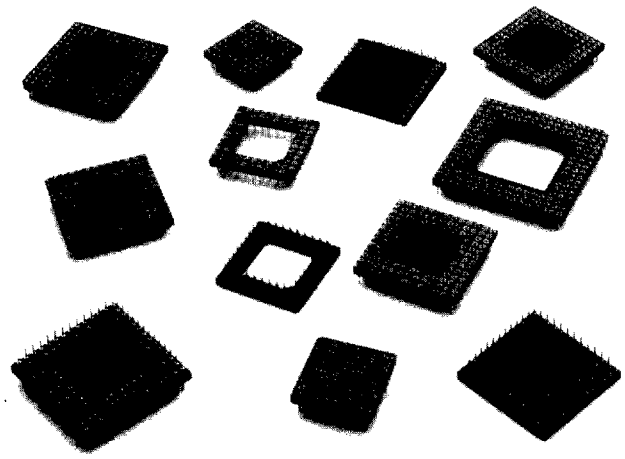
A-23-05



8.1

- High temperature plastic will withstand wave, vapor phase, and infrared soldering.
- Six(6) fingered Beryllium copper contacts provide low insertion.
- Six(6) points of contact redundancy and standard gold plating on spring clip contacts provide maximum mechanical and electrical performance.
- Precision machined outer sleeve features closed bottom to eliminate solder wicking problems.
- Precision design allows for ease of insertion using automatic insertion equipment.

Garry's 714 PGA series offers high temperature plastic in standard size footprint configurations from 6 x 6 thru 25 x 25. Custom footprints are available upon request. The 715 series offers high temperature plastic with "standoffs". The 716 series offers interstitial footprints which are manufactured from FR-4, .062" thick glass epoxy material.

All series offer your choice of different pin configurations along with Garry's new "Retent-A-Pin". The "Retent-A-Pin" feature provides positive retention on the Printed Circuit Board thru wave, vapor phase, and infrared soldering applications. Garry supplies a low insertion force six finger spring contact in all standard pins. The adapter PGA series offers precision screw machine terminals that assure durability even with repeated insertions and withdrawals.

Materials

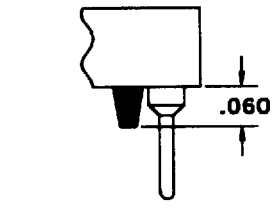
Insulator:
High temperature, PPS. Color: Black.

Spring Contact:
Six finger, Beryllium copper,
Gold over nickel plating.

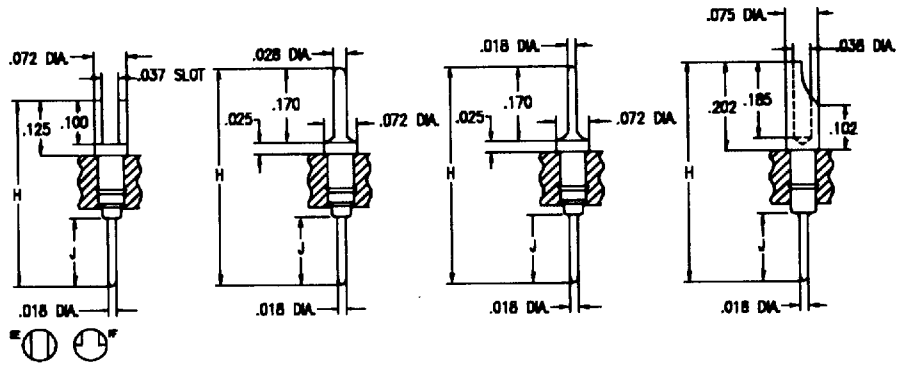
Outer sleeve:
Brass. Gold over nickel.
Tin Lead over nickel plating.

Plating options and specifications are available by contacting either the Garry factory or your local representative.

Garry's "Ultra Low" 3 fingered spring clip for high pin count applications is available upon request.



ALL PINS CAN BE SUPPLIED IN STANDOFF PLASTIC



EE-FF TT TF XX

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Part Number System For Pin Grid Arrays

XXX – XXX – XXX – XX – X

SERIES–PIN COUNT	
714	High Temp Plastic .120 Max.
715	High Temp Plastic .120 Max. w/standoffs
716	Glass Epoxy .062 Thick Interstitial

NUMBER OF PINS

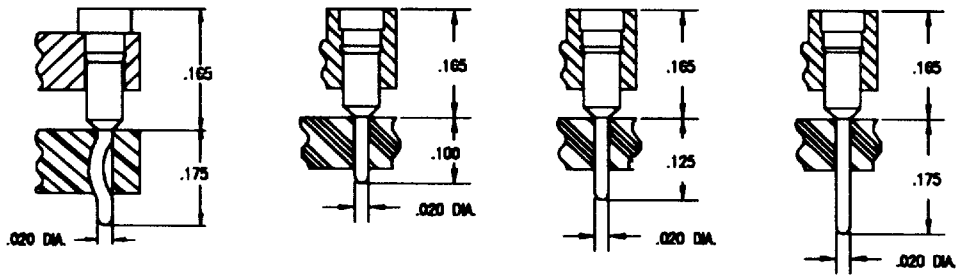
GRID SIZE	
6	6 Pins X 6 Pins
8	8 Pins X 8 Pins
10	10 Pins X 10 Pins
11	11 Pins X 11 Pins
12	12 Pins X 12 Pins
13	13 Pins X 13 Pins
14	14 Pins X 14 Pins
15	15 Pins X 15 Pins
16	16 Pins X 16 Pins
17	17 Pins X 17 Pins
18	18 Pins X 18 Pins
19	19 Pins X 19 Pins
20	20 Pins X 20 Pins
21	21 Pins X 21 Pins
22	22 Pins X 22 Pins
23	23 Pins X 23 Pins
24	24 Pins X 24 Pins
25	25 Pins X 25 Pins

PIN GRID FOOTPRINT
See Section VIII and designators

PLATING			
	CONTACT	SLEEVE	THICKNESS(u)
B	Gold	Gold	30/10
D	Gold	Tin	30/200

PIN STYLE	
DESCRIPTION	
LS	Solder Tail For .062 Thick Board
LC	Solder Tail For .062 Thick Board
LJ	Solder Tail For .093 or .125 Thk. Board

PIN STYLE		
P/N	H DIM.(in.)	J DIM.(in.)
EE	.414	.154
FF	.414	.154
TT	.480	.155
TF	.480	.155
XX	.490	.155



LK LS LC LJ

8.2

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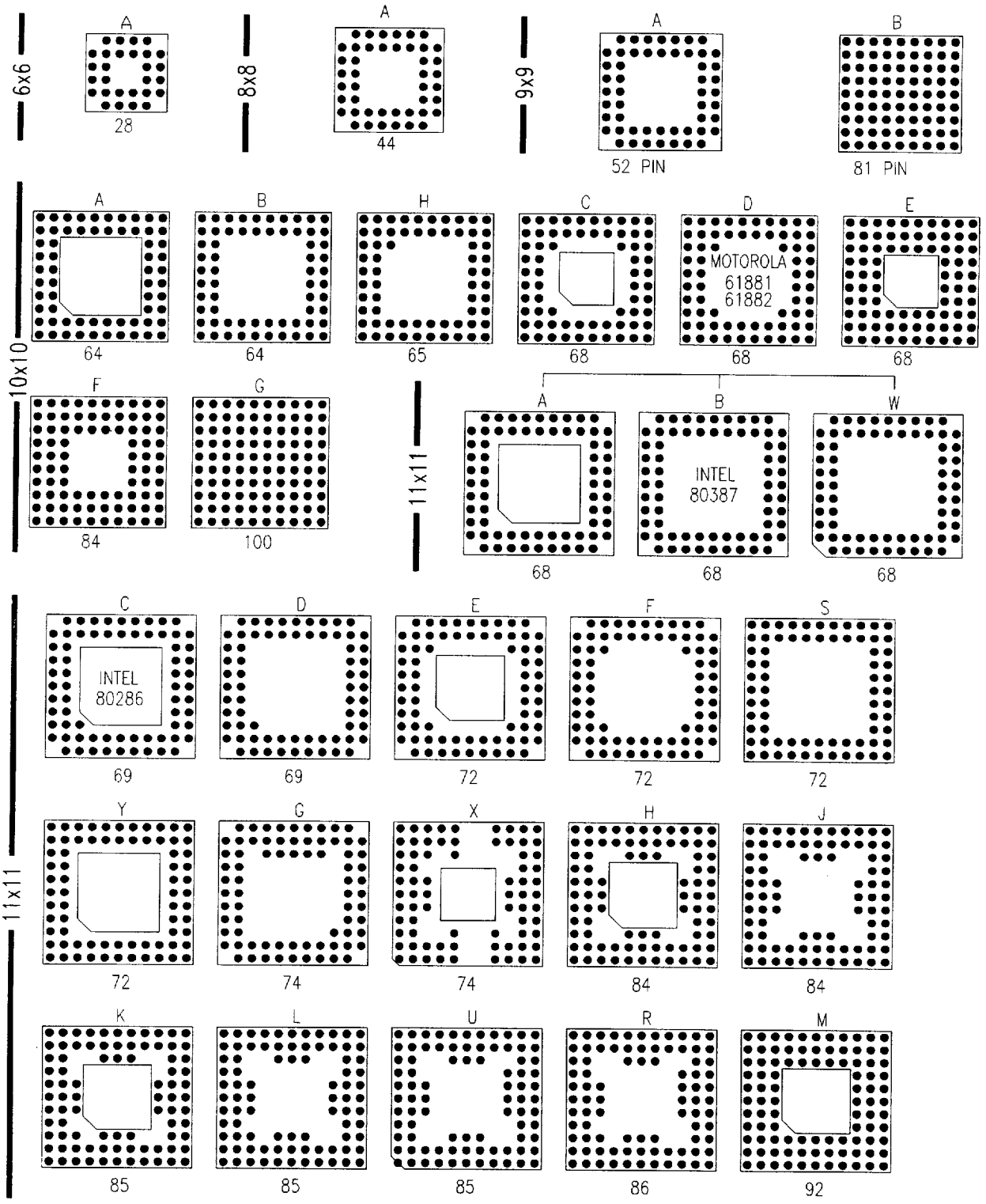

Additional Footprints available upon request.

8.6

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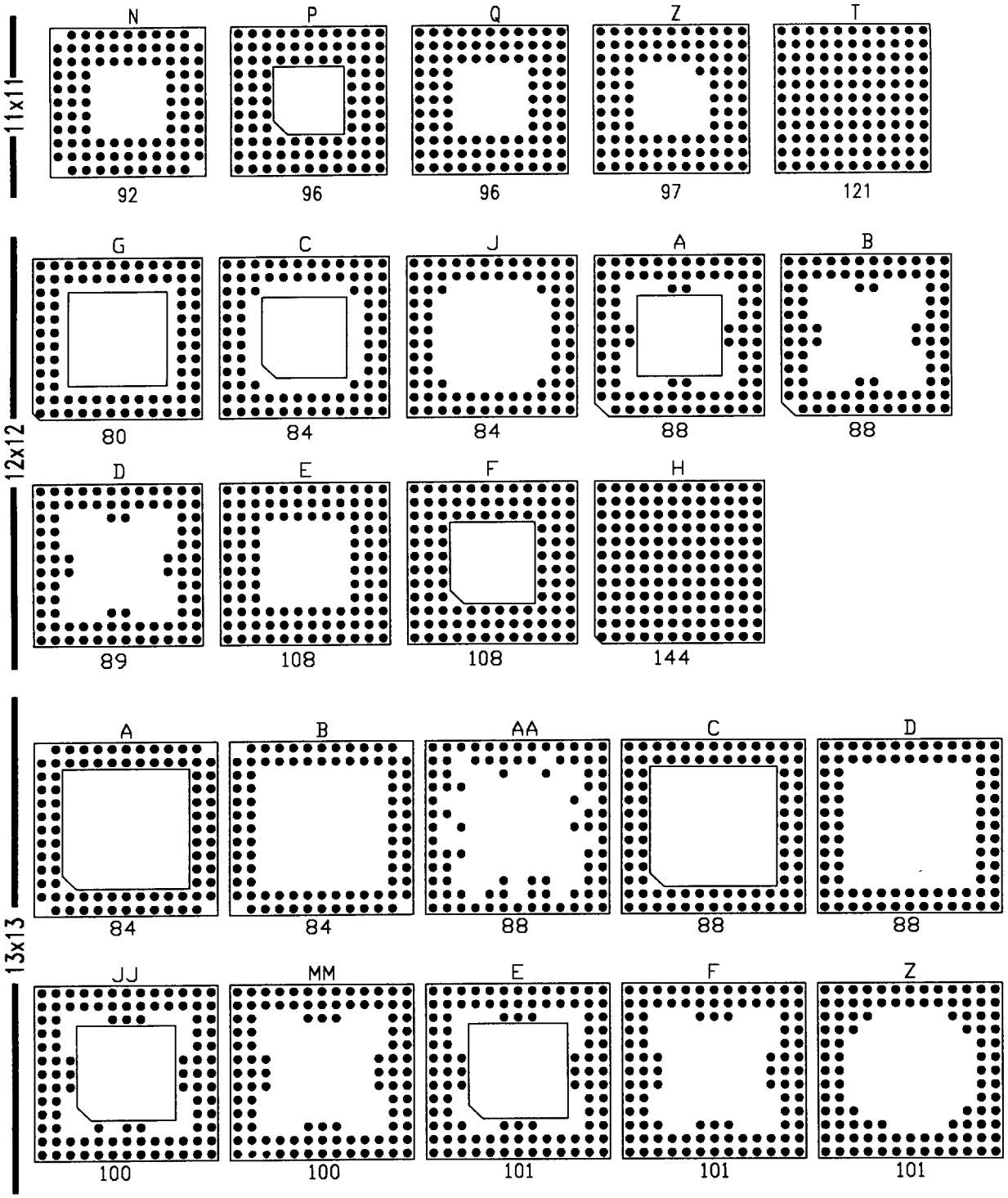

Additional Footprints available upon request.

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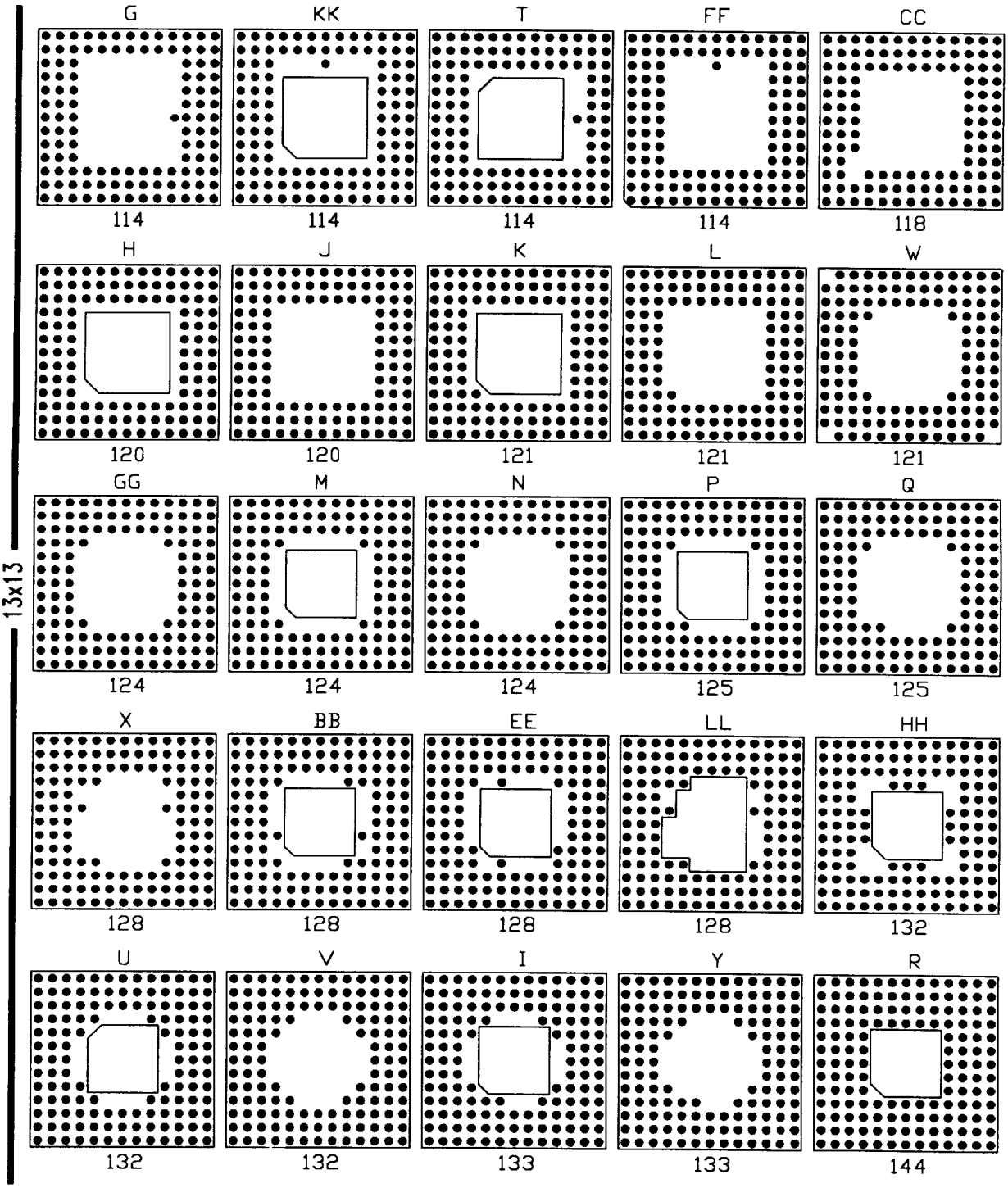

Additional Footprints available upon request.

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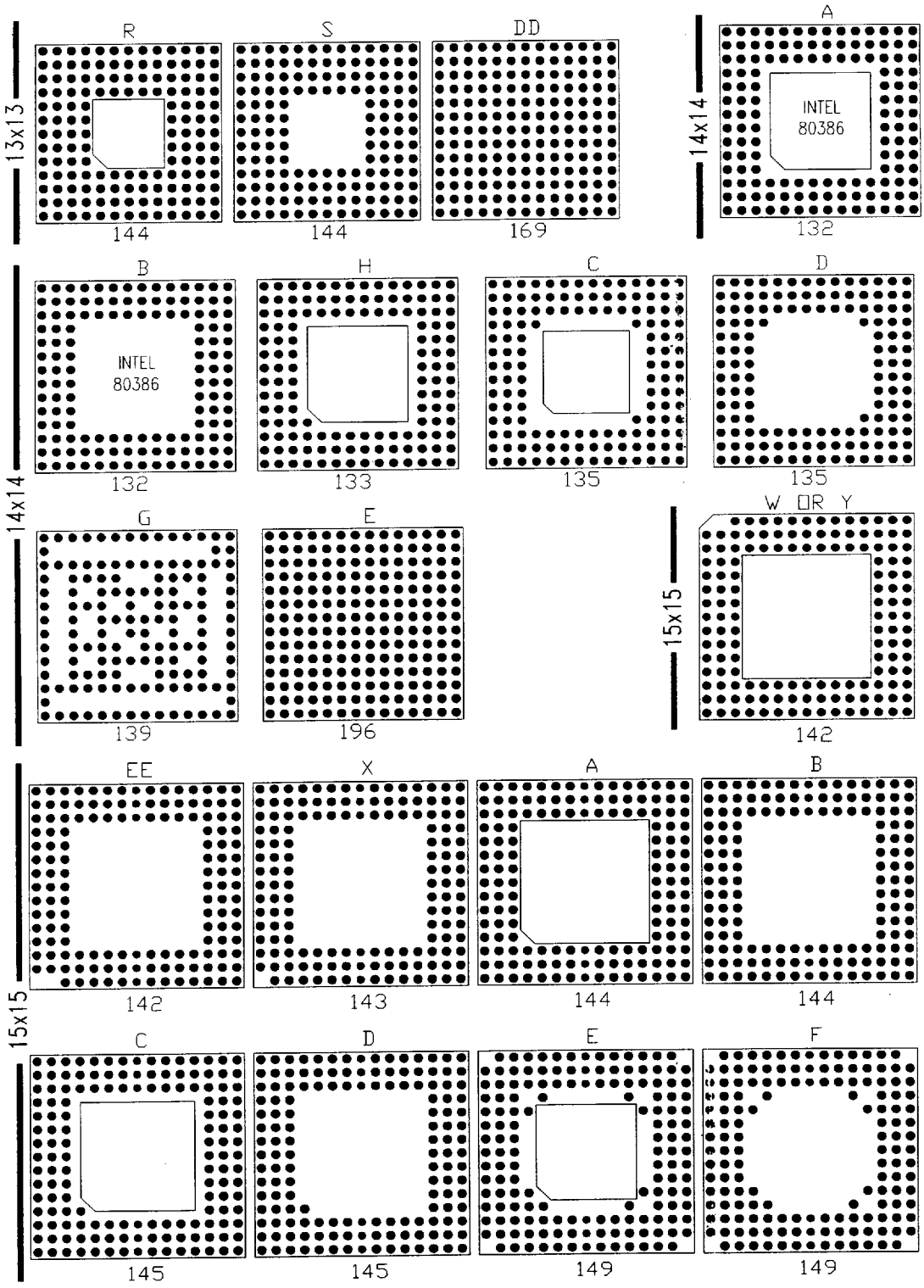

Additional Footprints available upon request.

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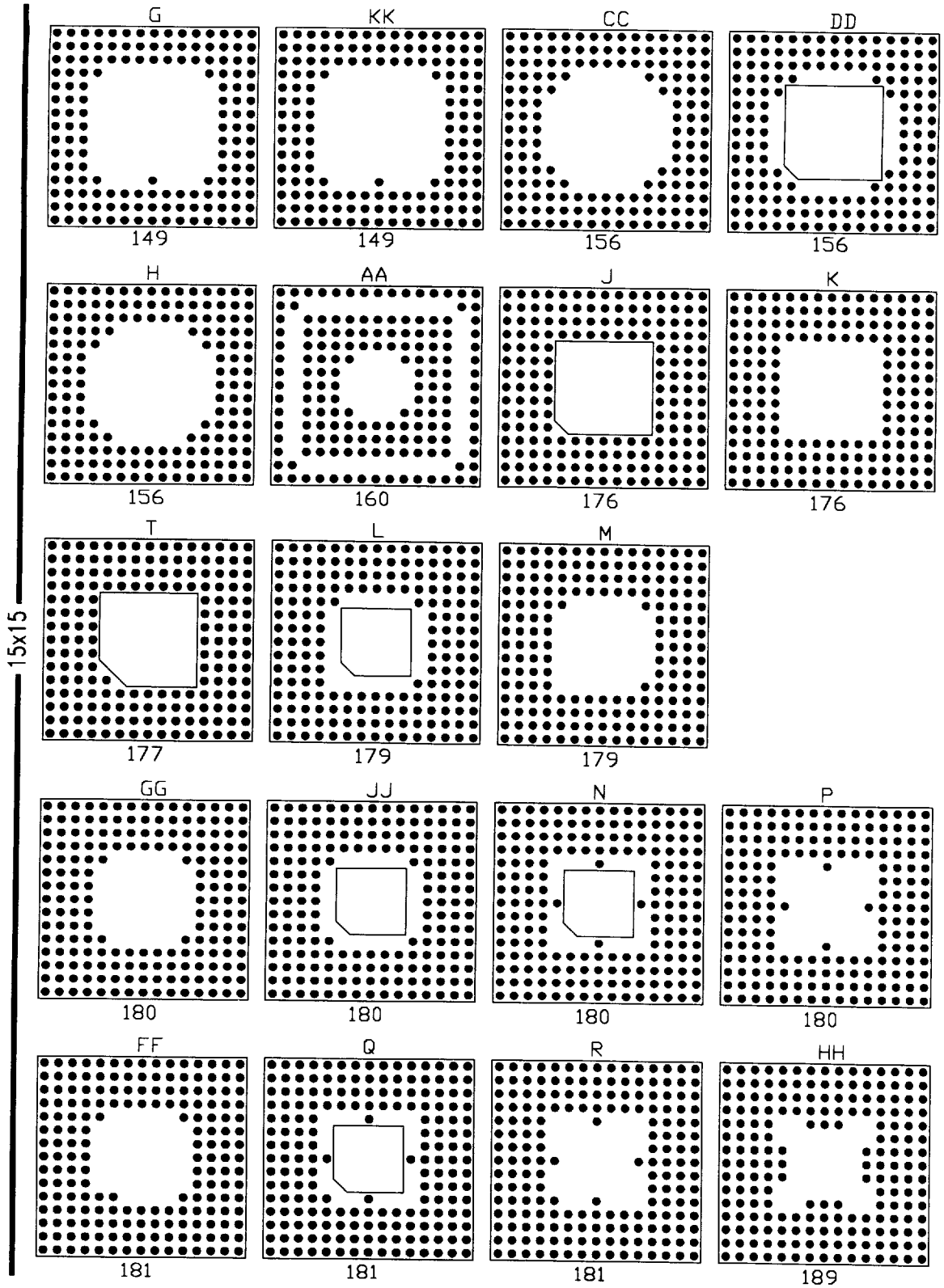

Additional Footprints available upon request.

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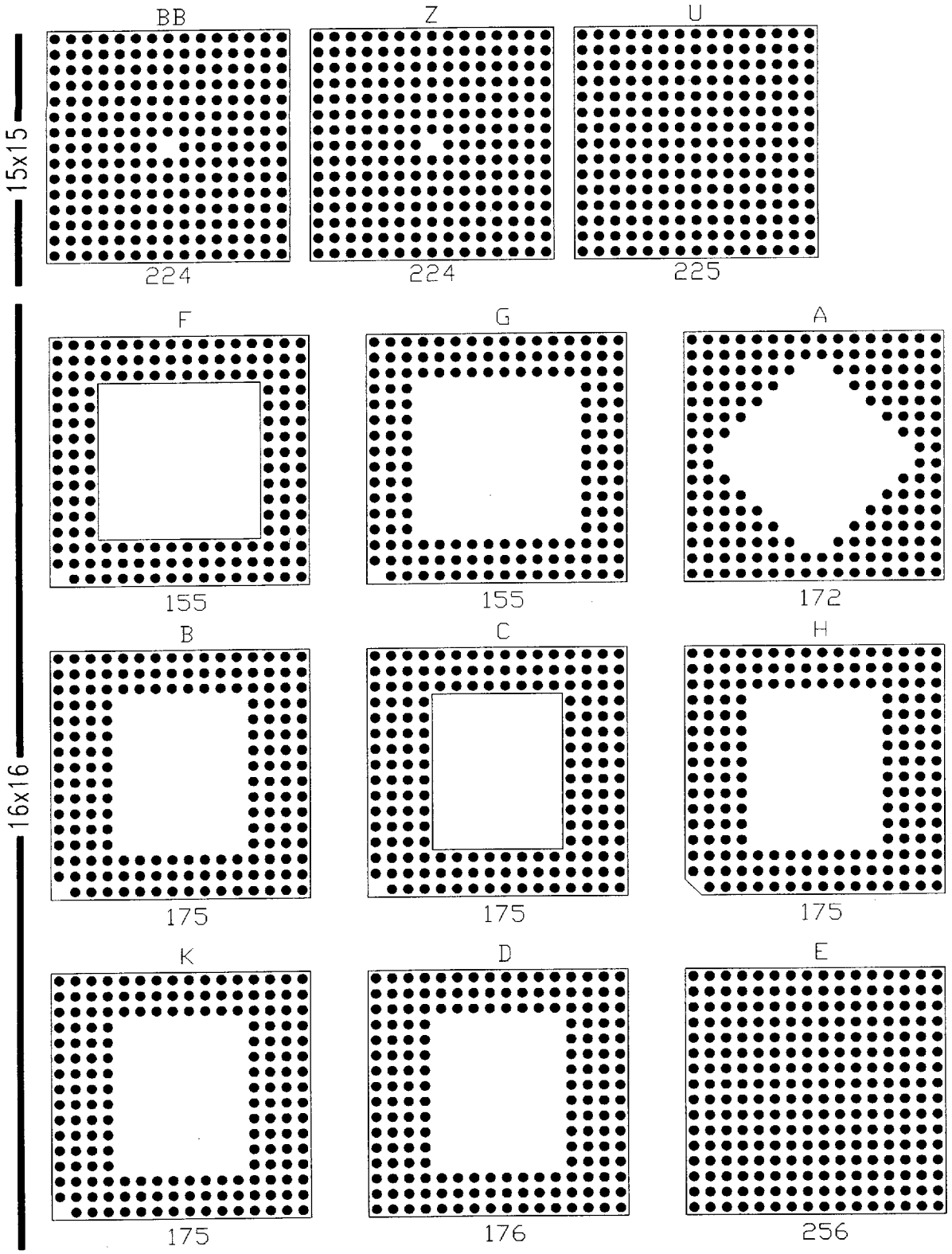
Pin Grid Array

Standard Pin Grid Array Footprints



8.11

Additional Footprints available upon request.

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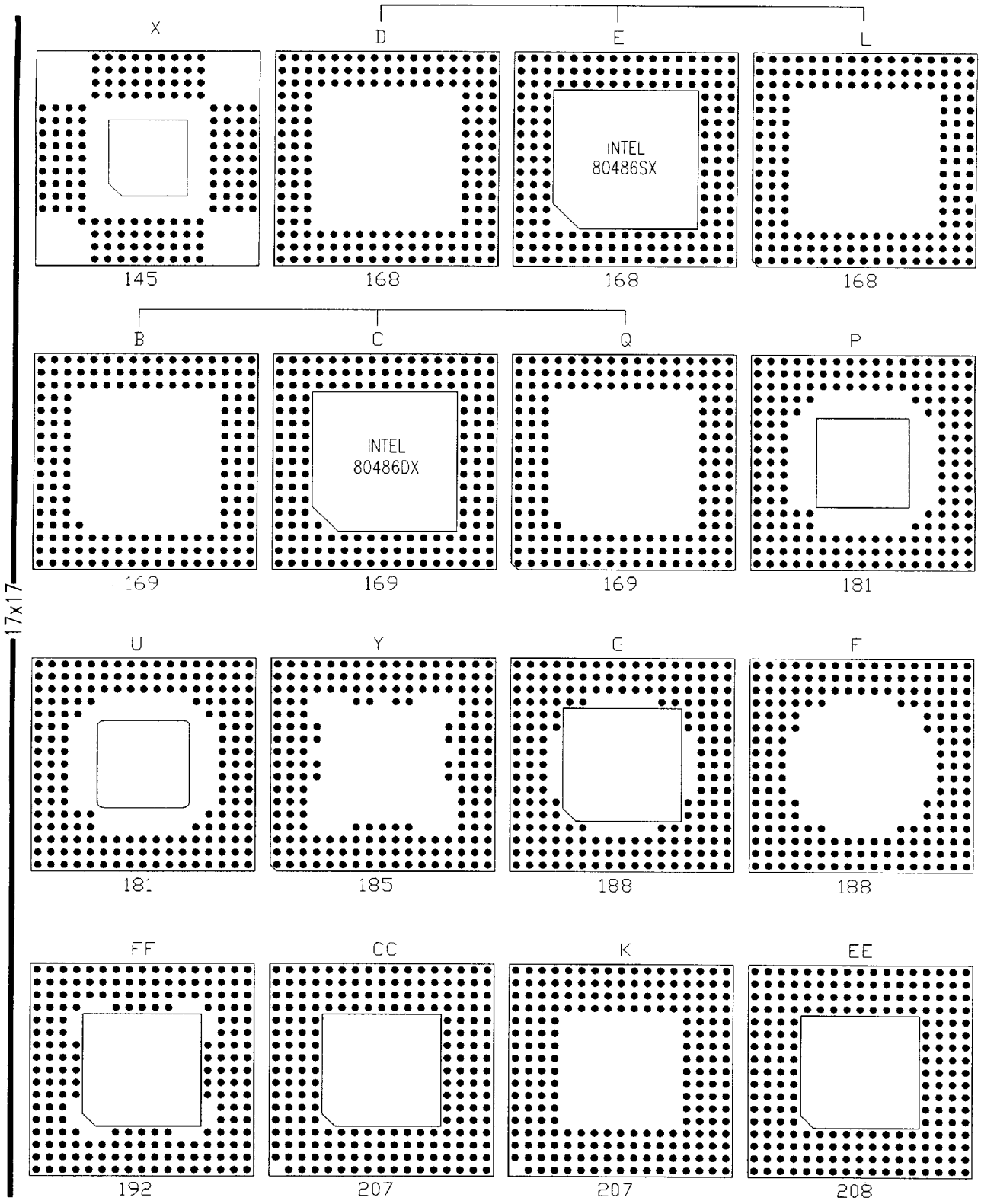

Additional Footprints available upon request.

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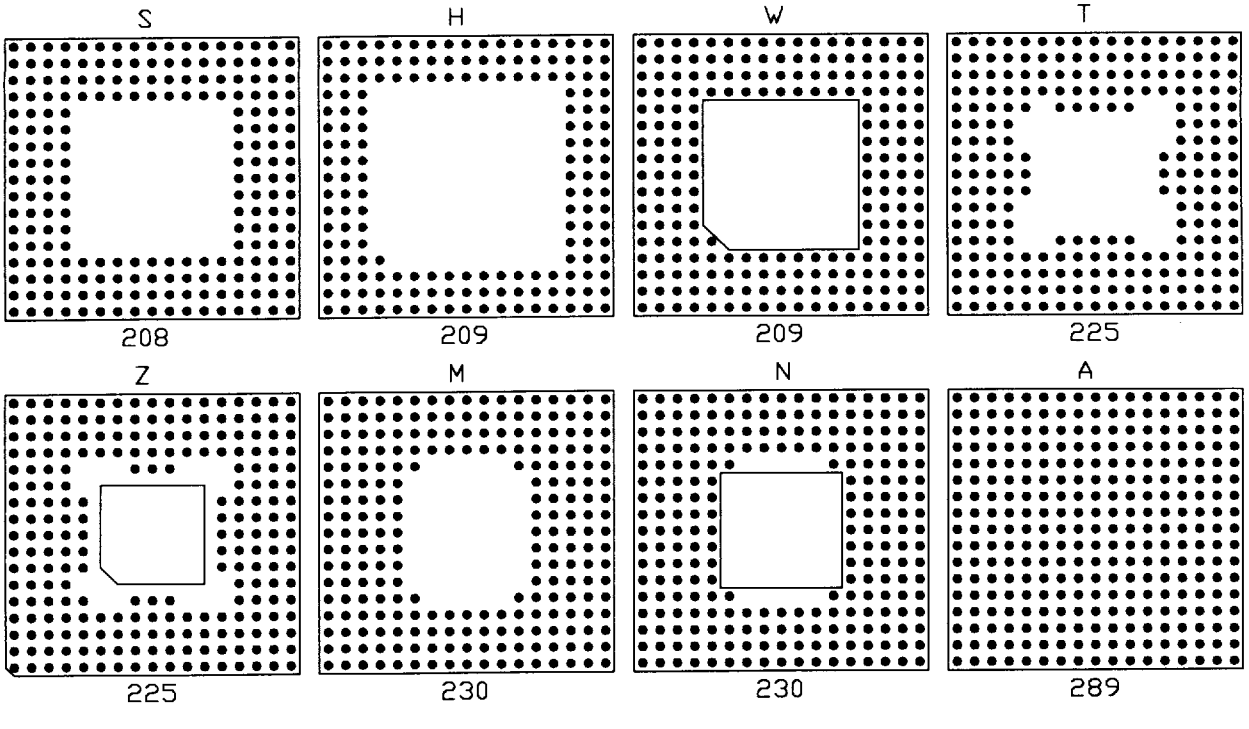
17x17



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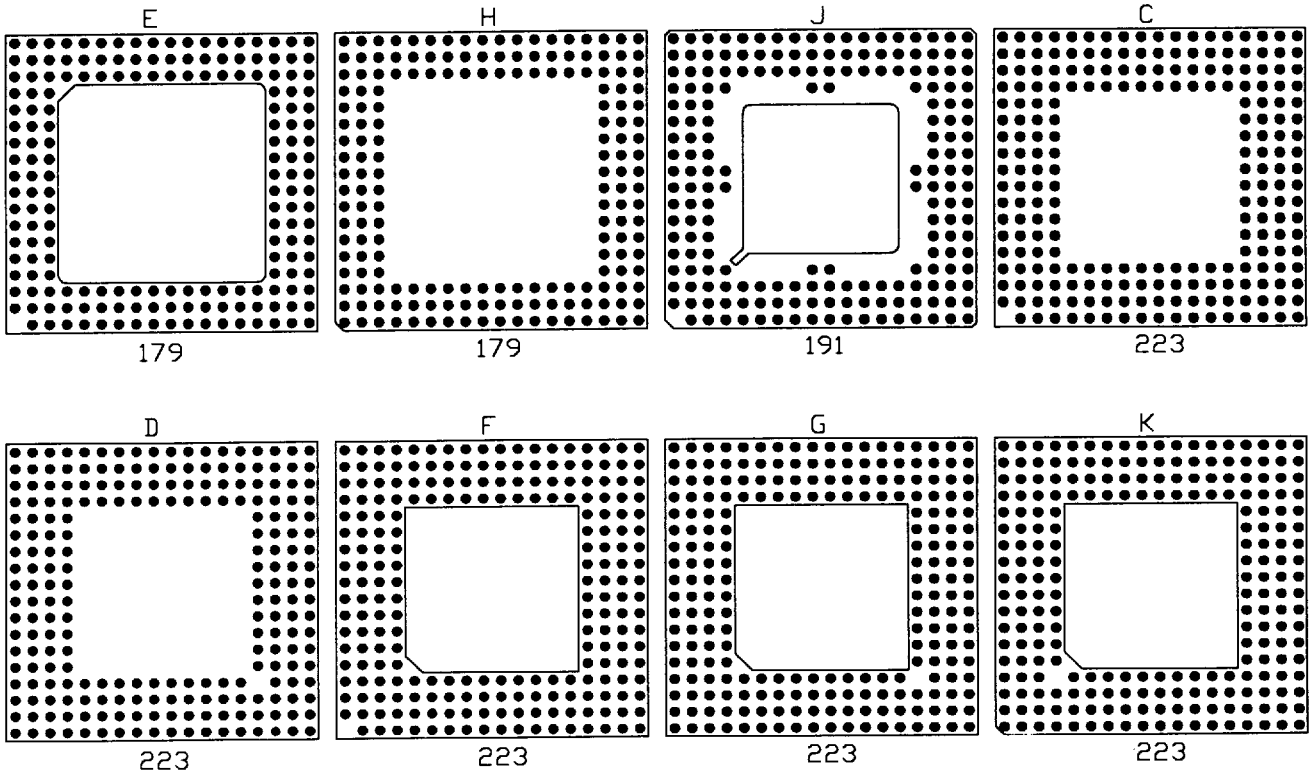

Additional Footprints available upon request.

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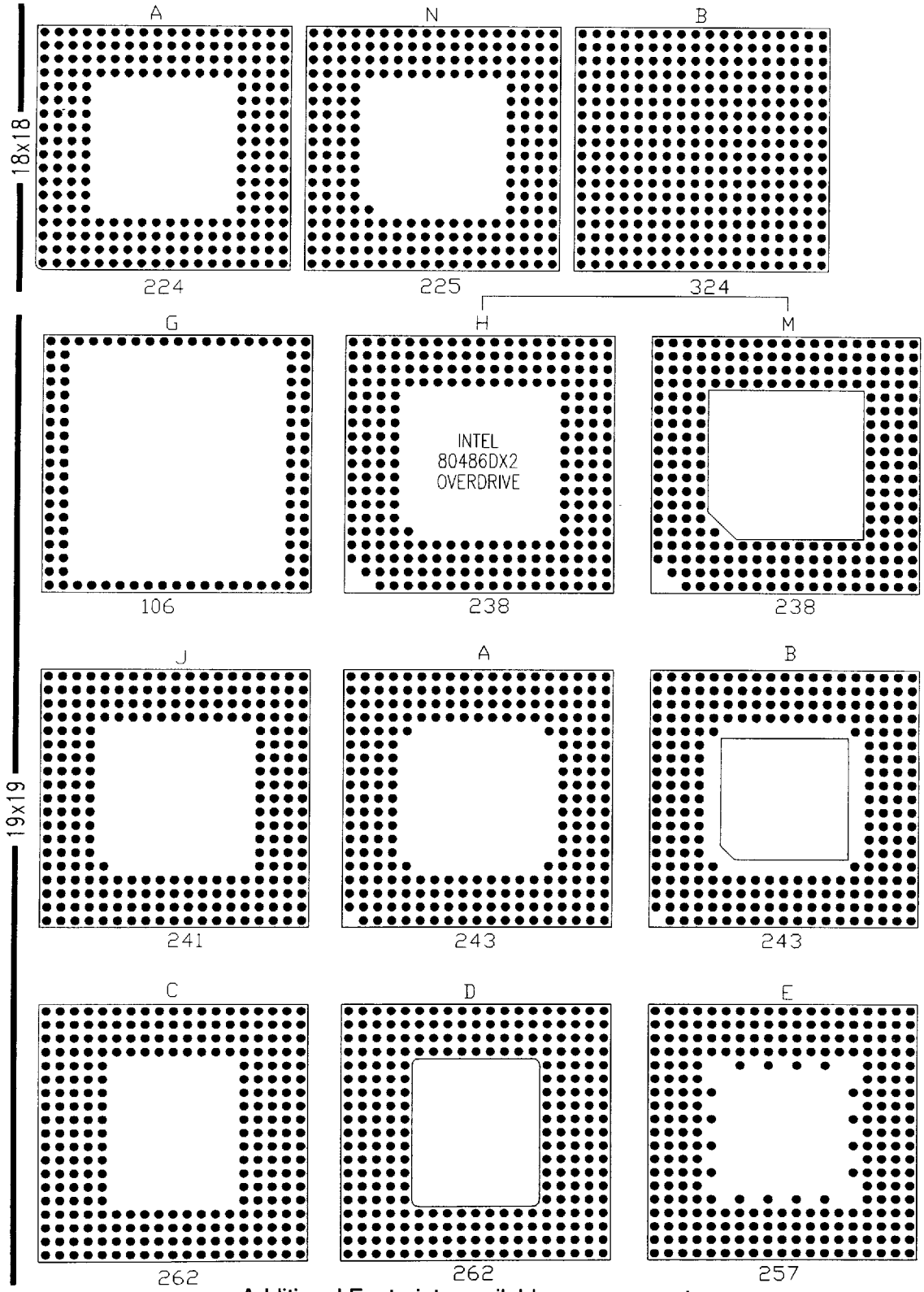

Additional Footprints available upon request.

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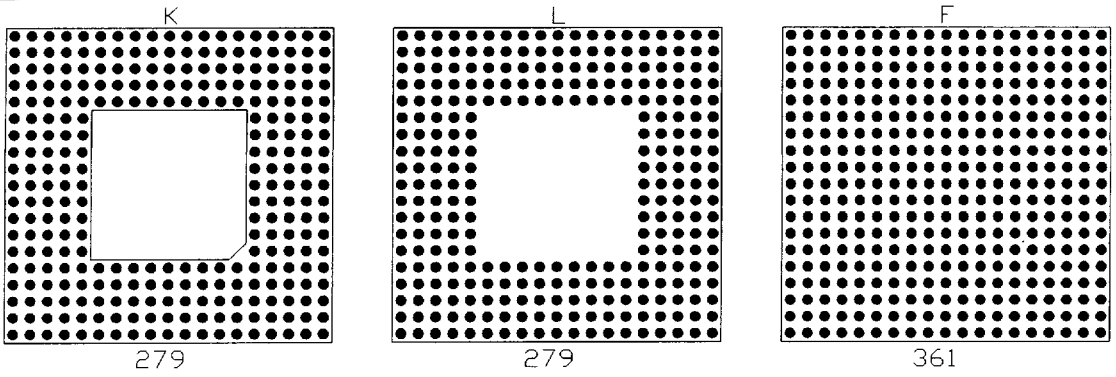
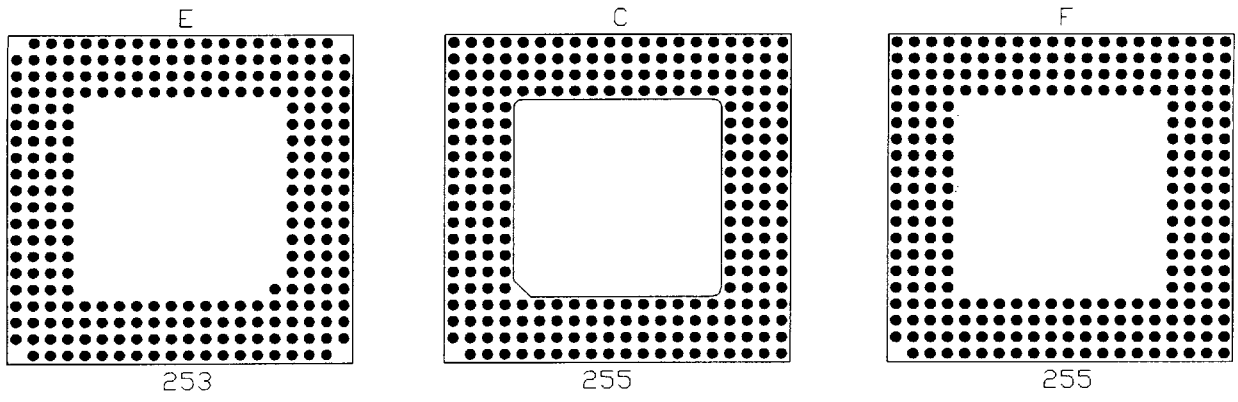
Pin Grid Array

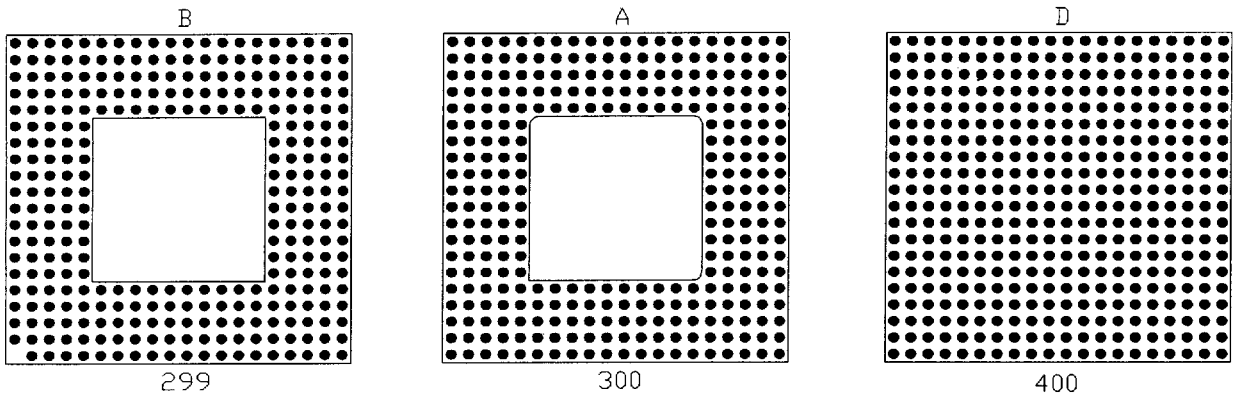
Standard Pin Grid Array Footprints

19x19



20x20





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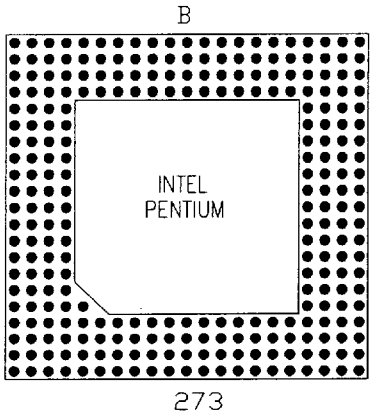

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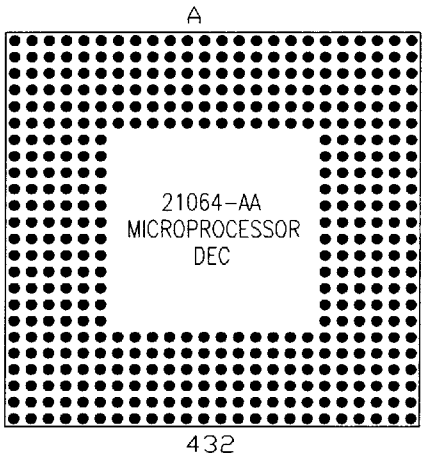

Additional Footprints available upon request.

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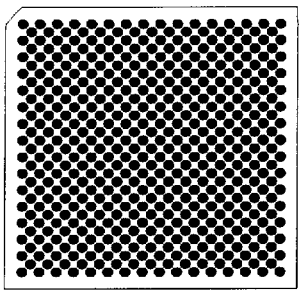
Pin Grid Array — *Interstitial Footprints*

16x16

L



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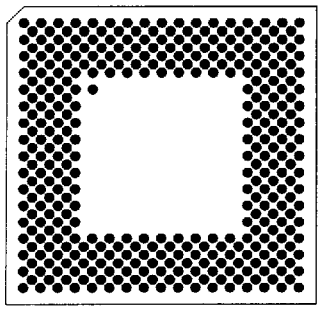
17x17

EE



365

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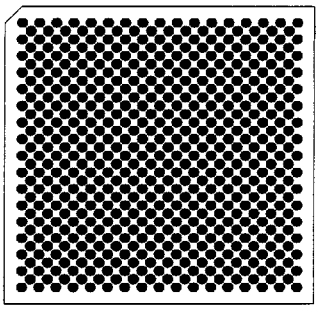

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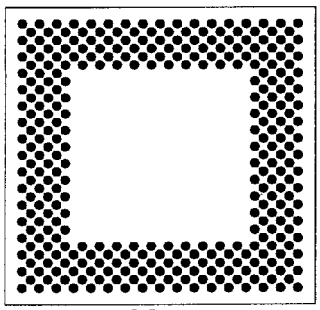

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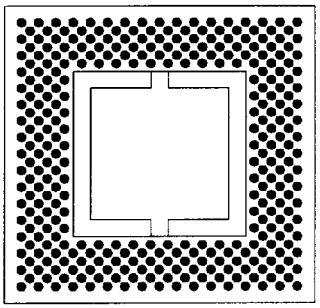

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18x18

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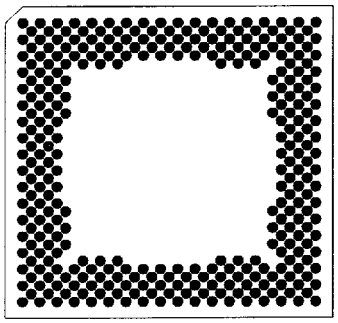

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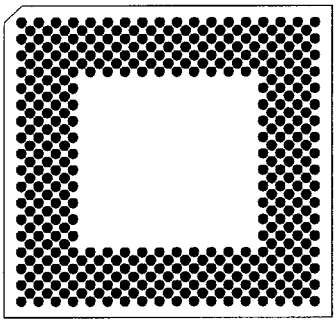
N



391

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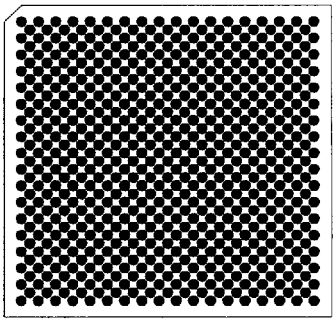

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19x19

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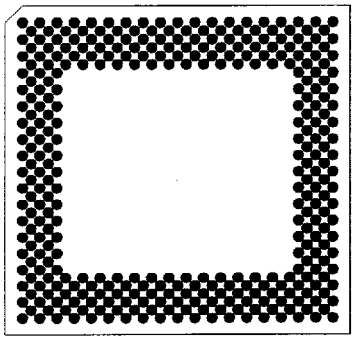

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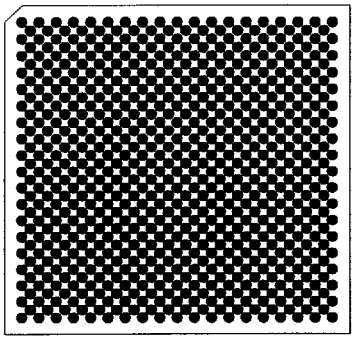
M



685

20x20

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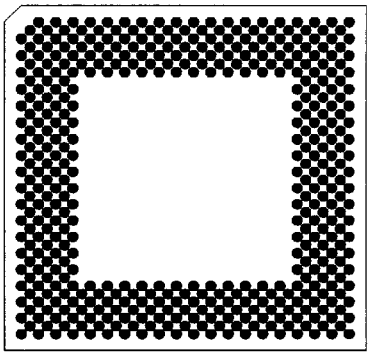

447

Additional Footprints available upon request.

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Material Specifications for Screw Machine Products

Insulators

High temperature vapor phase and infrared compatible

Ryton (PPS)

Continuous use temp.	220°c
Heat deflection temp.(@ 264 PSI)	260°c
UL rating	94V-0

FR-4 Glass Epoxy

Continuous use temp.	140°c
Heat deflection temp.(@ 264 PSI)	149°c
UL rating	94V-0

Standard temperature wave solder compatible

Thermoplastic Polyester (PBT)

Continuous use temp.	140°c
Heat deflection temp.(@ 264 PSI)	204°c

Kapton

Temperature rating	-269°c to +400°c
Thickness	.005/.007
U/L94 VO rated	

Politrex

Temperature rating	-60°c to +150°c
Thickness	.005/.007
U/L94 VO rated	

Outer Body/Terminal

Brass - Alloy 360 Q hard per QQ-B-626

Contact Clips

Beryllium Copper (Be Cu) #25 hard heat treated

Plating Specifications

Plating Code "B"

Contact: 30 micro inches of gold per MIL-G-45204 over 50 micro inches min. of nickel per QQ-N-290

Outer Body: 10 micro inches of gold per MIL-G-204 type II over 50 micro inches min. of nickel per QQ-N-290

Plating Code "D"

Contact: 30 micro inches of gold per MIL-G-45204 type II over 50 micro inches min. of nickel per QQ-N-290

Outer Body: 200 micro inches min. of 90/10 tin lead per MIL-P-81728 type 1 over 50 micro inches min. of nickel per QQ-N-290

*Other Plating Requirements consult factory

Garry offers three (3) types of inter contact clips.

- *Standard insertion clip - 4 finger (used on SIP/DIP products)*
- *Low insertion clip - 6 finger (used on PGA STD Pin counts)*
- *Ultra low insertion clip - 3 finger (used on high pin count PGA and Interstitial PGA)*

16.1

Insertion/withdrawal specification using a .018 dia. polished steel pin

	INS	*withdrawal*
STD 4 finger clip	8 oz max	3 oz min
Low insertion clip	2 oz max	0.5 oz min
Ultra low insertion clip	1 oz max	0.3 oz min

Typical performance characteristics for Screw Machine Products

- *Contact Resistance (MIL-STD-202 E method 302)*
  10 MIL/ohms max percontact
- *Contact Rating (for 10 C temperature rise)*
  3 Amps
- *Capacitance (MIL-STD-202E method 302)*
  0.2 PF
- *Insulation Resistance (MIL-STD-1344 method 3003.1)*
  10,000 Megaohms(min)
- *Dielectric Withstanding Voltage(DWV) (MIL-STD-1344 method 3001.1)*
  1000 VAC(RMS)
- *Vibration (MIL-STD-1344 method 2005.1 condition III)*
- *Shock (MIL-STD-1344 method 2004.1 condition G)*
- *Solderability (MIL-STD-202 method 208)*

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