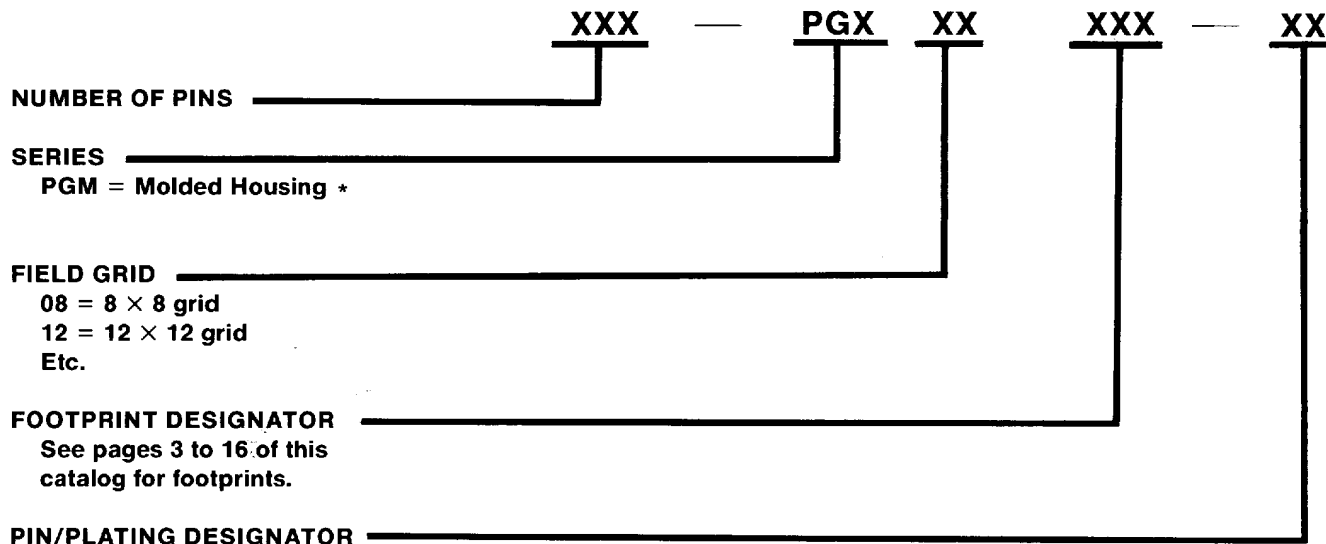


With the proliferation of pin grid packages on the market, there are a great number of options available on socket packages. Trying to incorporate these options into an easy to understand part numbering

structure is not an easy task. We have tried to make it as easy as possible with the following description.

**ARIES PIN GRID ARRAY PART NO. STRUCTURE**



\* PGG = Glass Epoxy Housing (Only used if footprint has not been molded.)

DASH #	TYPE	PLATING	SKETCH
-10T	Socket, Solder Tail	Tin Collet/Tin Shell (See Chart A)	#1
-10	Socket, Solder Tail	Gold Collet/Tin Shell (See Chart A)	#1
-10H	Socket, Solder Tail	Heavy Gold Collet/Tin Shell (See Chart A)	#1
-11	Socket, Solder Tail	Gold Collet/Gold Shell (See Chart A)	#1
-11H	Socket, Solder Tail	Heavy Gold Collet/Tin Shell (See Chart A)	#1
-20	Socket, 2-Level Wire Wrap	Gold Collet/Tin Shell (See Chart A)	#2
-21	Socket, 2-Level Wire Wrap	Gold Collet/Gold Shell (See Chart A)	#2
-30	Socket, 3-Level Wire Wrap	Gold Collet/Tin Shell (See Chart A)	#2
-31	Socket, 3-Level Wire Wrap	Gold Collet/Gold Shell (See Chart A)	#2
-40	Header, Post Solder Tail	200 Microinches Tin over 100 Microinches Nickel	#3
-41	Header, Post Solder Tail	10 Microinches Gold over 100 Microinches Nickel	#3

Certain of the Aries products shown herein are covered by U.S. and Foreign patents and/or pending patent applications.

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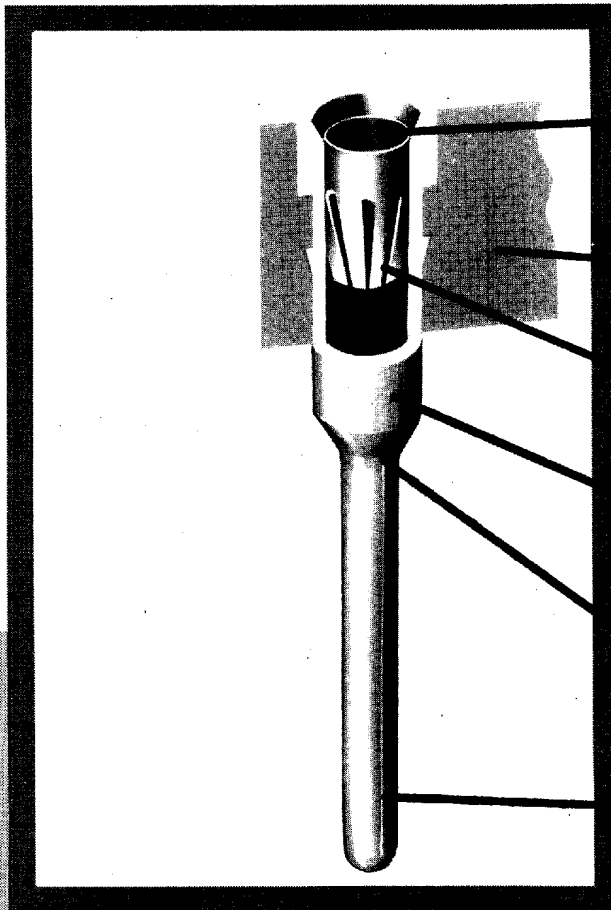
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**ARIES COLLET CONTACT PINS**

These high quality, high performance-to-cost ratio contacts use gold plated beryllium copper contacts within a brass socket body available either tin or gold plated. Collet contacts accept .015-.022 dia. round leads.

- Superior insertion-to-withdrawal ratios and low insertion force type for high pin count devices.
- Six point contact redundancy and gold plated spring clip contacts provide excellent mechanical and electrical performance.
- Collet contacts accept long or short leads.
- Machined from solid bar stock with closed bottom which prevents solder wicking.
- Socket body of glass filled thermoplastic or glass epoxy.



Wide tapered entry for easy insertion

Housing available glass epoxy or molded

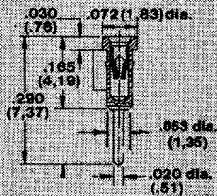
Six fingered inner contact for low insertion force

Precision screw machine sleeve

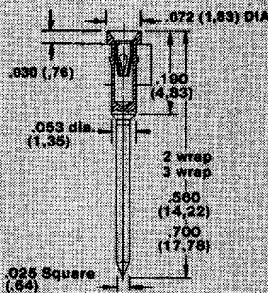
Closed bottom prevents wicking

Solder tail or wire wrap termination pin

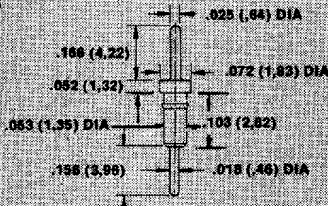
**SKETCH 1**



**SKETCH 2**



**SKETCH 3**



**Plating:** Table gives plating specifications by Termination Type and suffix Part Numbering of products using collet style pins.

Termination Type	Part No. Suffix	Specifications
Solder Tail	-10T	Contact: 100μ (2,54μm) tin minimum per MIL-T-10727 over 50μ (1,27μm) nickel per QQN-290. Body: 200μ (5,08μm) tin per MIL-T-10727 over 100μ (2,54μm) nickel per QQN-290.
	-10	Contact: 10μ (0,254μm) gold minimum per MIL-G-45204 over 50μ (1,27μm) nickel per QQN-290. Body: 200μ (5,08μm) tin per MIL-T-10727 over 100μ (2,54μm) nickel per QQN-290.
	-10H	Contact: 30μ (0,76μm) gold minimum per MIL-G-45204 over 50μ (1,27μm) nickel per QQN-290. Body: 200μ (5,08μm) tin per MIL-T-10727 over 100μ (2,54μm) nickel per QQN-290.
	-11	Contact: 10μ (0,254μm) gold minimum per MIL-G-45204 over 50μ (1,27μm) nickel per QQN-290. Body: 10μ (0,254μm) gold minimum per MIL-G-45204 over 100μ (2,54μm) nickel per QQN-290.
	-11H	Contact: 30μ (0,76μm) gold minimum per MIL-G-45204 over 50μ (1,27μm) nickel per QQN-290. Body: 10μ (0,254μm) gold minimum per MIL-G-45204 over 100μ (2,54μm) nickel per QQN-290.
Wire Wrap	-30	Contact: 30μ (0,76μm) gold minimum per MIL-G-45204 over 50μ (1,27μm) nickel per QQN-290. Body: 200μ (5,08μm) tin per MIL-T-10727 over 100μ (2,54μm) nickel per QQN-290.
	-20	Contact: 30μ (0,76μm) gold minimum per MIL-G-45204 over 50μ (1,27μm) nickel per QQN-290. Body: 200μ (5,08μm) tin per MIL-T-10727 over 100μ (2,54μm) nickel per QQN-290.
	-31	Contact: 30μ (0,76μm) gold minimum per MIL-G-45204 over 50μ (1,27μm) nickel per QQN-290. Body: 10μ (0,254μm) gold minimum per MIL-G-45204 over 100μ (2,54μm) nickel per QQN-290.
	-21	Contact: 30μ (0,76μm) gold minimum per MIL-G-45204 over 50μ (1,27μm) nickel per QQN-290. Body: 10μ (0,254μm) gold minimum per MIL-G-45204 over 100μ (2,54μm) nickel per QQN-290.

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**ARIES**  
Electronics - Europe



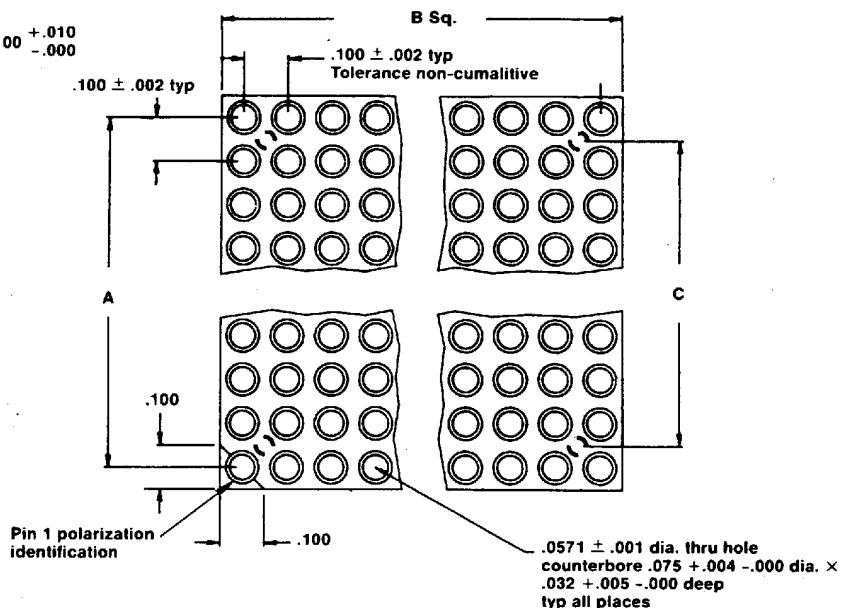
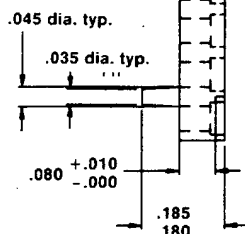
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**NOTES:**

1. All ctr dimensions are to be centered within .002 of true centerline.
2. Material is to be black, glass filled thermoplastic polyester, UL94VO rated.

Optional Four Stand-Off Posts  
.085 deep x .045 dia.  
Consult factory.



**DIMENSIONS (inches)**

HOUSING SIZE	A ± .002	B +.000 - .005*	C = A - .100 ± .005
9 × 9	.800	.900	.700
10 × 10	.900	1.000	.800
11 × 11	1.000	1.100	.900
12 × 12	1.100	1.200	1.000
13 × 13	1.200	1.300	1.100
14 × 14	1.300	1.400	1.200
15 × 15	1.400	1.500	1.300
16 × 16	1.500	1.600	1.400
17 × 17	1.600	1.700	1.500
18 × 18	1.700	1.800	1.600
19 × 19	1.800	1.900	1.700
20 × 20	1.900	2.000	1.800
21 × 21	2.000	2.100	1.900

\*Non-Cumulative

Consult factory for grids not listed. Grids such as 3 × 3 thru 8 × 8 can be achieved using glass epoxy housings (PGG version).

**PIN GRID PLASTIC**

**Specifications**

- Injection molded, glass reinforced thermoplastic polyester UL94VO rated. Other engineered resins available. Consult factory.
- All footprints on industry standard .100" × .100" grid.
- Color - black.
- Platform is precision molded with extremely tight

tolerances on all dimensions.

- Dimensions of plastic platform allow side-to-side stacking on .100" grid. (This is important for dense packaging of p.c. boards.)
- Pin 1 identified by chamfered corner.

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All footprints are topview.

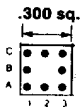
FOOTPRINTS

3x3



9 PINS

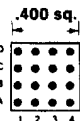
Footprint 03001



8 PINS

Footprint 03002

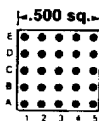
4x4



16 PINS

Footprint 04001

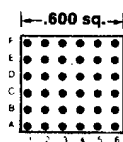
5x5



25 PINS

Footprint 05001

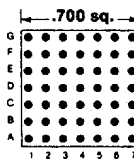
6x6



36 PINS

Footprint 06001

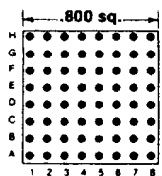
7x7



49 PINS

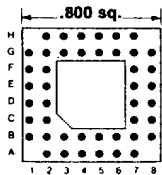
Footprint 07001

8x8



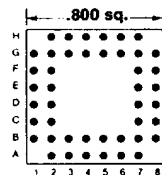
64 PINS

Footprint 08001



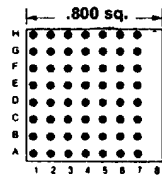
44 PINS

Footprint 08002



44 PINS

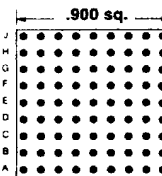
Footprint 08003



56 PINS

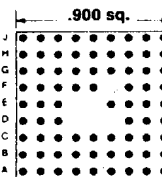
Footprint 08004

9x9



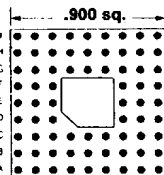
81 PINS

Footprint 09001



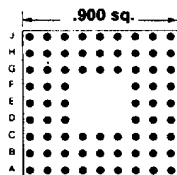
75 PINS

Footprint 09002



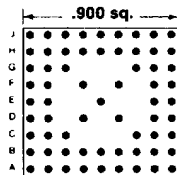
72 PINS

Footprint 09003



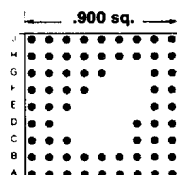
72 PINS

Footprint 09004



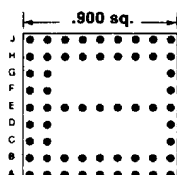
65 PINS

Footprint 09005



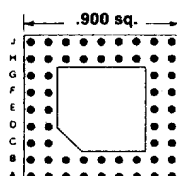
65 PINS

Footprint 09006



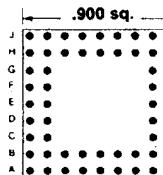
57 PINS

Footprint 09007



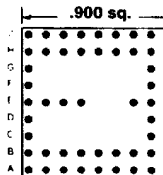
56 PINS

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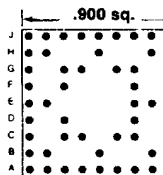
56 PINS

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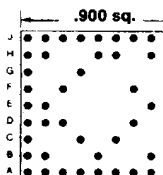
55 PINS

Footprint 09010



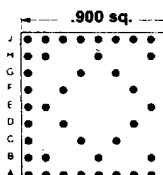
53 PINS

Footprint 09011



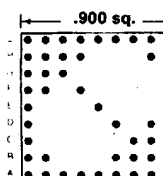
49 PINS

Footprint 09012



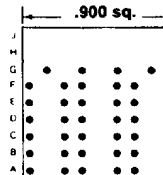
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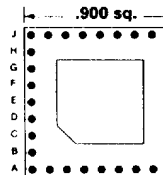
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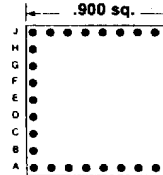
40 PINS

Footprint 09015



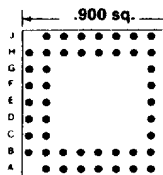
32 PINS

Footprint 09016



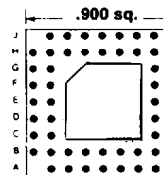
32 PINS

Footprint 09017



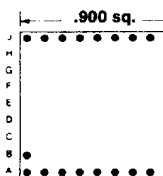
52 PINS

Footprint 09018



52 PINS

Footprint 09019



22 PINS

Footprint 09020

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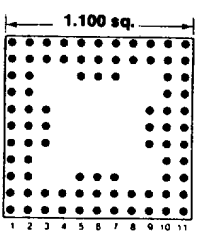
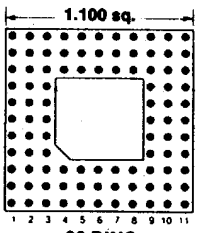
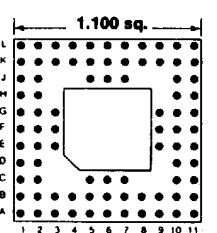
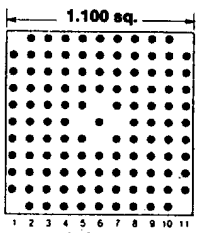
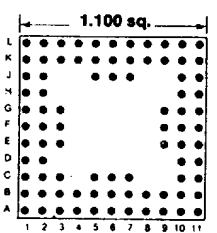
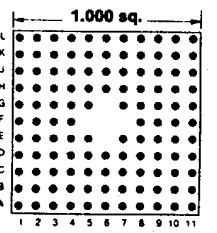
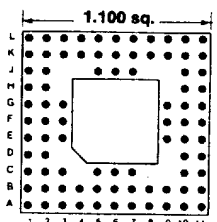
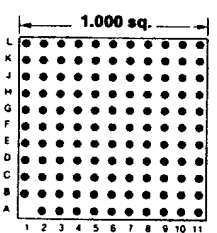
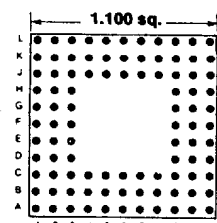
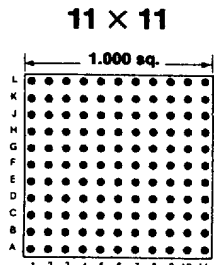
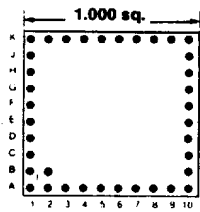
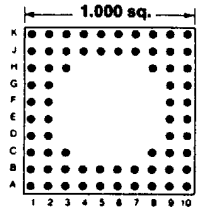
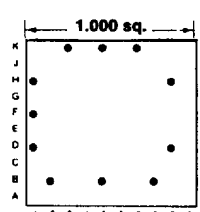
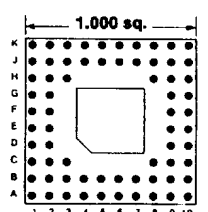
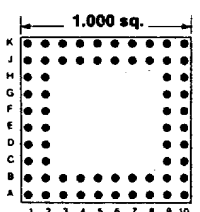
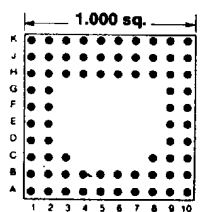
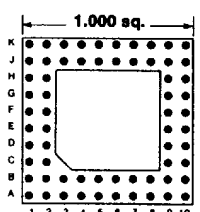
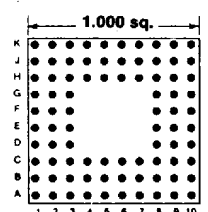
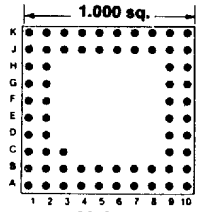
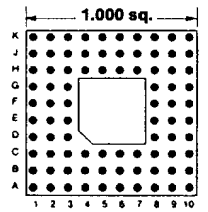
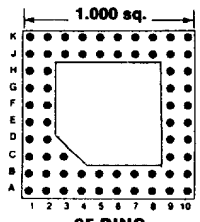
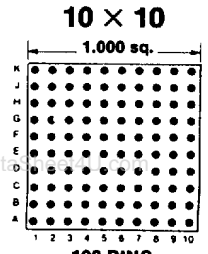
5

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All footprints are topview.

FOOTPRINTS

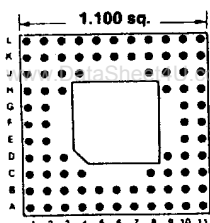


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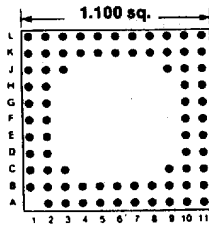


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 Milton Keynes, England MK19 6AQ  
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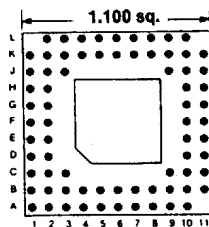
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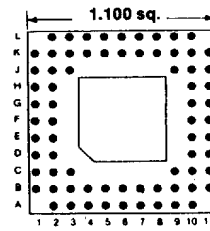
84 PINS  
Footprint 11011



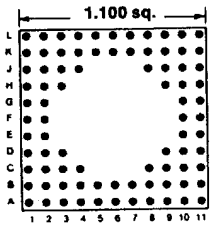
75 PINS  
Footprint 11016



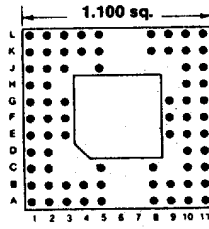
73 PINS  
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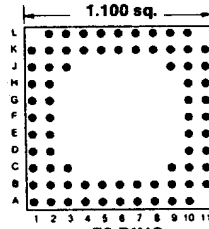
72 PINS  
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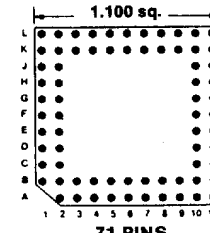
84 PINS  
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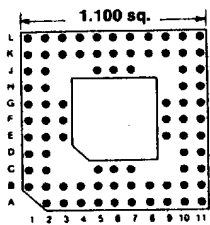
74 PINS  
Footprint 11017



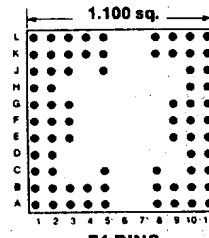
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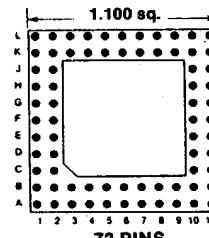
71 PINS  
Footprint 11027



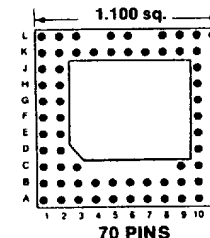
83 PINS  
Footprint 11013



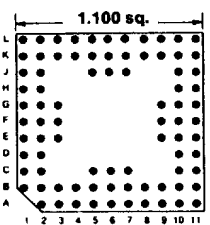
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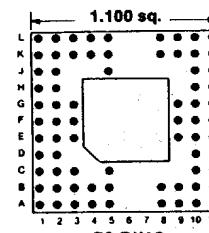
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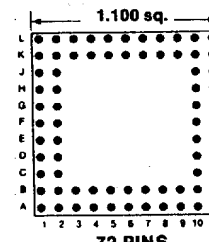
70 PINS  
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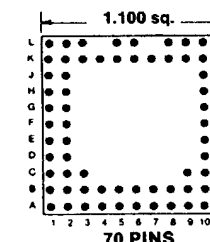
83 PINS  
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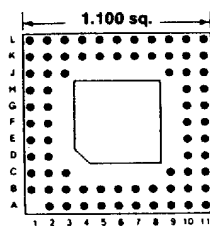
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Footprint 11019



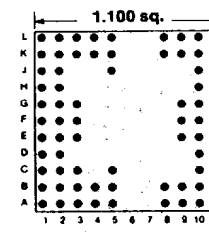
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Footprint 11024



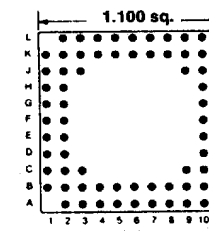
70 PINS



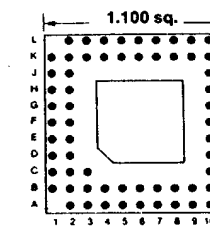
75 PINS  
Footprint 11015



73 PINS  
Footprint 11020



72 PINS  
Footprint 11025



69 PINS  
Footprint 11030

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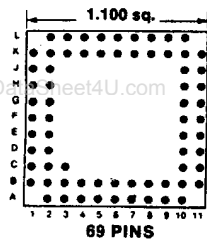
7

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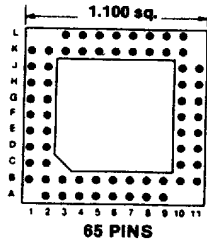
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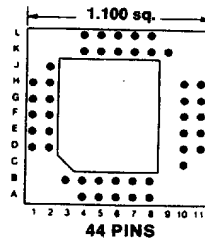
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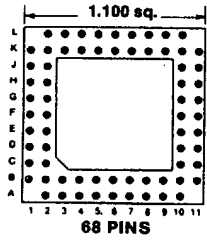
Footprint 11031



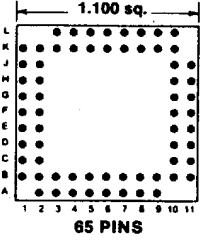
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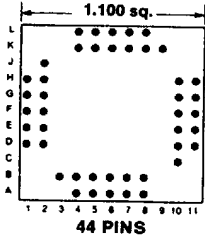
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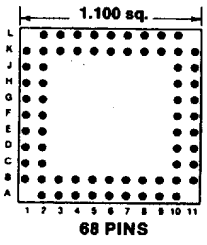
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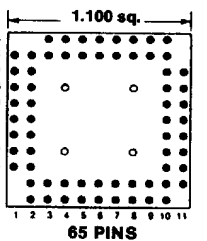
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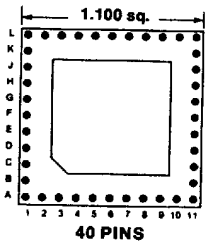
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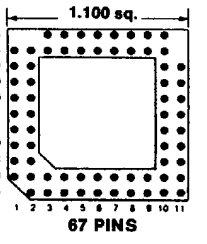
Footprint 11033



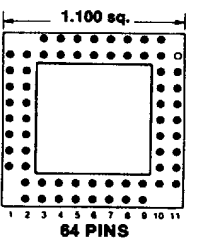
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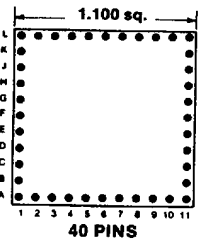
Footprint 11043



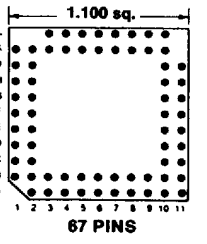
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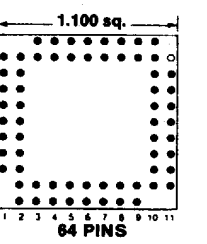
Footprint 11039



Footprint 11044

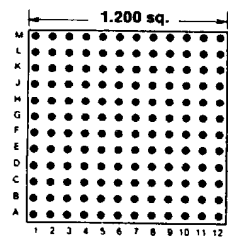


Footprint 11035

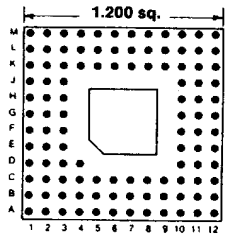


Footprint 11040

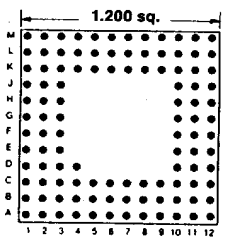
12 x 12



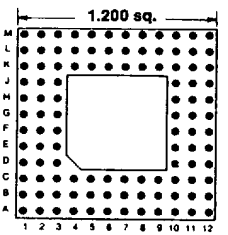
Footprint 12001



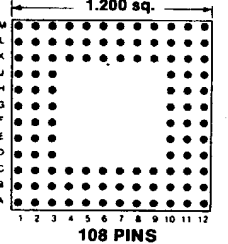
Footprint 12002



Footprint 12003



Footprint 12004



Footprint 12005

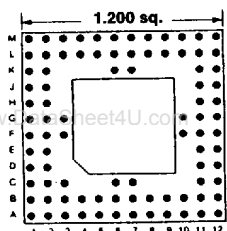


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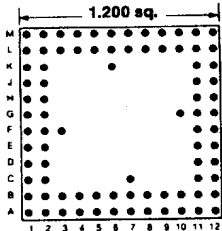


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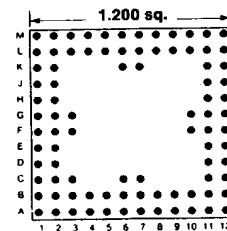
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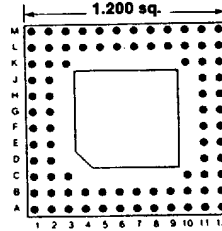
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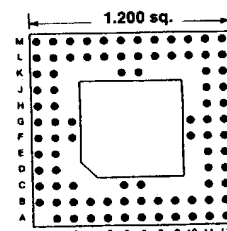
Footprint 12011



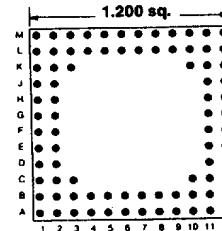
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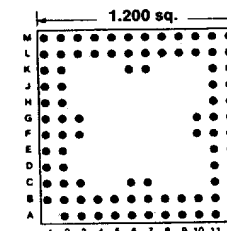
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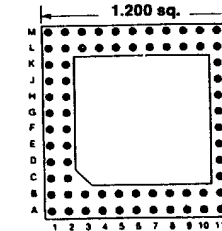
Footprint 12008



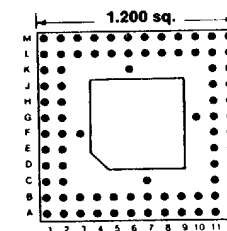
Footprint 12013



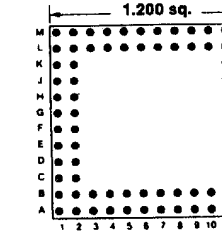
Footprint 12009



Footprint 12014

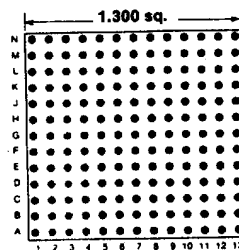


Footprint 12010

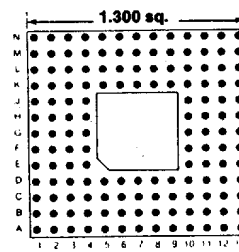


Footprint 12015

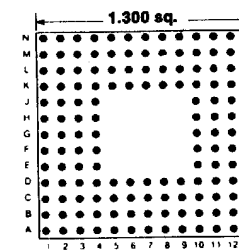
13 X 13



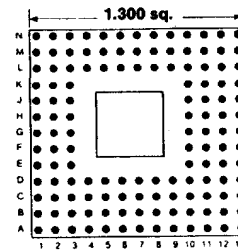
Footprint 13001



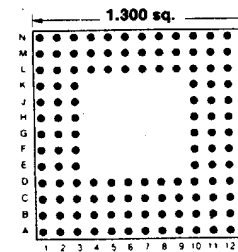
Footprint 13002



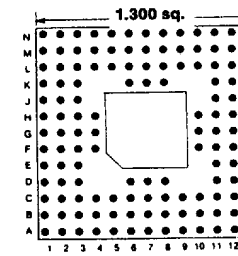
Footprint 13003



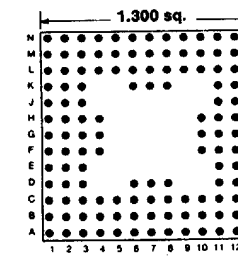
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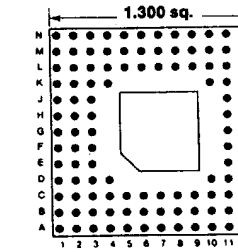
Footprint 13005



Footprint 13006



Footprint 13007



Footprint 13008

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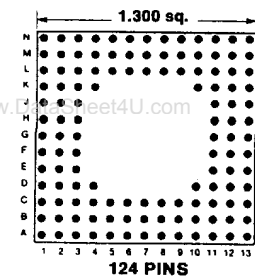
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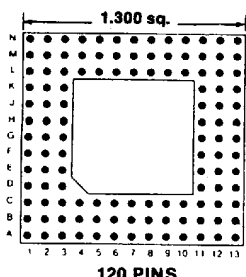


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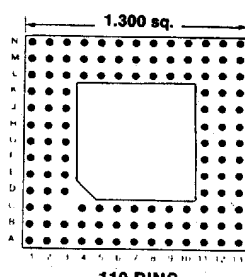
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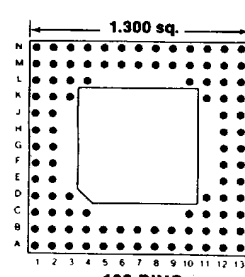
124 PINS



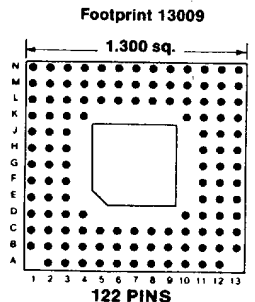
120 PINS



119 PINS

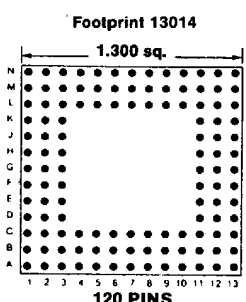


100 PINS



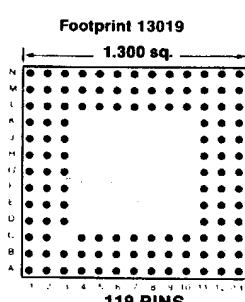
122 PINS

Footprint 13009



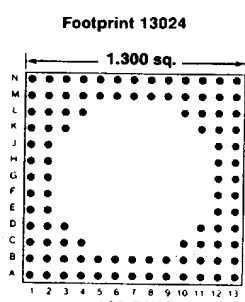
120 PINS

Footprint 13014



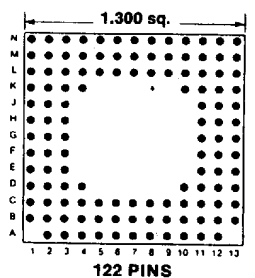
119 PINS

Footprint 13019



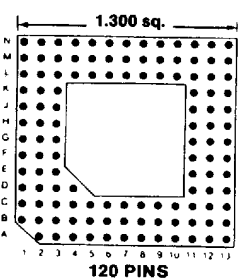
100 PINS

Footprint 13024



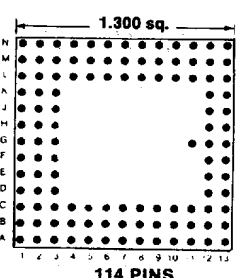
122 PINS

Footprint 13010



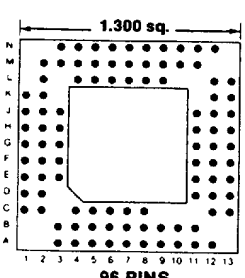
120 PINS

Footprint 13015



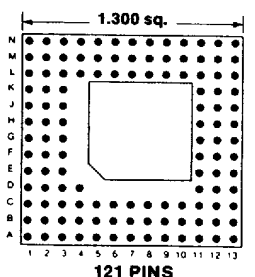
114 PINS

Footprint 13020



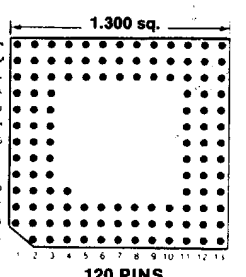
96 PINS

Footprint 13025



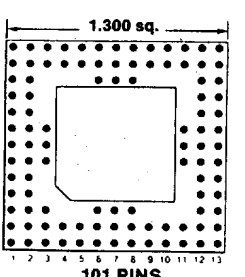
121 PINS

Footprint 13011



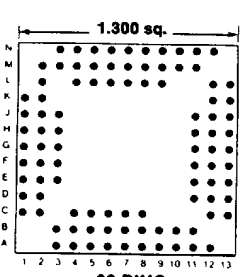
120 PINS

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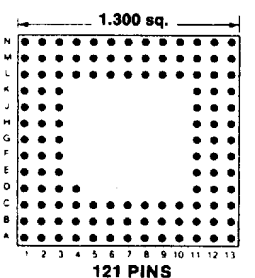
101 PINS

Footprint 13021



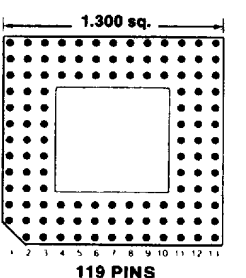
96 PINS

Footprint 13026



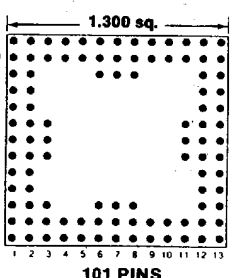
121 PINS

Footprint 13012



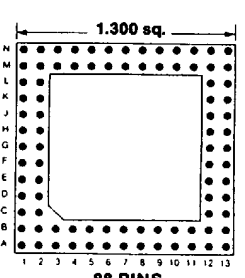
119 PINS

Footprint 13017



101 PINS

Footprint 13022



88 PINS

Footprint 13027



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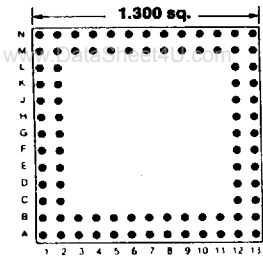


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All footprints are topview.

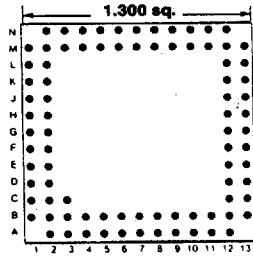
13 x 13 cont.

FOOTPRINTS



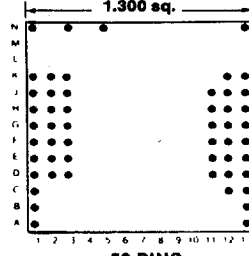
88 PINS

Footprint 13029



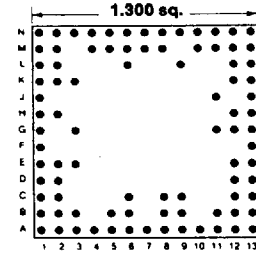
85 PINS

Footprint 13033



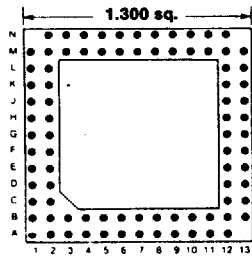
52 PINS

Footprint 13037



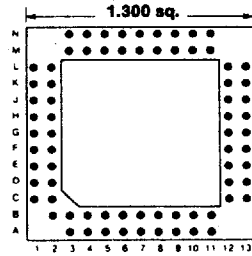
88 PINS

Footprint 13041



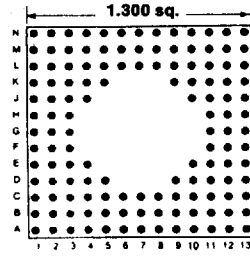
85 PINS

Footprint 13030



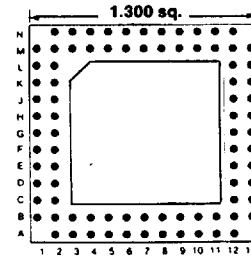
73 PINS

Footprint 13034



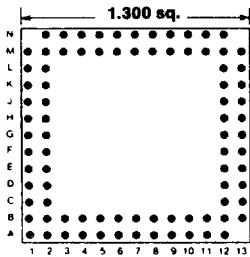
132 PINS

Footprint 13038



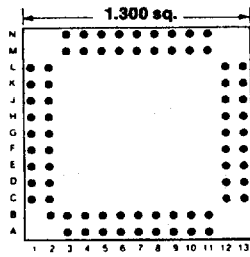
84 PINS

Footprint 13042



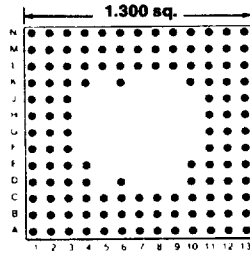
85 PINS

Footprint 13031



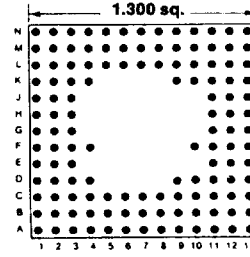
73 PINS

Footprint 13035



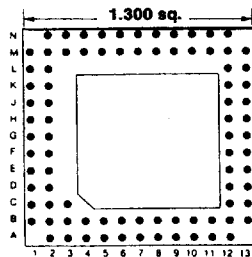
128 PINS

Footprint 13039



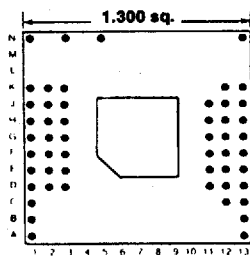
128 PINS

Footprint 13043



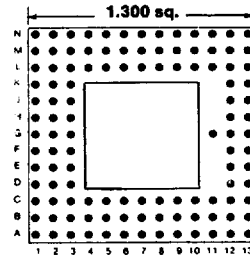
85 PINS

Footprint 13032



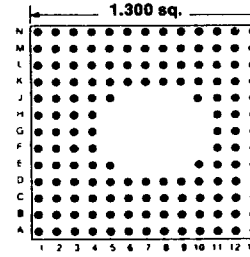
52 PINS

Footprint 13036



114 PINS

Footprint 13040



143 PINS

Footprint 13044

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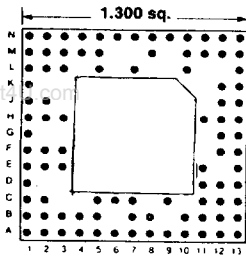
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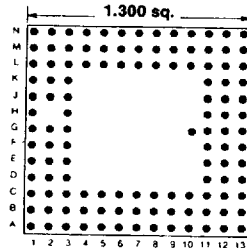
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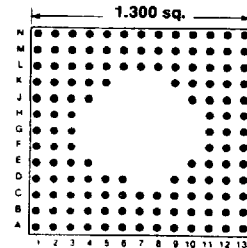
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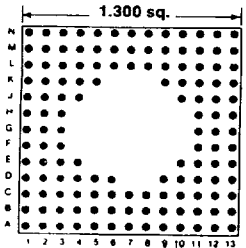
93 PINS  
Footprint 13045



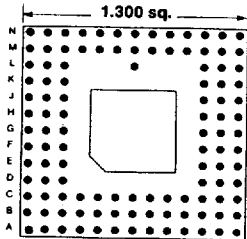
113 PINS  
Footprint 13050



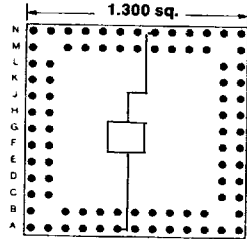
133 PINS  
Footprint 13055



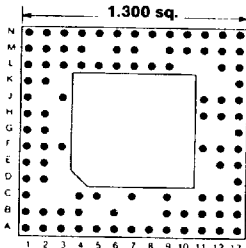
133 PINS  
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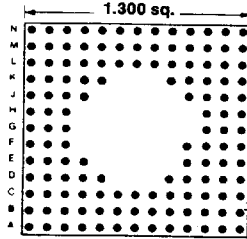
114 PINS  
Footprint 13051



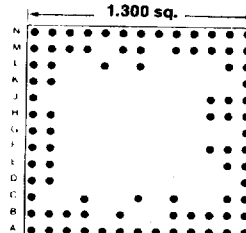
84 PINS  
Footprint 13056



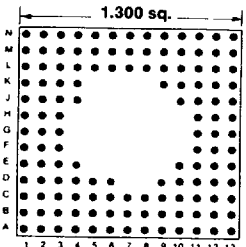
95 PINS  
Footprint 13047



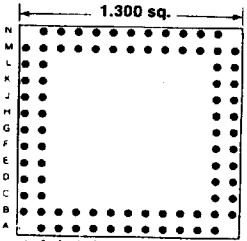
133 PINS  
Footprint 13052



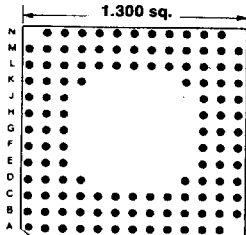
88 PINS  
Footprint 13057



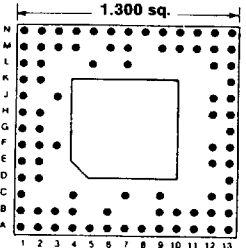
133 PINS  
Footprint 13048



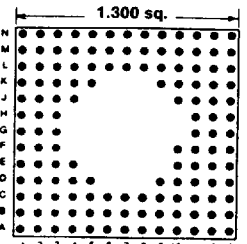
84 PINS  
Footprint 13053



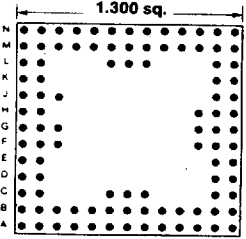
121 PINS  
Footprint 13058



88 PINS  
Footprint 13049



133 PINS  
Footprint 13054



100 PINS  
Footprint 13059

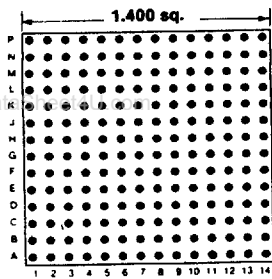


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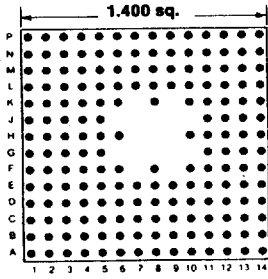


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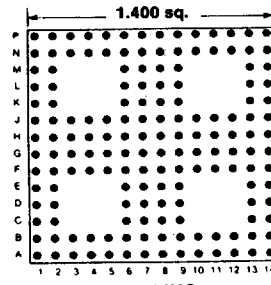
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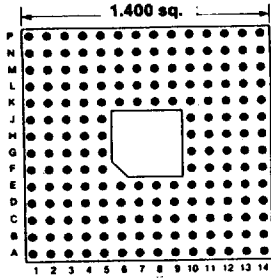
196 PINS  
Footprint 14001



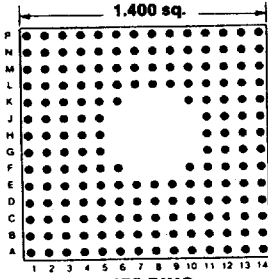
179 PINS  
Footprint 14005



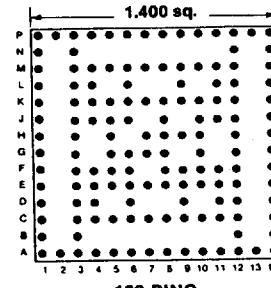
160 PINS  
Footprint 14009



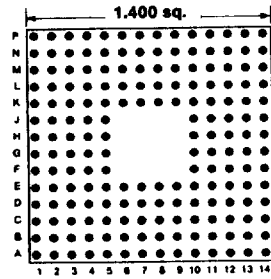
180 PINS  
Footprint 14002



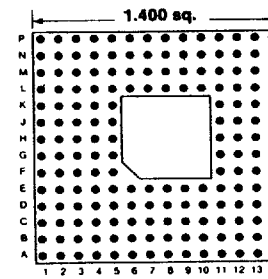
175 PINS  
Footprint 14006



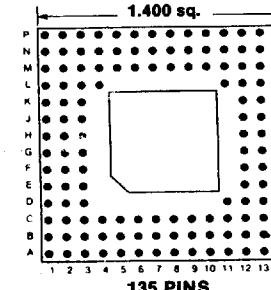
139 PINS  
Footprint 14010



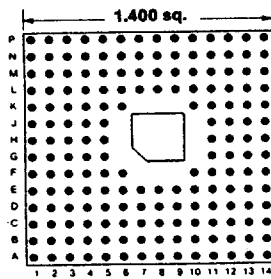
180 PINS  
Footprint 14003



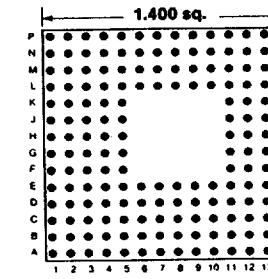
171 PINS  
Footprint 14007



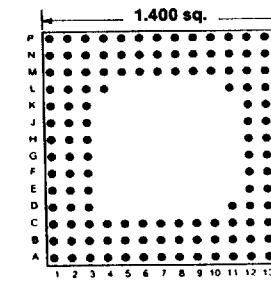
135 PINS  
Footprint 14011



175 PINS  
Footprint 14004



171 PINS  
Footprint 14008



135 PINS  
Footprint 14012

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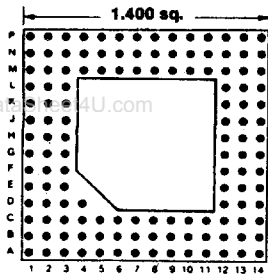
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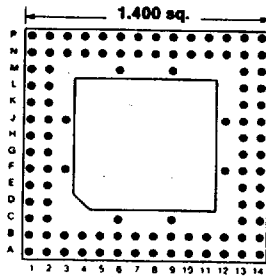
All footprints are topview.

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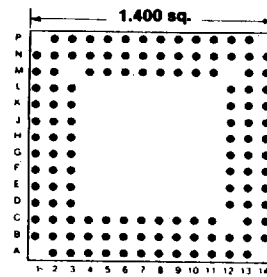
14 x 14 cont.



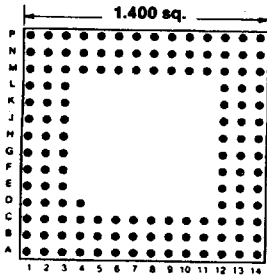
133 PINS  
Footprint 14013



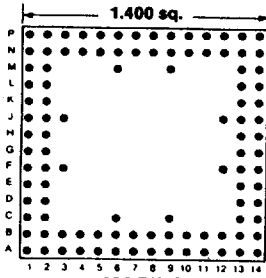
104 PINS  
Footprint 14017



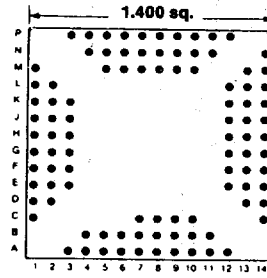
125 PINS  
Footprint 14021



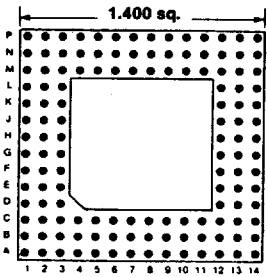
133 PINS  
Footprint 14014



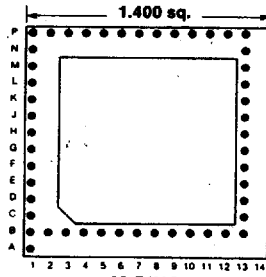
104 PINS  
Footprint 14018



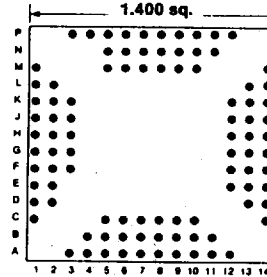
94 PINS  
Footprint 14022



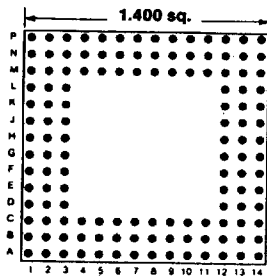
132 PINS  
Footprint 14015



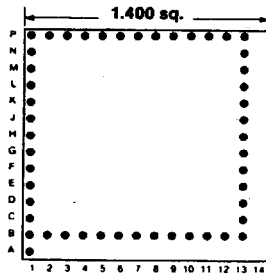
49 PINS  
Footprint 14019



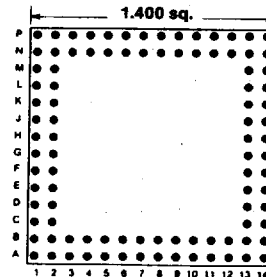
94 PINS  
Footprint 14023



132 PINS  
Footprint 14016



49 PINS  
Footprint 14020



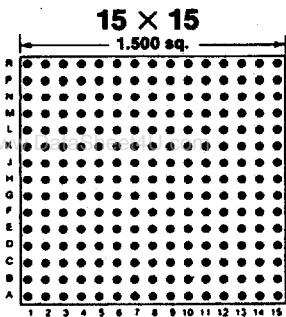
96 PINS  
Footprint 14024



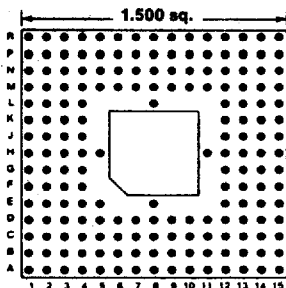
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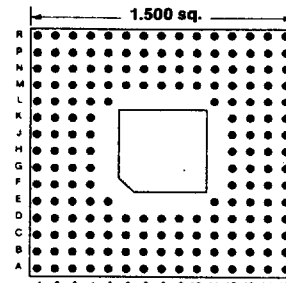
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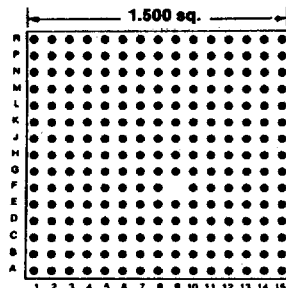
225 PINS  
Footprint 15001



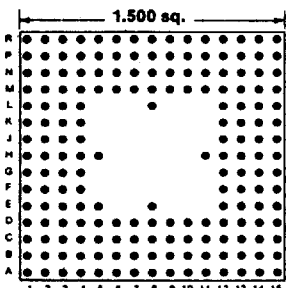
181 PINS  
Footprint 15005



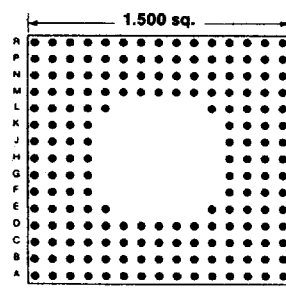
180 PINS  
Footprint 15009



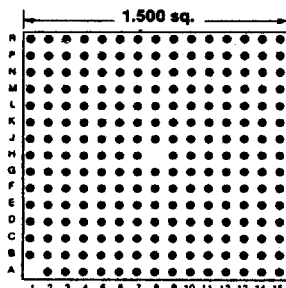
224 PINS  
Footprint 15002



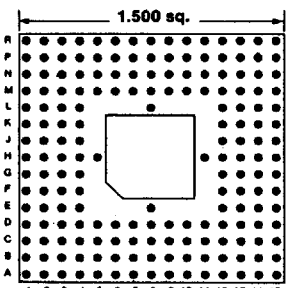
181 PINS  
Footprint 15006



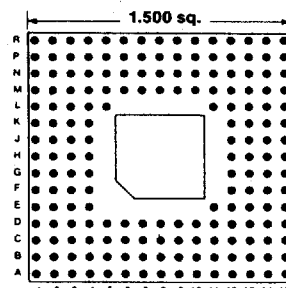
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Footprint 15010



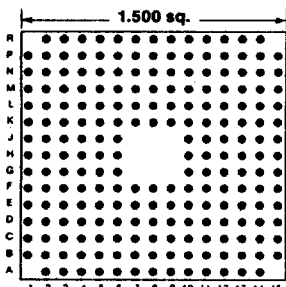
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Footprint 15003



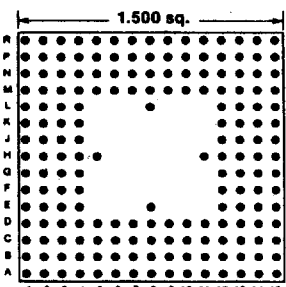
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Footprint 15007



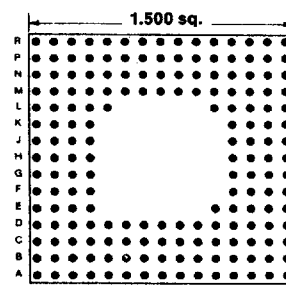
179 PINS  
Footprint 15011



212 PINS  
Footprint 15004



180 PINS  
Footprint 15008



179 PINS  
Footprint 15012

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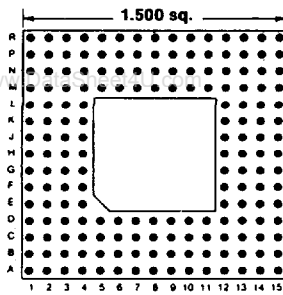


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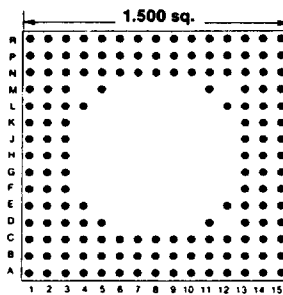
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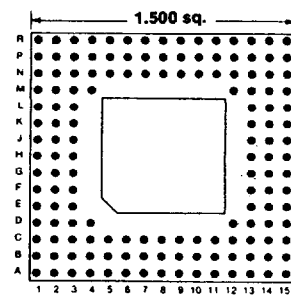
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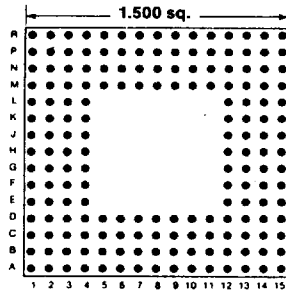
176 PINS  
Footprint 15013



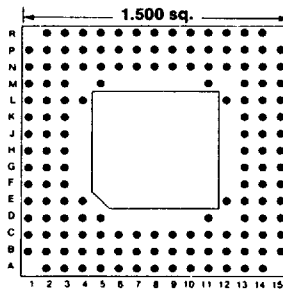
153 PINS  
Footprint 15017



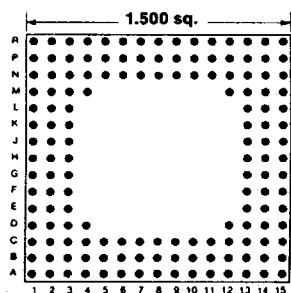
148 PINS  
Footprint 15021



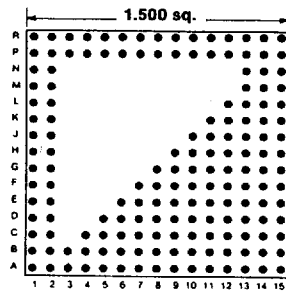
176 PINS  
Footprint 15014



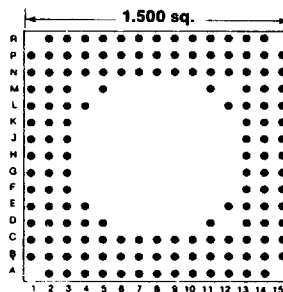
149 PINS  
Footprint 15018



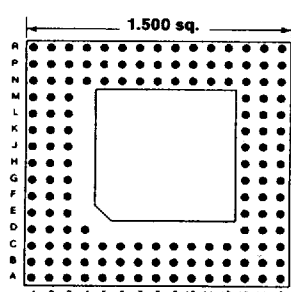
148 PINS  
Footprint 15022



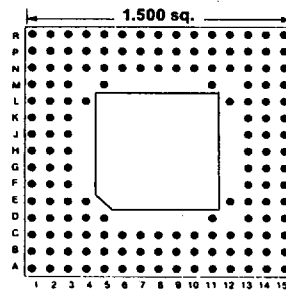
160 PINS  
Footprint 15015



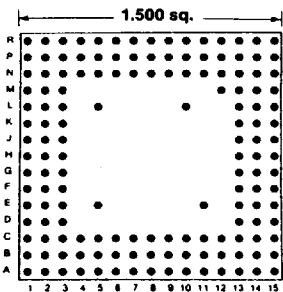
149 PINS  
Footprint 15019



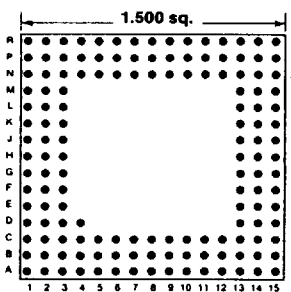
145 PINS  
Footprint 15023



153 PINS  
Footprint 15016



149 PINS  
Footprint 15020



145 PINS  
Footprint 15024



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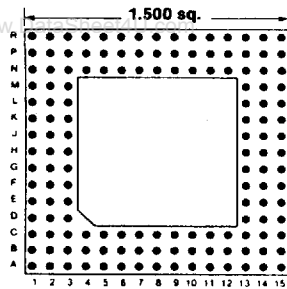


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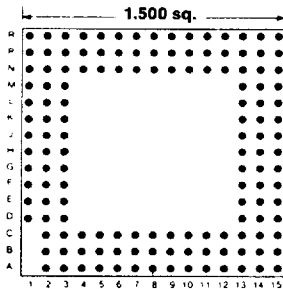
All footprints are topview.

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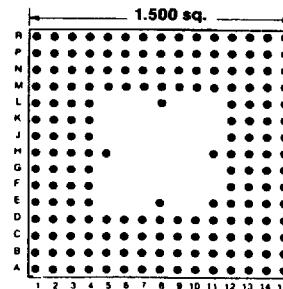
15 x 15 cont.



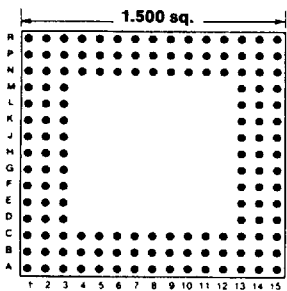
144 PINS  
Footprint 15025



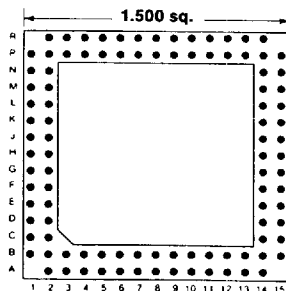
141 PINS  
Footprint 15029



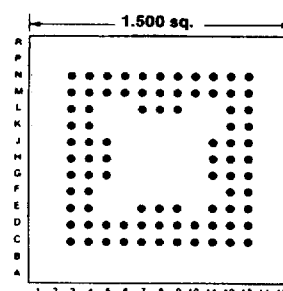
181 PINS  
Footprint 15033



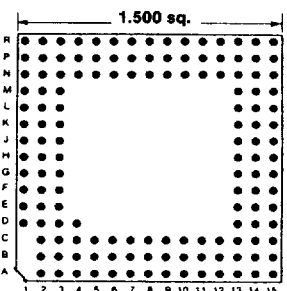
144 PINS  
Footprint 15026



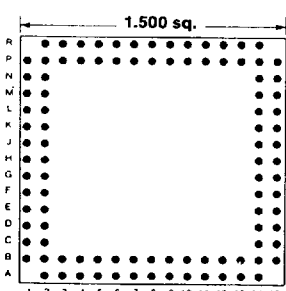
100 PINS  
Footprint 15030



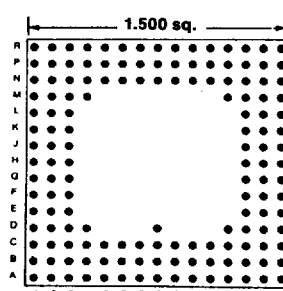
85 PINS  
Footprint 15034



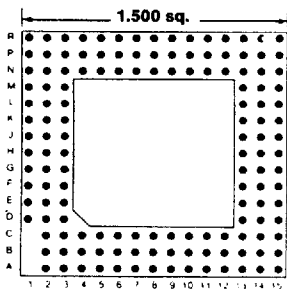
142 PINS  
Footprint 15027



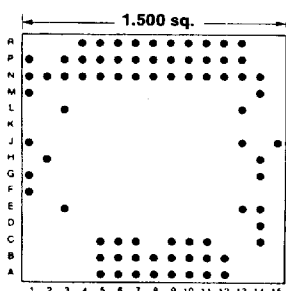
100 PINS  
Footprint 15031



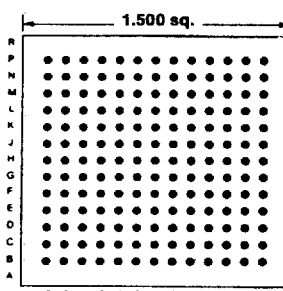
149 PINS  
Footprint 15035



141 PINS  
Footprint 15028



75 PINS  
Footprint 15032



169 PINS  
Footprint 15036

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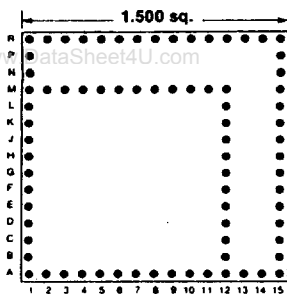
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All footprints are topview.

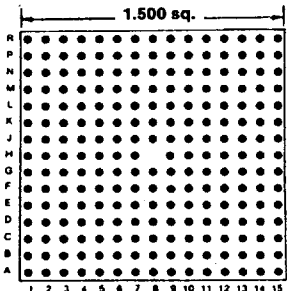
15 x 15



77 PINS

Footprint 15037

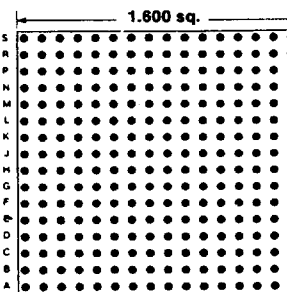
1.500 sq.



224 PINS

Footprint 15038

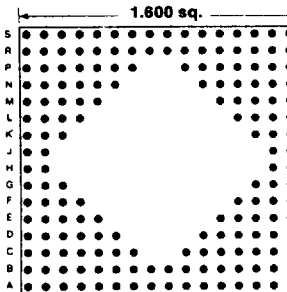
16 x 16



256 PINS

Footprint 16001

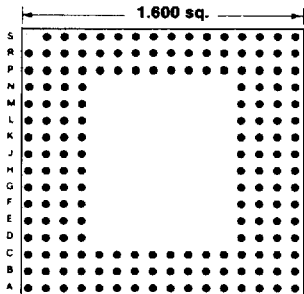
1.600 sq.



172 PINS

Footprint 16002

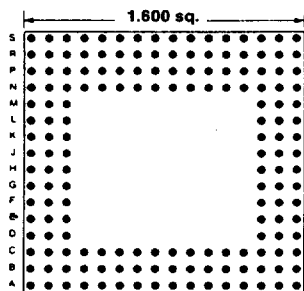
1.600 sq.



175 PINS

Footprint 16003

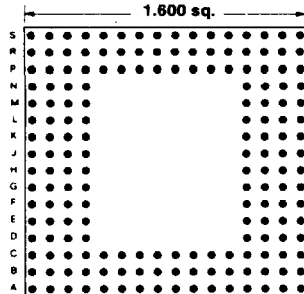
1.600 sq.



166 PINS

Footprint 16004

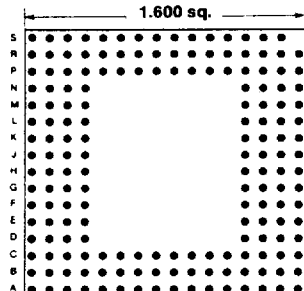
1.600 sq.



176 PINS

Footprint 16007

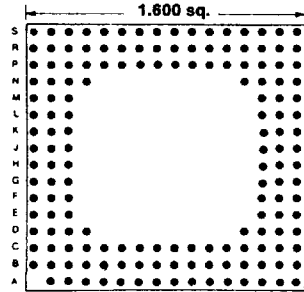
1.600 sq.



175 PINS

Footprint 16008

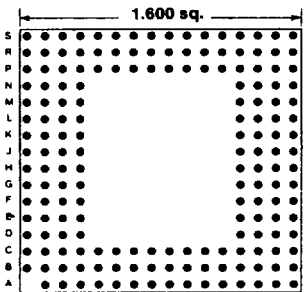
1.600 sq.



159 PINS

Footprint 16009

1.600 sq.



175 PINS

Footprint 16010



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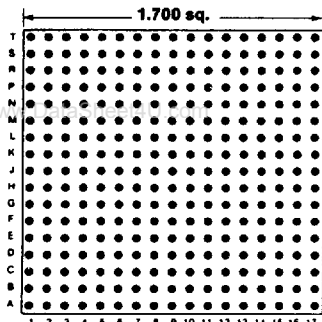
18



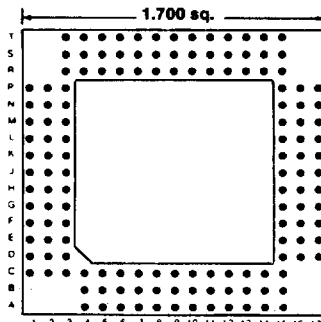
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17 x 17

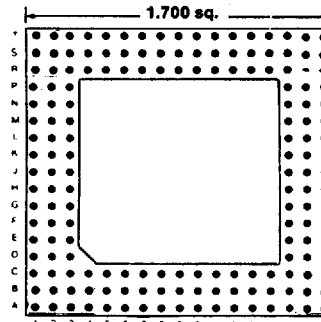
FOOTPRINTS



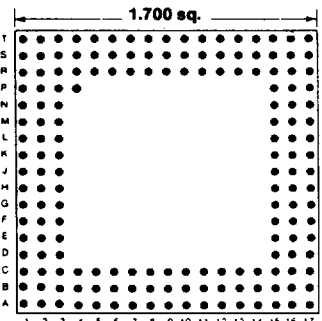
**289 PINS**  
Footprint 17001



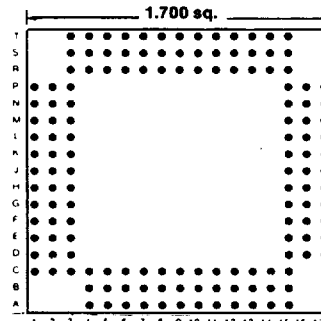
**144 PINS**  
Footprint 17005



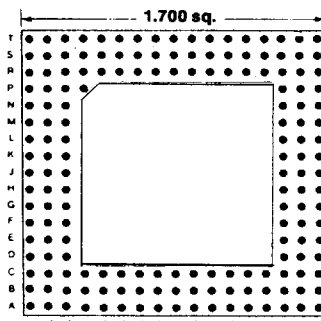
**168 PINS**  
Footprint 17009



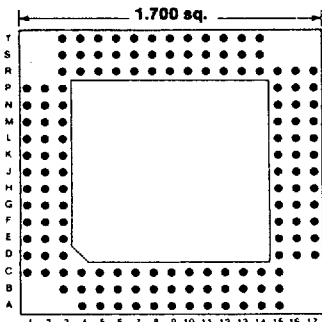
**169 PINS**  
Footprint 17002



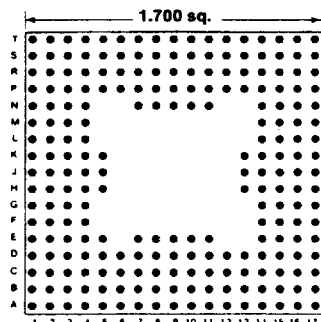
**144 PINS**  
Footprint 17006



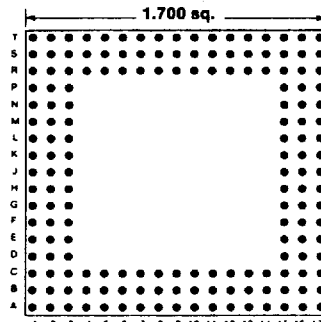
**169 PINS**  
Footprint 17010



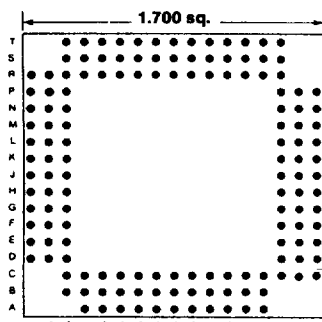
**145 PINS**  
Footprint 17003



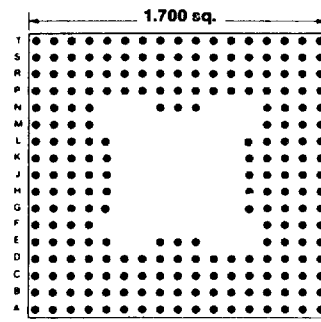
**225 PINS**  
Footprint 17007



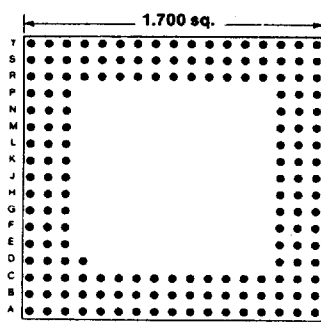
**168 PINS**  
Footprint 17011



**145 PINS**  
Footprint 17004



**225 PINS**  
Footprint 17008



**169 PINS**  
Footprint 17012

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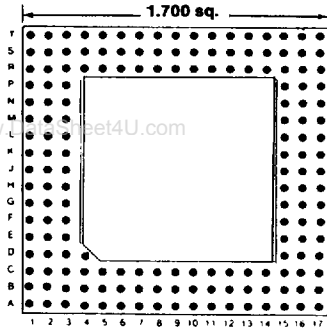
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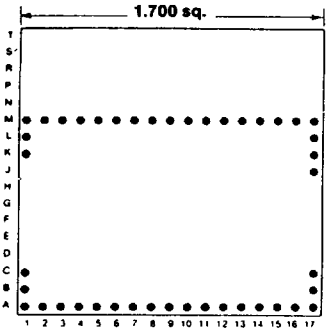
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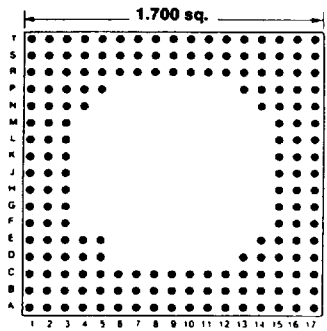
169 PINS

Footprint 17013



43 PINS

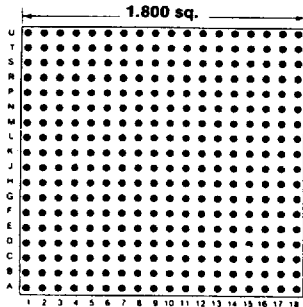
Footprint 17014



181 PINS

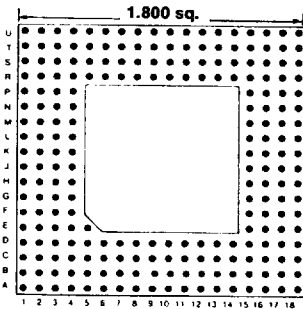
Footprint 17015

18 x 18



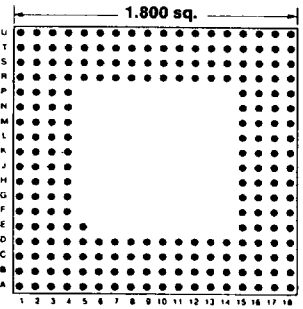
324 PINS

Footprint 18001



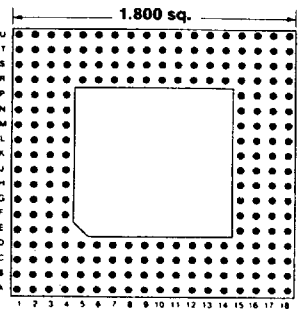
225 PINS

Footprint 18002



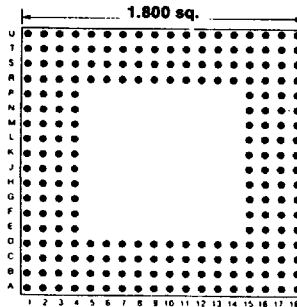
225 PINS

Footprint 18003



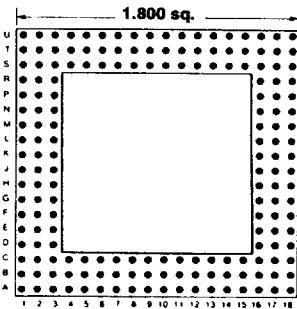
224 PINS

Footprint 18004



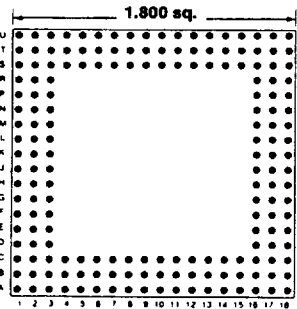
224 PINS

Footprint 18005



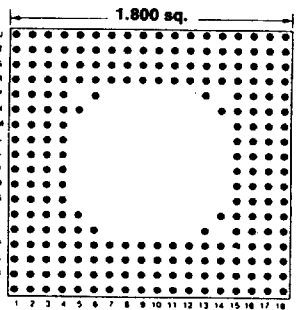
180 PINS

Footprint 18006



180 PINS

Footprint 18007



233 PINS

Footprint 18008

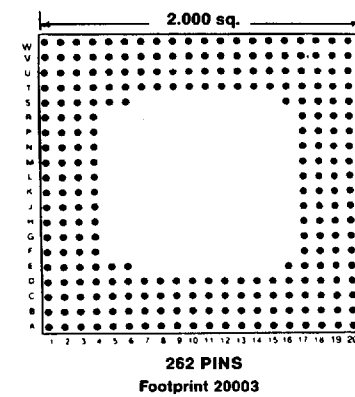
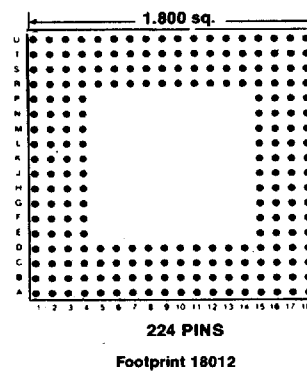
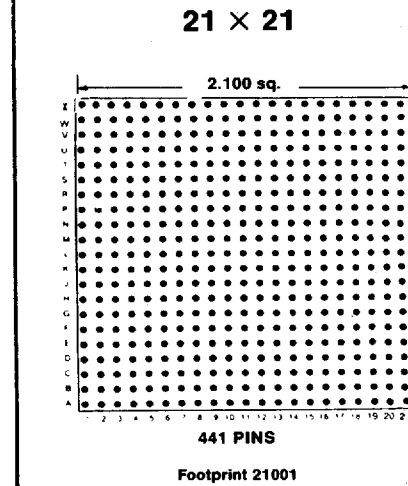
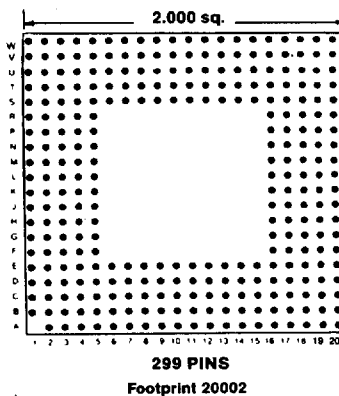
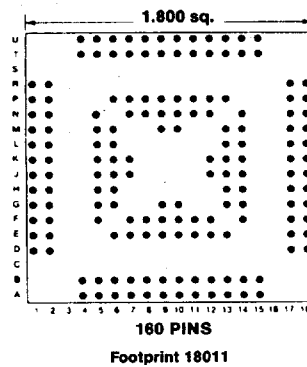
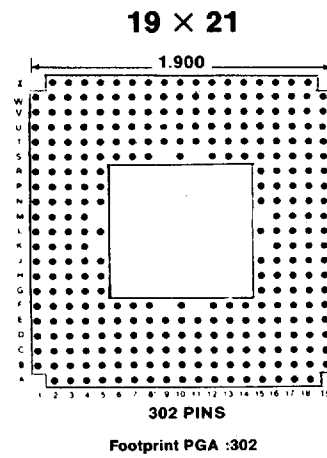
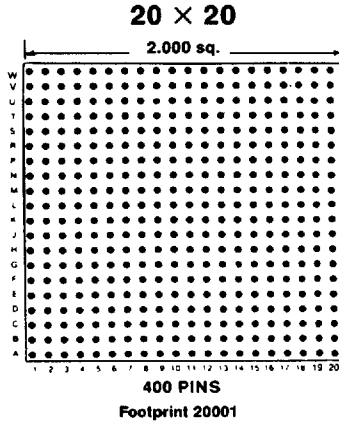
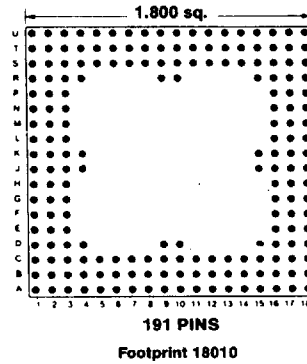
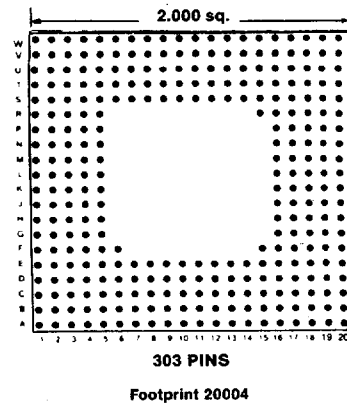
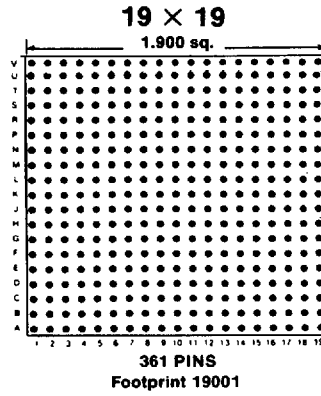
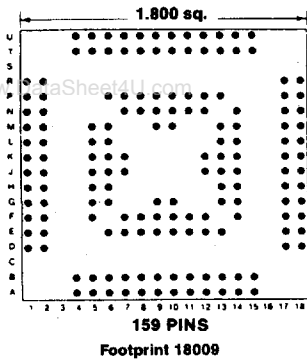


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