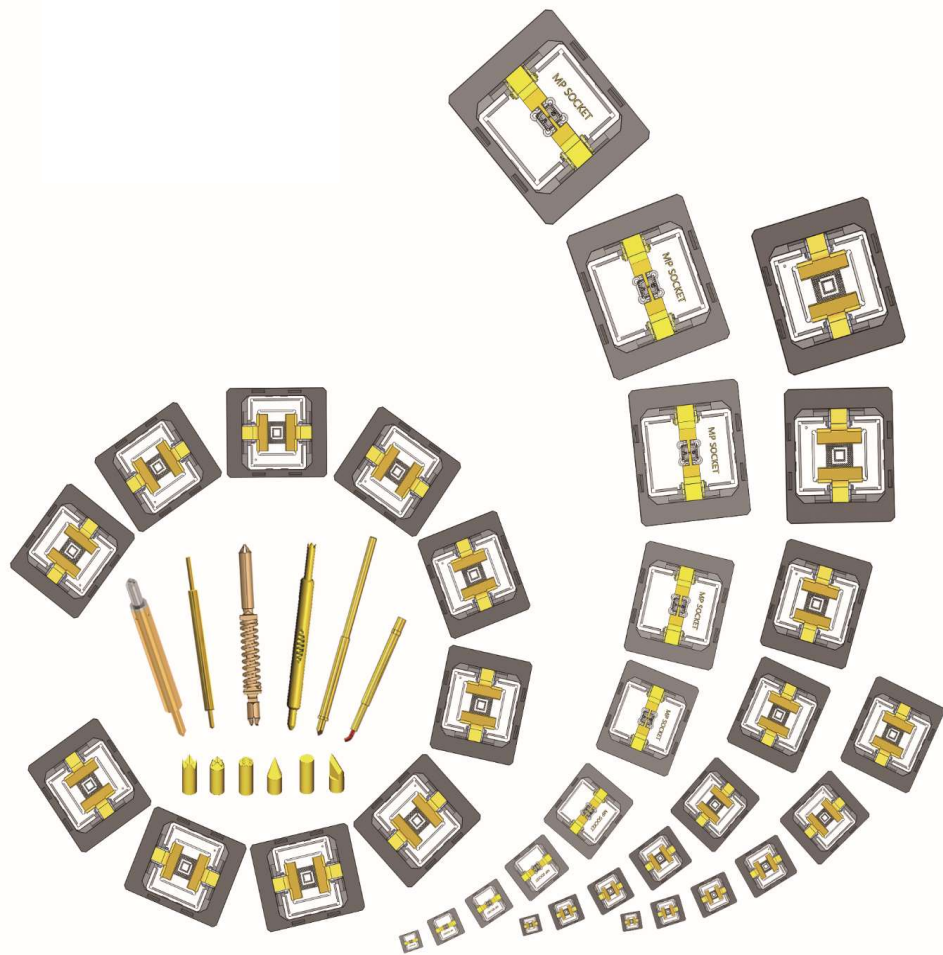


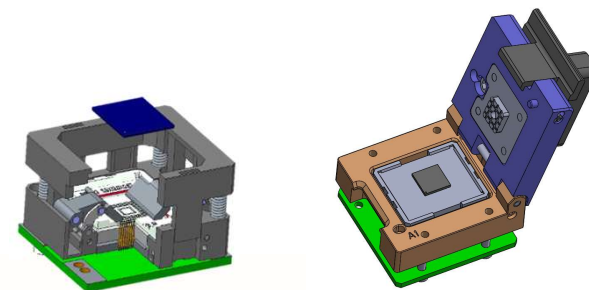


OKSolution



OKSolution

弹压式探针测试座优秀供应商



苏州奥金斯电子有限公司

Suzhou OKSolution Electronics Co.,Ltd.

ABOUT OKSOLUTION

OKsolution was established in 2015, The predecessor was OKins Electronics (KOREA) China office established in 2006.

OKS is a professional supplier of spring probes (pogo-pin), one piece spring pins and some kinds of socket solutions for Semiconductor devices and smartphone component. We have over 15 years of various field experience supplying and developing high-performance Open Top structure for Contact or Burn-in test for semiconductor device; Various type of Pogo pin; B-T-B socket for 0.30/0.35/0.40pitch connector or component; Test Socket for RF,Coaxial,High power,ICTC and Cleaning service etc;

OKsolution has a long-term partnership with Korean companies and works closely with their R&D team for a long time.

Representative company:    

COMPANY CULTURE

The pursuit of material and spiritual well-being of employees; Contributeto the progress and development of human and society.

VISION

To be the Chinese leader in high performance testing socket and spring probe products.

MISSION

Professional technical products and services to enhance customer value, and strive to achieve a win-win situation.

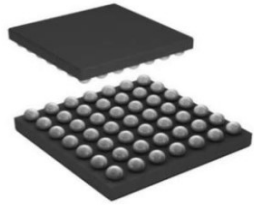
CORE VALUE

Integrity, profession, win-win, challenge, innovation.

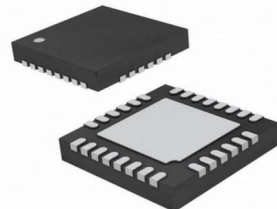


- 01 SHORT LEAD TIME
- 02 QUICK RESPONSE
- 03 EASY TO INSTALL
- 04 WORK STABLE





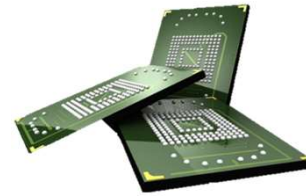
WLCSP、CSP



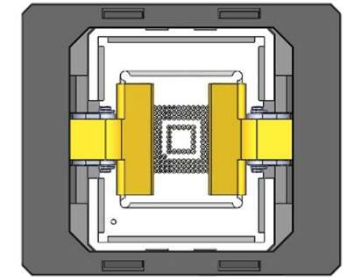
QFN、DFN、SON



SOP、SOT、TSOP



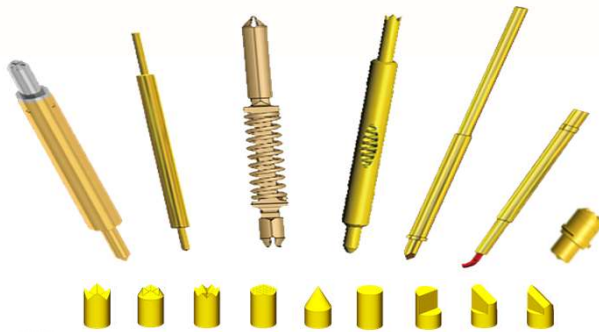
Memory IC



①

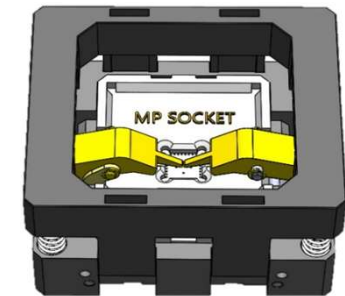
弹压式探针测试座优秀供应商

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Design Features

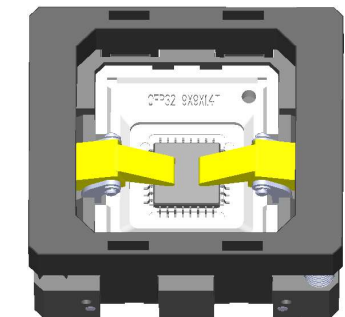
- ◆ Socket outlines: 28x32mm
- ◆ Applicable Max. PKG Size : **16x20mm**
- ◆ Applicable Min. PKG Size : **1x1mm**
- ◆ Contact Force: 12gf & 25 gf / Option Pin
- ◆ Operation Force: AVR 3.0~3.5kg
- ◆ Insulation Resistance: >1000mΩ at 100V DC
- ◆ Temperature Rating: -40°C ~ +155°C



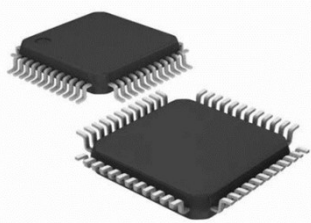
②

Electrical (Static Conditions)

- Current Rating: 3.5 amps
- Resistance: < 100 mΩ
- Bandwidth: 6~14GHz@-1dB
- Self Inductance: 1.22 nH
- Capacitance: 0.87 pF



③



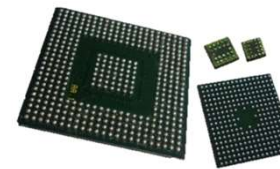
QFP、Lead Type



Special IC & LGA



Modular Packaging



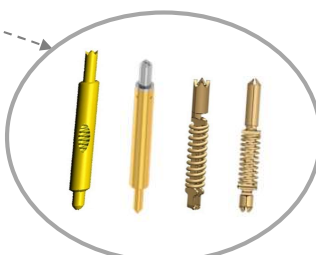
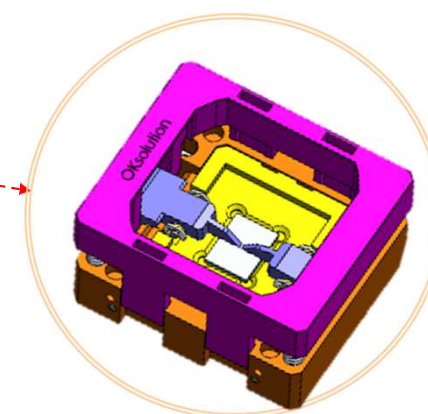
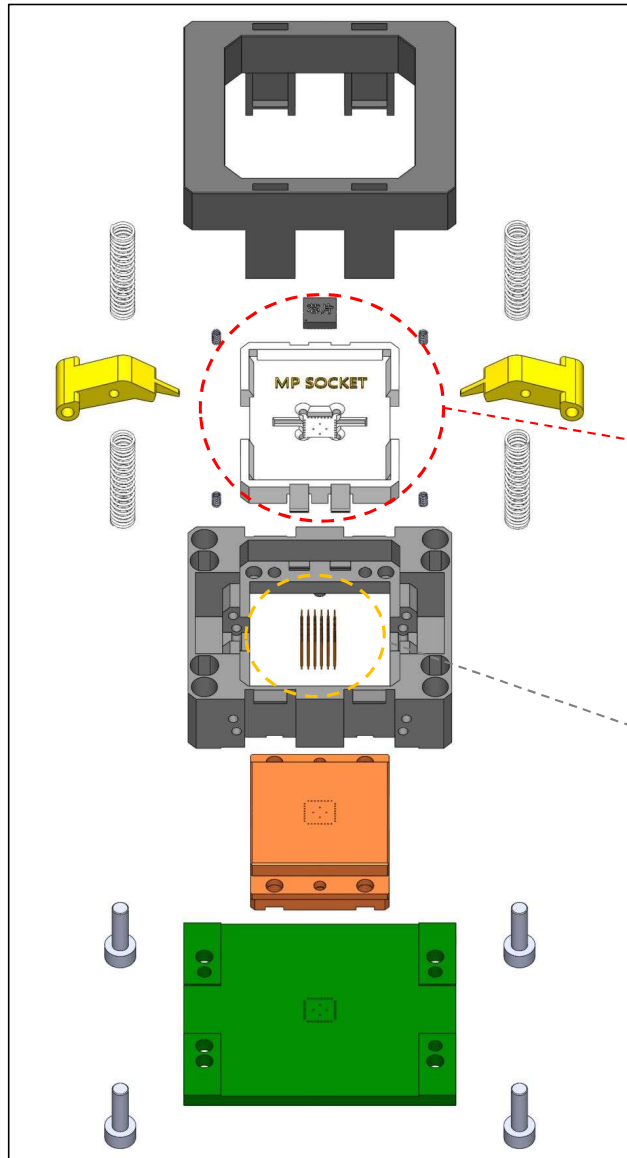
All BGA application

MP socket Matching Solutions

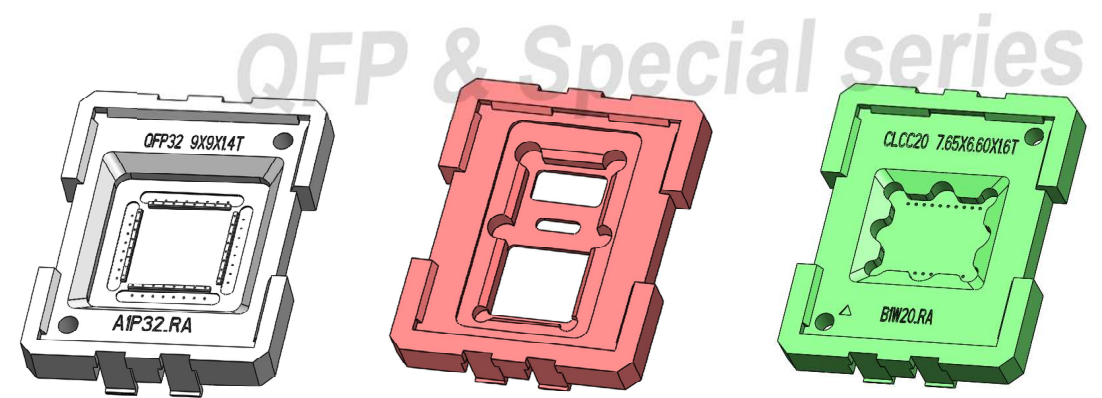
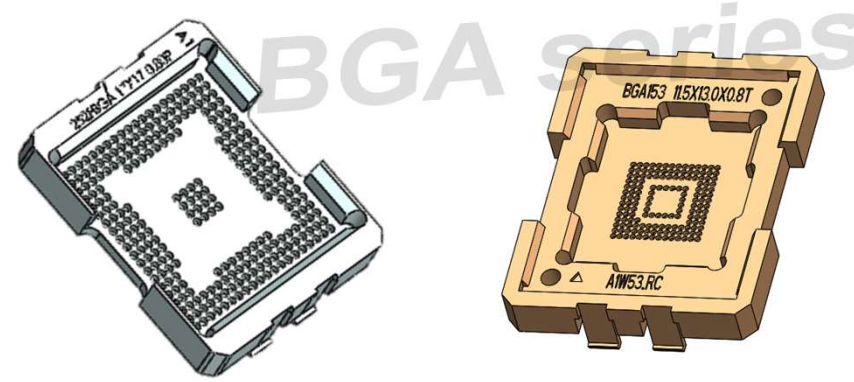
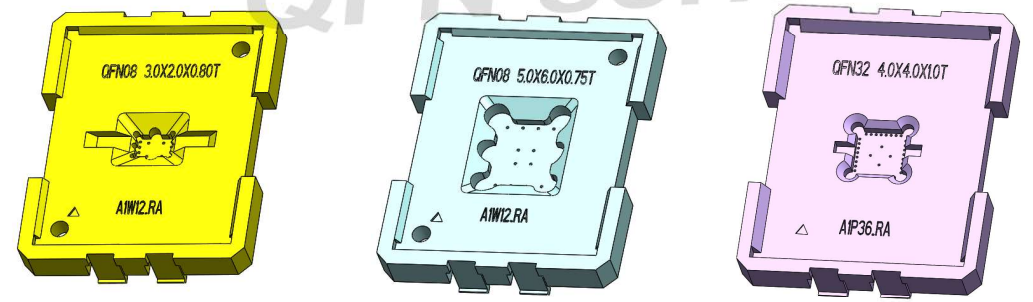


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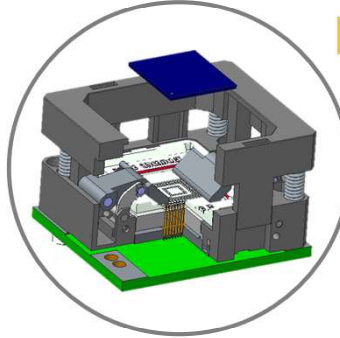
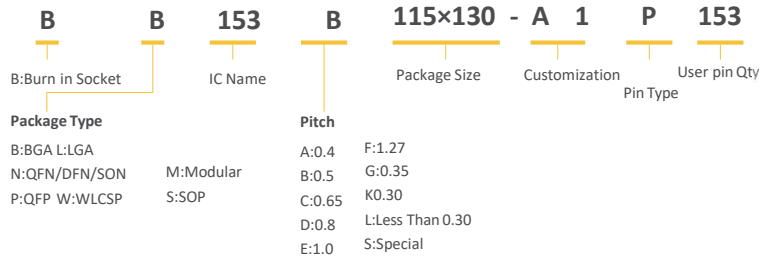


Semi Pogo Pin



MP Socket P.N List (update)

MP Socket Numbering System



IC TYPE	Package	Pitch	Size	MP Socket P.N (user_pin)	IC TYPE	Package	Pitch	Size	MP Socket P.N (user_pin)
	QFP32	0.80	9*9	BP032D09X09-B1P032		SOT23-6	0.95	2.8x2.9	BP006S028X029-A1P006
	QFP44	0.80	10*10	BP044D10X10-B1P044		SOT56-3	0.50	1.2*1.6	BP003B012X016-A1P003
	QFP48	0.50	9*9	BP048B09X09-B1P048		SOP8	1.27	4.0*5.1	BP008F040X051-A1P008
	QFP64	0.50	12*12	BP064B12X12-B1P064		SOP10	1.00	4.9*6	BP010E049X060-A1P010
	LQFP80	0.50	12*12	BP080B12X12-B1P080		QFP16	1.27	9.9*6	BP016F060X099-A1P016
	TQFP100	0.50	14*14	BP100B14X14-B1P100		SOP20	1.27	7.8*12.5	BP020F078X125-A1P020
	TQFP100	0.40	12*12	BP100A12X12-B1P100		SOP24	1.27	7.8*15	BP024F078X150-A1P024
	TQFP128	0.40	14*14	BP128A14X14-B1P128		SOP28	1.27	18.5*9.9	BP028F185X099-A1P028
	LQFP128	0.50	14*20	BP128A14X20-B1P128		SOP32	1.27	20.5*7.5	BP032F205X075-A1P032
						TSSOP48	0.50	12*18	BP048B120X180-A1P048
						SSOP56	0.64	8*17	BP056S080X170-A1P056

More Socket Drawing be coming ..

More Socket Drawing be coming ..

IC TYPE	Package	Pitch	Size	MP Socket P.N (user_pin)	IC TYPE	Package	Pitch	Size	MP Socket P.N (user_pin)
	LGA10	0.40	1.6*1.6	BL010A016X016-B1P010		DFN6	0.65	2*2	BQ06C02X02-B1W06
	LGA12	0.50	2*2	BL012B020X020-B1W012		DFN6	0.50	1.5*1.5	BQ06B15X15-B1W06
	LGA16	1.27	8.89*9.13	BL016F889X913-B1W016			0.65	2*2	BQ08C02X02-B1W08
	LGA40	0.70	6*10	BL040S060X100-B1W040			1.27	5.15*6.15	BQ08F52X62-B1W08
	LGA45	1.00	12*12	BL045E120X120-B1W045			0.50	3*3	BQ10B03X03-B1W10
	LGA64	0.50	5*5	BL064B050X050-B1W064		SON16	0.40	2.5*3.2	BQ16A03X03-B1P16
	LGA68	0.25	8*8	BL068L080X080-B1P068					
	LGA97	1.00	16*20	BL097E160X200-B1W097					
	LGA90	1.00	16*20	BL090E160X200-B1W090					

More Socket Drawing be coming ..

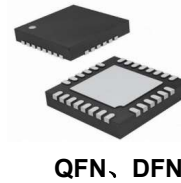
More Socket Drawing be coming ..

IC TYPE	Package	Pitch	Size	MP Socket P.N (user_pin)	IC TYPE	Package	Pitch	Size	MP Socket P.N (user_pin)
	QFN8	0.50	3X2	BQ08B03X02-B1W12		BGA4	1.00	0.84*1.54	BB04E084X154-B1W04
	QFN8	0.80	4X3	BQ08D04X03-B1W12		BGA8	0.35	1.09*1.29	BB08G109X129-B1P08
	QFN8	0.80	4X4	BQ08B04X04-B1W12		BGA15	0.65	3*3	BB15C03X03-B1W15
	QFN8	1.27	6X5	BQ08F06X05-B1W12		BGA24	1.00(5x5)	6x8	BB24E6X8-B1W24-5X5
	QFN8	1.27	8X6	BQ08F08X06-B1W12					
	QFN12	0.65	3*3	BQ12C03X03-B1W16		BGA24	1.00(4x6)	6x8	BB24E6X8-B1W24-4X6
	QFN16	0.50	3*3	BQ16B03X03-B1W20		BGA49	0.50	4*4	BB49B40X04-B1W49
	QFN20	0.40	3*3	BQ20A03X03-A1P24		BGA56	0.50	6*6	BB56B06X06-B1W56
	QFN24	0.50	4*4	BQ24B04X04-B1W28		BGA63	0.80	9x11	BB63D09X11-B1W63
	QFN32	0.40	4*4	BQ32A04X04-A1P36		BGA78	0.80	7.5*11	BB78D75X11-B1W78
	QFN36	0.50	6*6	BQ36B06X06-B1W40		BGA88	0.80	8*11	BB88D08X11-B1W88
	QFN40	0.50	6*6	BQ40B06X06-B1W44		BGA96	0.80	7.5*13	BB96D75X13-B1W96
	QFN44	0.35	5*5	BQ44G05X05-B1P48		BGA100	0.65	7x7	BB100C7X7-B1W100
	QFN44	0.80	10*10	BQ44D10X10-B1W48		BGA100	1.00	14*18	BB100E14X18-B1W100
	QFN48	0.40	6*6	BQ48A06X06-B1P52		BGA108	0.80	10*10	BB108D10X10-B1W108
	QFN56	0.40	7*7	BQ56A07X07-B1P60		BGA103	1.00	14*11.2	BB108E14X11.2-B1W108
	QFN64	0.50	9*9	BQ64B09X09-B1W68		BGA132	1.00	12*18	BB132E12X18-B1W132
	QFN70	0.60	7.8*8.9	BQ70S78X89-B1W74		BGA134	0.65	8*8	BB144C08X08-B1W144
	QFN73	0.50	7*7	BQ73B07X07-B1W77		BGA144	0.80	10*10	BB144D10X10-B1W144
	QFN76	0.40	9*9	BQ76A09X09-B1P80		BGA153	0.50	7.5*8	BB153B75X08-B1W153
	QFN128	0.40	14*14	BQ128A14X14-B1P132		BGA153	0.50	11.5*13	BB153B115X13-B1W153
	QFN132	0.50	11*11	BQ132B11X11-B1W136		BGA162	0.50	12*16	BB162B12X16-B1W162

More Socket Drawing be coming ..

IC TYPE	Package	Pitch	Size	MP Socket P.N (user_pin)	IC TYPE	Package	Pitch	Size	MP Socket P.N (user_pin)
	CSP8	0.4	1.388*1.318	BW08A138X131-B1P08		BGA176	0.50	15*15	BB176B15X15-B1W176
	CSP8	0.5	1.56*2.16	BW08B156X216-B1W08		BGA200	0.65x0.80	10*15	BB200S10X15-B1W200
	CSP10	0.5	1.559*2.13	BW10B155X213-B1W10		BGA208	0.80	13*13	BB208D13X13-B1W208
	CSP20	0.4	1.609*1.995	BW20A160X199-B1P20		BGA216	0.80	13*13	BB216D13X13-B1W216
	CSP22	0.4	1.99*3.5	BW22A199X350-B1P22		BGA220	0.50	6.5*12	BB220B65X12-B1W220
	CSP23	0.5	4.28*4.71	BW23B428X471-B1W23		BGA254	0.50	11.5*13	BB254B115X13-B1W254
	CSP24	0.5	3.199*2	BW24B319X200-B1W24		BGA272	0.80	14*18	BB272D14X18-B1W272
	CSP25	0.35	1.93*2.022	BW25G193X202-B1P25		BGA289	0.80	14*14	BB289D14X18-B1W289
	CSP40	0.5	4.25*2.65	BW40B425X265-B1W40		BGA320	0.40	12*13	BB320B12X13-B1P320
	CSP49	0.35	2.557*2.587	BW49G255X258-B1P49		BGA352	0.30	12.75*14.5	BB352B1275X145-B1P352
	CSP49	0.4	2.965*2.965	BW49A296X296-B1P49		BGA409	0.50	12.1*12.6	BB409B12X12.6-B1W409
	CSP50	0.4	2.956*2.956	BW50A295X295-B1P50		BGA416	0.40	8.3*8.7	BB416A08X087-B1P416
	CSP51	0.25	2.325*2.325	BW51L232X232-B1P51		BGA426	0.35	13.5*14.5	BB426G135X145-B1P426
	CSP144	0.5	6.33*6.41	BW144B63X641-B1W144					

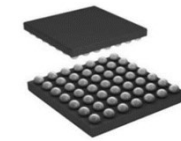
More Socket Drawing be coming ..



QFN, DFN



BGA



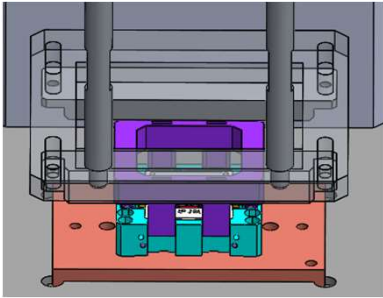
WLCSP, CSP



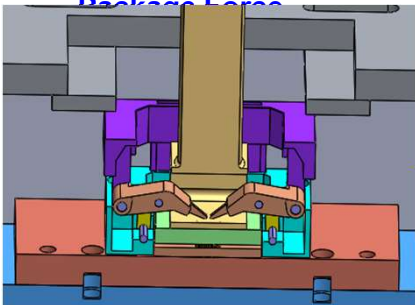
Modular

TESTING SYSTEMS

Operating 1KK Testing
(Open & Close)



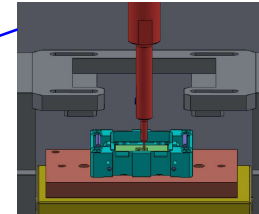
Measuring Pressure
Backless Force



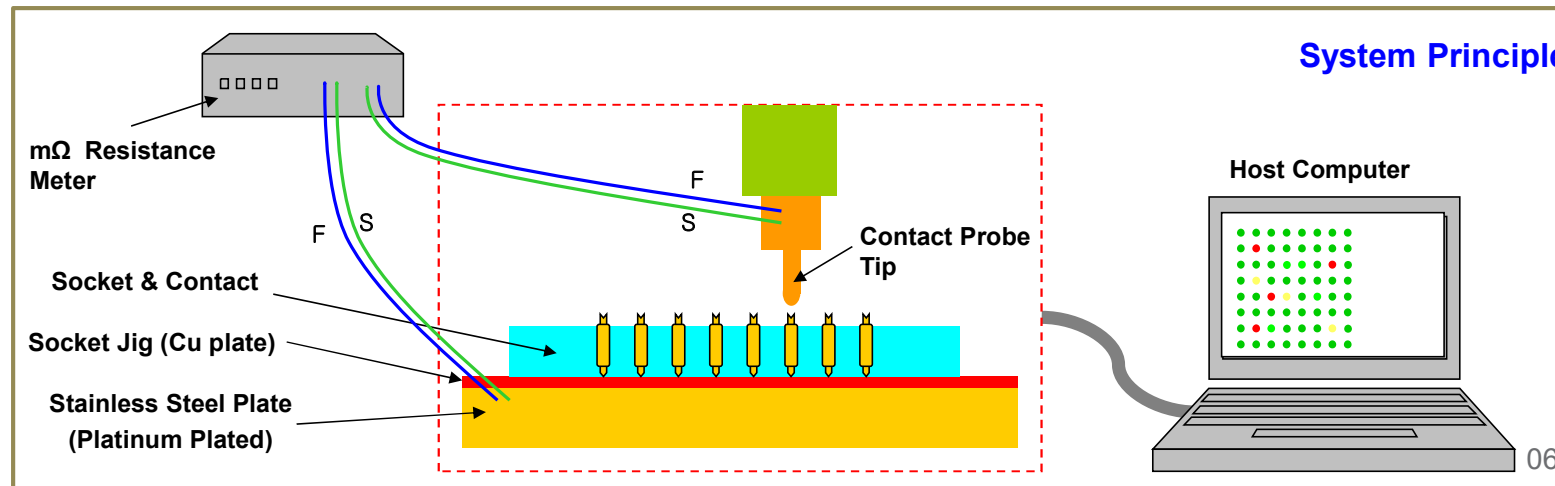
Testing System Overview



Pogo-pin Tester
1. Contact Force
2. Stroke
3. Resistance



Milliohm meter

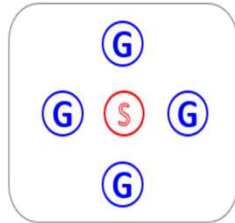


SI Simulation (S21, S11)

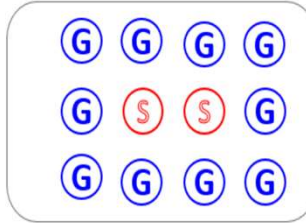
Simulation Information



Condition_1



Condition_2



Condition_3

1. Simulation Tool : ANSYS Electronics Desktop 2021 R1

2. Material Property

① Contact : BeCu17200 1/2H, 15% IACS ($\sigma = 8.7 \times 10^6 \text{ S/m}$)

② Housing : PEEK Kyron 2204, $\epsilon_r = 3.5$

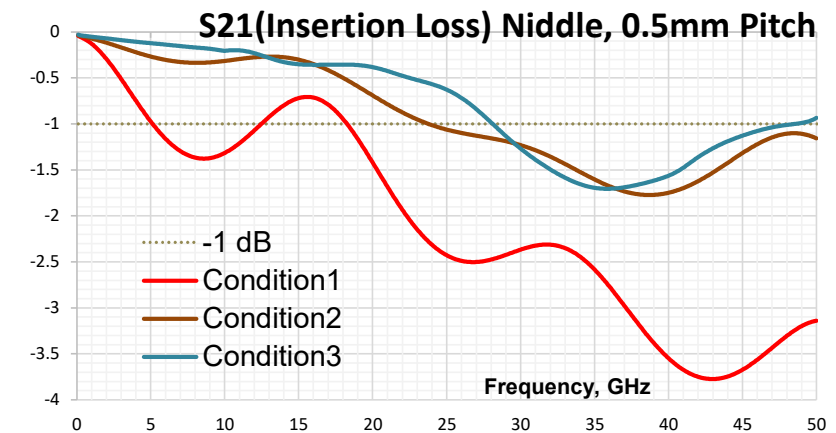
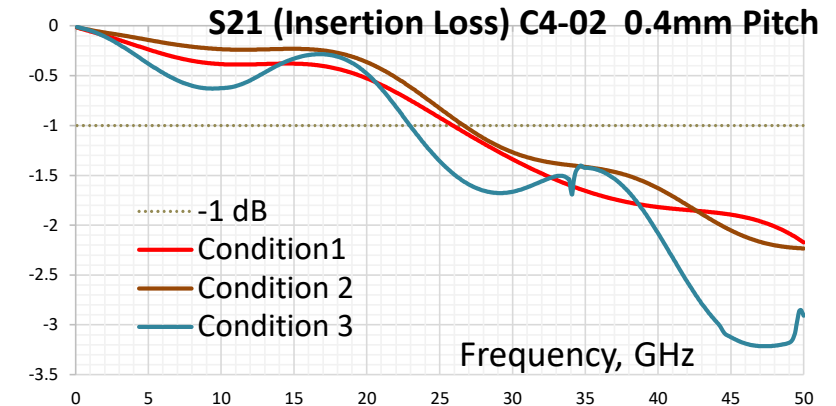
③ Spring : SUS ($\sigma = 1.45 \times 10^6 \text{ S/m}$)

3. Operating Frequency : ~ 50 GHz 501 point

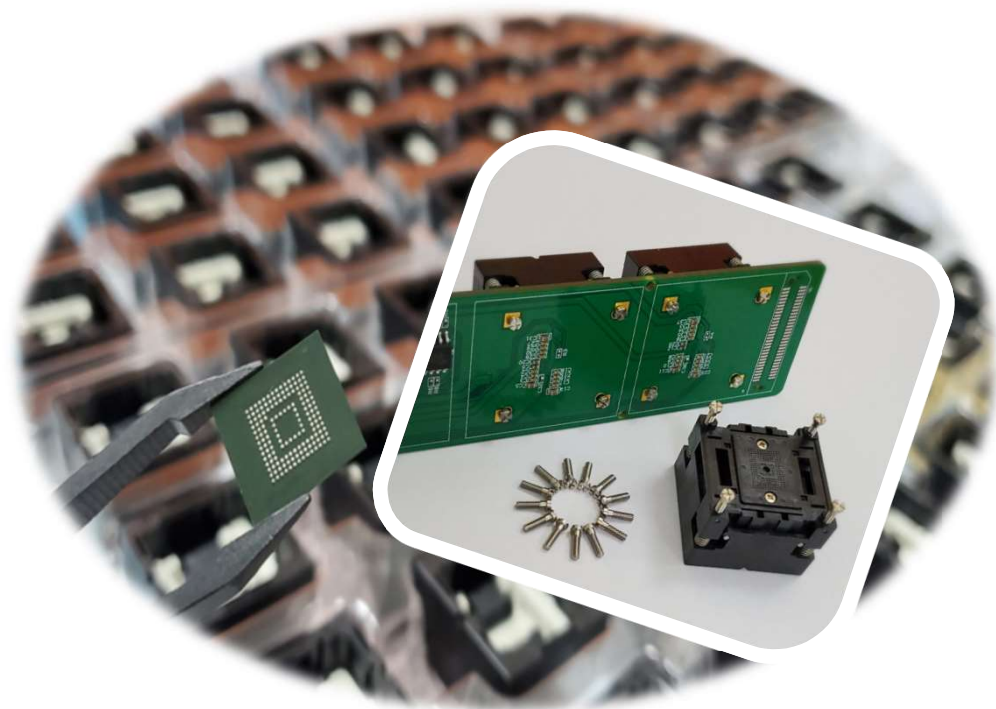
4. Pin Patterns & 3D Model

5. Output Result: S-Parameter

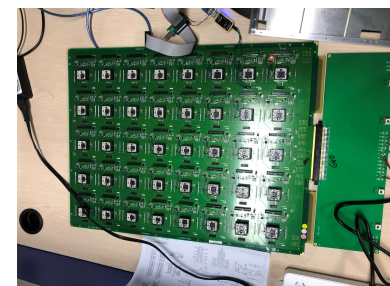
Pogo-Pin		Crown Pin (Ball Type IC)		Middle Pin (Pad type IC)	
HFSS	Condition	S21 -1dB Freq. [Ghz]	S11 -10dB Freq. [Ghz]	S21 -1dB Freq. [Ghz]	S11 -10dB Freq. [Ghz]
0.40mm Pitch	1	26	29	20.5	31.2
	2	27	24	26.5	26.1
	3	23	8	24.1	23.6
0.50mm Pitch	1	9	5	5	3
	2	49	28	24	20.4
	3	38	25	28	27



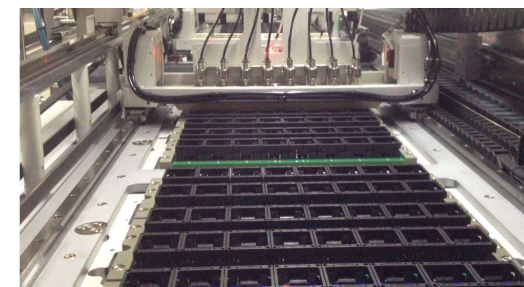
探针式下压测试座 “应用领域”



信赖性测试
老化板



自动化量产
Handler ATE



实现复合测试架构



芯片验证实验产品



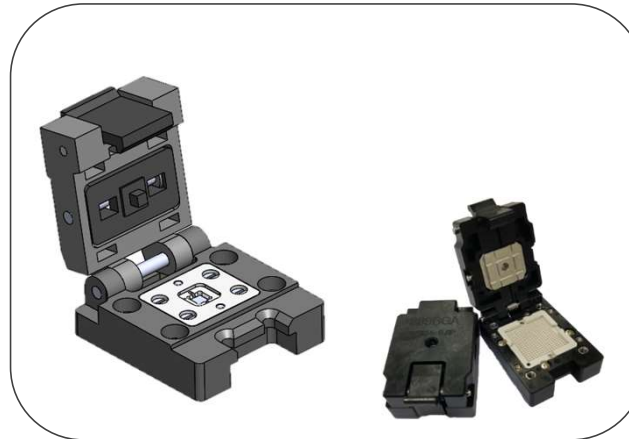
烧录测试多元化



Open-top



Clamshell type



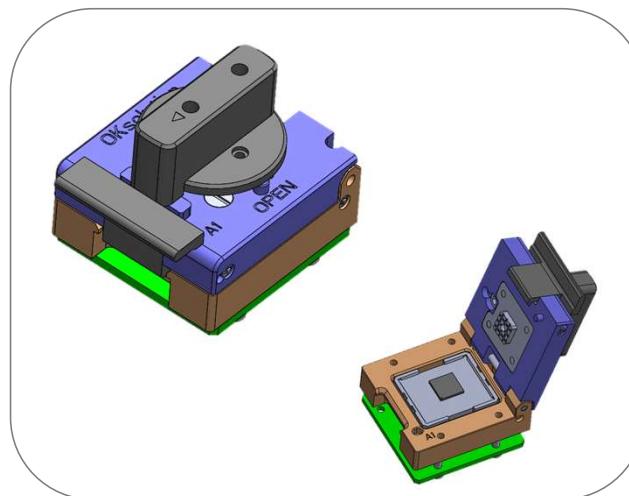
Design Features

- ◆ Socket outlines: 28x33mm/20x30mm
- ◆ Applicable Max. PKG Size : **16x20mm**
- ◆ Applicable Min. PKG Size : **0.5x0.5mm**
- ◆ Applicable Package:
BGA/LGA/QDFN/WLCSP/QFP/LCCC/SOP...etc
- ◆ Package Pitch: 0.3/0.35/0.4/0.5/0.80/1.27mm..etc
- ◆ Contact Force: Pogo-Pin
- ◆ Temperature Rating: -40°C ~ +155°C

LID + BIG SIZE



LID + Small Size



Design Features

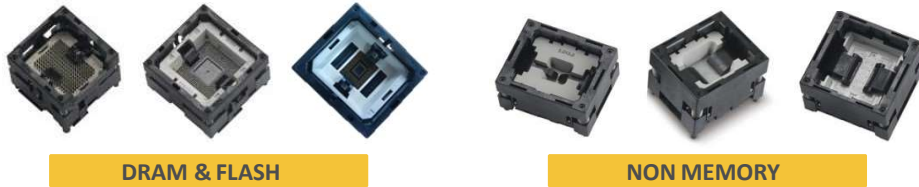
- ◆ Socket outlines: 38x44mm/65x50mm
- ◆ Applicable Max. PKG Size : **40x40mm**
- ◆ Applicable Min. PKG Size : **16x16mm**
- ◆ Applicable Package:
BGA/LGA/QDFN/WLCSP/QFP/LCCC/SOP...etc
- ◆ Package Pitch: 0.3/0.35/0.4/0.5/0.80/1.27mm..etc
- ◆ Contact Force: Pogo-Pin
- ◆ Temperature Rating: -40°C ~ +155°C

Burn-in Socket & Cleaning Service



OKSOLUTION
苏州奥金斯

WE ARE CONNECTING BETTER LIFE



DRAM & FLASH

NON MEMORY

Burn-in Socket Contacts



Pinch & Dual

BOW contact



- Pitch**
- 0.35mm
 - 0.40mm
 - 0.50mm
 - 0.65mm
 - 0.80mm
 - 1.00mm



- Pitch**
- 0.30mm
 - 0.40mm
 - 0.50mm
 - 0.65mm
 - 0.80mm
 - 1.00mm

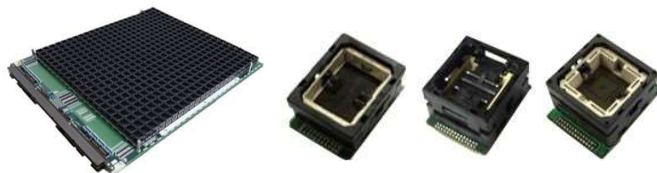


Okins Electronics (From Korea) offers wide selection of Burn-in Sockets for various package applications, from Lead packages to Ball package, including TSOP, QFP, BGA, CSP, LGA, QFN, and CLCC, which enable to support thermal and electrical stress solutions of IC packages.

Customers may have preferable options for socket outlines that helps higher board density, and our expertise will make the operation stable and cost effective



Burn-in Chamber



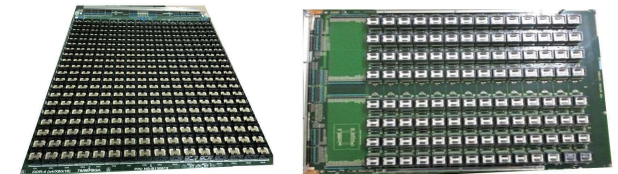
Burn-in Board AND Burn-in Socket

Semi Products Cleaning Service



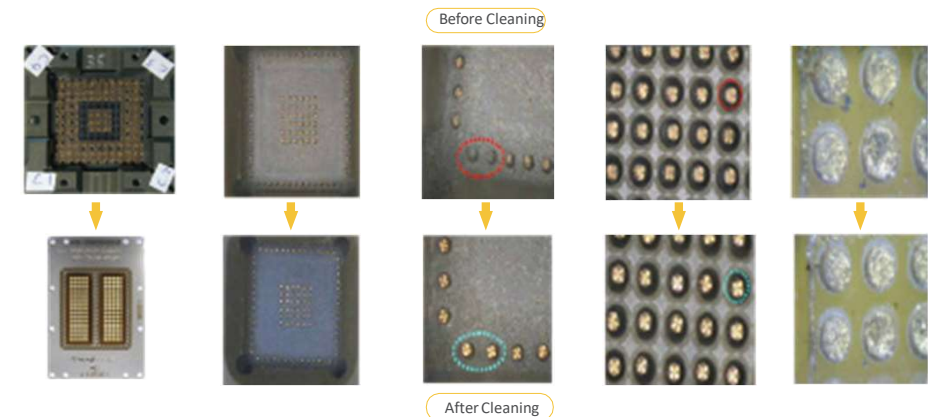
电分解清洗案例 (一)

对象: 芯片测试老化板。
效果 / 效率: 除去异物提高测试良率、降低阻抗值、提升使用寿命。
方法: 利用电流及电解液强制产生反应，清洗去除 socket contact point 长时间使用后表面辅助异物的清洗作业。



电分解清洗案例 (二)

对象: 探针测试座，导电胶测试座 Pogo-pin & Rubber contact
效果 / 效率: 除去异物提高测试良率、降低阻抗值、延长 Socket 使用寿命。
方法: 利用将电流及电解液强制产生反应等特别方式，清洗去除 socket contact Tip 表面辅助异物的作业和服务。



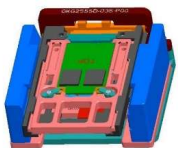
SSD Socket & DDR Module Socket

SSD Testing Solutions 固态硬盘自动测试载具

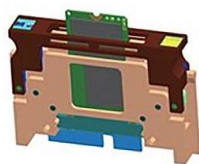
- Various test sockets are available per module component designs and outlines.
- Short contact provides short electrical path.
- Contacts area designed to work individually to improve warped module handling.
- Good electrical performance and mechanical reliability found even at Cold test.



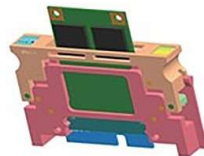
Products Line-up



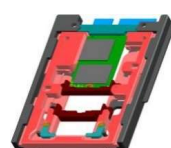
2.5" Auto Latch Type Gender



m-SATA C-Tray Housing Gender



M.2 C-Tray Housing Gender



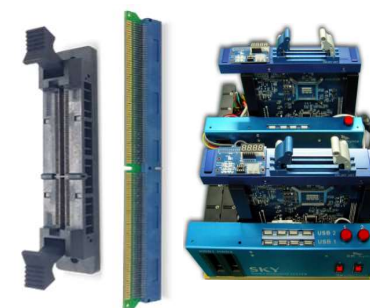
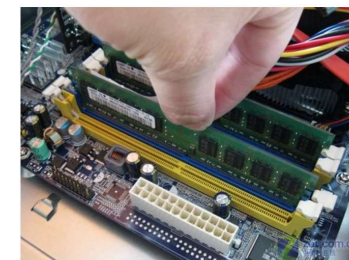
Variable Gender

Application	Part No	Overview
2.5" SATA Cassette	OK25SSD-127-T1	
2.5" SATA Magazine	OK25SSD-127-T2	
2.5" SATA STD Type	OK25SSD-127-T3	
1.8" SATA	OK18SSD-127-T1(2)	
2.5" SAS+SATA STD Type	OK25SSD-127-T6	
m-SATA PB SMT Type	OK52SSD-080-T14	
m-SATA SMT Type	OK52SSD-080-T15	
m-SATA Gender Type	OKG52SSD-037-00	
NGFF PB SMT Type	OK75SSD-050-T13	
NGFF SMT Type	OK75SSD-050-T17	
NGFF Gender Type	OKG75SSD-042-00	
PCIe STD SMT Type	OK164SSD-100-T18	

Module testing Solutions 内存条测试座

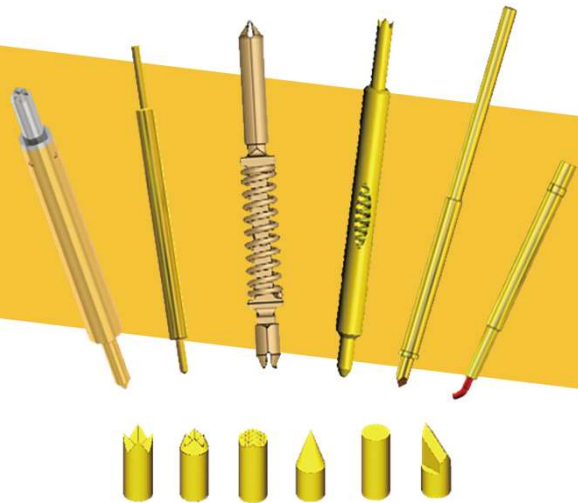
Socket Specification

- Socket Outline : 7.5 x 152.0 mm
- Socket Height : 15.0 ±0.1mm
- Applicable Pattern Pitch : 0.85mm
- Module : DDR4 288RDIMM, 260SODIMM
- Test type : Final Test
- Insertion Force : Max 10.5kg
- Contact Force : 40±5 g/pin
- Current : 1.0Amps/pin
- Contact Resistance : 100mΩ
- Operating Temperature : -10°C~ 100°C
- PCB or Connector Contact Type : DIP or SMT



Module Type	Test Type	Pin	Out Type	P/N	
DDR3	Final Test	204 0.6	Board SMD	MS204C61A-026	
			Board SMD	MS204C61A-077	
	BD Level	240 1	Board SMD	MS240C52A-012	
			DIP	MS240D62M-019	
			DIP	MS240B62M-038	
			Board Through Hole	MS240E62M-049	
DDR4	Final Test	288 0.8 5	DIP	MS240D62M-054	
			Board SMT	MS288F84M-104	
	Final Test	288 0.8 5	Board SMT	MS288F84M-105	
			Board SMD	MS288C84A-101	
	-	288 0.8 5	DIP	MS288E84M-102	
			Extend	MS288E84M-116	
	SODIMM to RDIMM	Final Test	260 0.5	Board SMT	MS260F83M-110
				Board SMT	MS260F83M-111
		-	260 0.5	Board SMD	MS260D83M-106
				PCB Extend	MS260D83M-107

POGO PIN

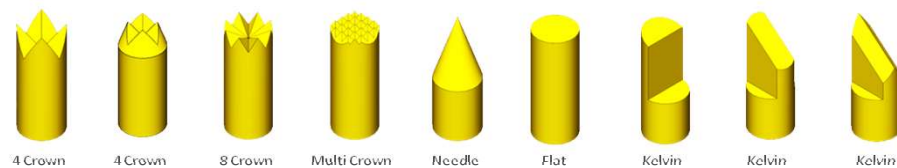


POGO PIN

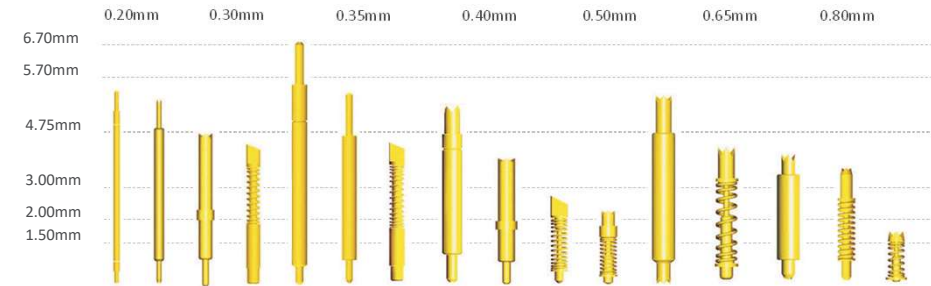
Numbering System

D	C	0 3 1	0 5 7 0	N	-	1 0 0	A
Type	T/Tip Shapes	Barrel Outer Diameter	Length	B/Tip Shapes		Serial Number	Revision
D:Double S:Single	C:Crown N:Needle R:Round	020:Φ0.20mm 031:Φ0.31mm	0020:2.2mm 0570:5.7mm	C:Crown N:Needle R:Round		100 110	

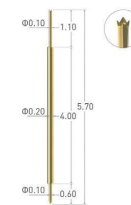
Top/Bottom Plunger Tip Shapes



Spring Probes in Pitch



Double Ended Probe Pin D-C0200570N-100A



Material&Plating			Electrical	
Part	Material	Plating	Current Rating	1.0A Continuous
Top Plunger	Hardened Steel	Au plated	Resistance	<100mΩ
Bottom Plunger	Hardened BeCu	Au Plated	Brand width	6.87GHz@-1dB
Spring	Stainless Steel	Au plated	Self Inductance	1.31 nH
Barrel	Phosphor Bronze	Au plated	Capacitance	0.62pF

Double Ended Probe Pin D-C0280570N-120A



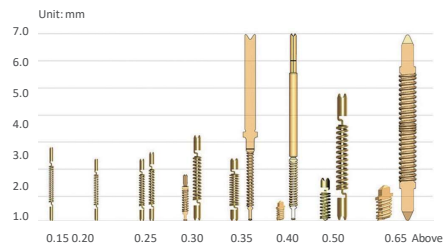
Material&Plating			Electrical	
Part	Material	Plating	Current Rating	1.0A Continuous
Top Plunger	Hardened Steel	Au plated	Resistance	<100mΩ
Bottom Plunger	Hardened BeCu	Au Plated	Brand width	6.87GHz@-1dB
Spring	Stainless Steel	Au plated	Self Inductance	1.31 nH
Barrel	Phosphor Bronze	Au plated	Capacitance	0.62pF

Single Ended Probe Pin S-C0350336N-100A



Material&Plating			Electrical	
Part	Material	Plating	Current Rating	2.0A Continuous
Top Plunger	Hardened Steel	Au plated	Resistance	<80mΩ
Bottom Plunger	Hardened BeCu	Au Plated	Brand width	22.19GHz@-1dB
Spring	Music Wire	Au plated	Self Inductance	0.72 nH
Barrel	Phosphor Bronze	Au plated	Capacitance	0.63pF

High Performance Spring Probes

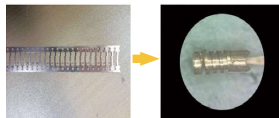


205 kind of spring probe pin,
300 kinds of test socket(44,000 Pin count socket possible)

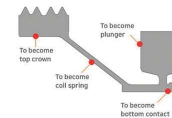
1. One piece spring probe
2. Three piece spring probe
3. High speed product → 0.63mm Length spring probe pin available
4. Finest Pitch → 0.154mm Pitch

Fully assembled pin attached to the reel

1. Can control very tight dimensional tolerance
2. Crown shape, Spring force and spring diameter can be optional
3. Very productive/low cost method to make spring probe for good volume

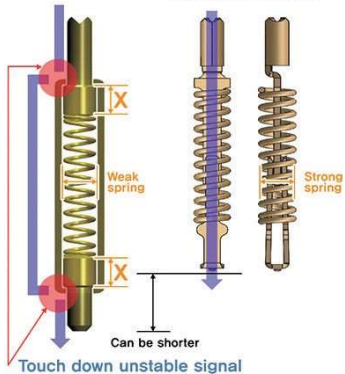


Planer figure for stamping



Test Pin Comparidon

Ordinary POGO **New Technology**
Signal path stable



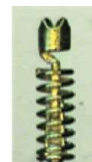
1. **Current carrying** [IWIN:Over 4 Amp Possible, Touch Down > stable]
2. **Signal integrity** [IWIN:Stable Signal Path/-1db@70GHz(in Production)]
3. **Pitch** [IWIN:0.15mm(in Production)]
4. **Stroke** [IWIN:Long Stroke Possible(over 1.0mm)]
5. **Lifetime** [IWIN:Long Life Time]



Diameter:0.1mm



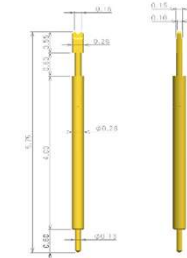
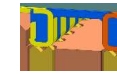
Three pieces pins



Length:0.63mm

B-T-B Connector Test Socket

Customized B-T-B Socket for FPCB connector on smartphone component



Fully assembled pin attached to the reel

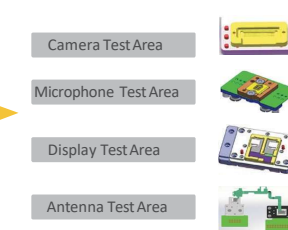
Testing Socket Block for various Application on FCT and BTB Connector



Application



Max Pin



Pin Solution

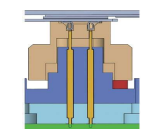
Pin Block



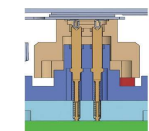
Fully assembled pin attached to the reel

Testing Socket Block for various Application on FCT and BTB Connector

Item	Pogo Pin	Blade Pin	Comparison
Pitch	0.35 mm	0.35 mm	No Difference
Pin Length	5.7 mm	5.85 mm	No Difference
Housing	95%	85%	Inferiority (Countermeasure; Open Die Needle Plate)
Contact Reliability	80%	95%	Superiority
Mechanical LifeSpan	100k	500k	Superiority
BandWidth	-1.0dB@6ghz	-1.0dB@12ghz	Superiority
Current Rating	1A	2A	Superiority
Resistance	<100mΩ	<70mΩ	Superiority



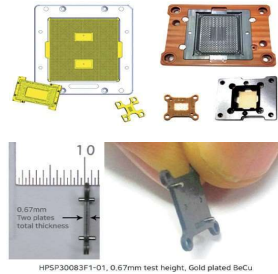
Socket-POGO Type



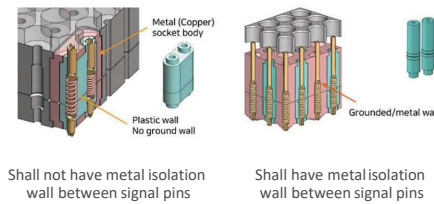
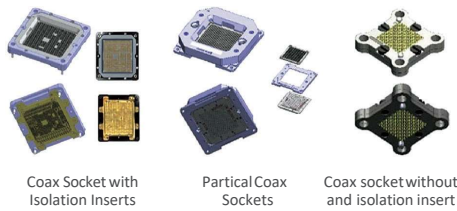
Socket-Blade Type

Test Socket

Test Speed Range	All the Way up to -1db@80ghz, 160gb/s
Pitch	0.15mm、0.2mm、0.3mm、 0.4mm、0.5mm、0.65mm、 1.0mm and above
Test Hight	0.67mm and above
Pin Count	All the Way up to 43000 pin counts, Including CPU test socket pin count 5903 pins
Package can be tested	BGA, LGA, QFN, TSOP and other

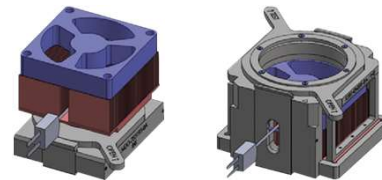
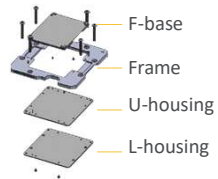
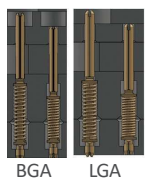


Coaxial RF Socket



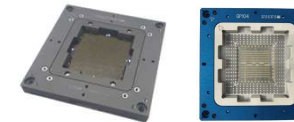
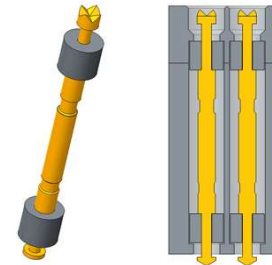
Test Socket Families

Short Pin+Head Sink+Fan+Sensor



Coaxial Test Socket

Precision Controlled Impedance



Design Features

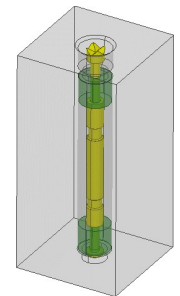
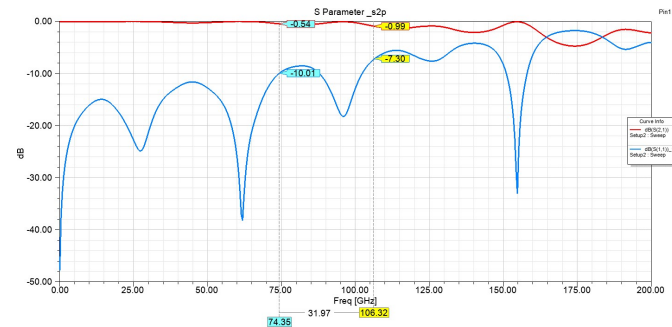
1. Complete 50 ohm controlled impedance : customized impedance control
2. High speed transmission Insertion loss (S21): 106GHz@-1dB Return loss (S11): 8.15GHz @-25dB
3. Device ball pitch down to 0.7mm (available above 0.7mm)
4. Designed for Ball packages (CSP, BGA, etc)

Benefits of OKsolution Coax Test Socket

1. High speed coaxial signal transmission - with mechanical advantages of spring probes.
2. Grounded socket body - socket ground pins are connected to the conductive socket body.
3. True coax performance 1 – whole socket body & all ground pins are grounded.
4. True coax performance 2 - signal pins are isolated from the socket body, with excellent dielectric constant.

Coaxial Test Socket - SI simulation

Insertion & Return Loss of Single Signal Pin (Signal only)



Insertion Loss: 106.32GHz@-1dB
Return Loss: 5GHz@-20dB / 74.35GHz@-10dB

High Power & RF Coaxial Socket

High Basic Concepts

Socket Basic Concepts

Control Device temperature during burn-in test (individual chip temperature control)support optimized heat dissipation solution.
high contact performance & high power range temp Efficient air-flow system with variable speed fan high confidence in burn-in effectiveness.



Socket Features

clamshell socket design compression surface mount spring probes and stamped contacts various pitches available optional heat sink and fan attached socket materials of PEI and equivalent.

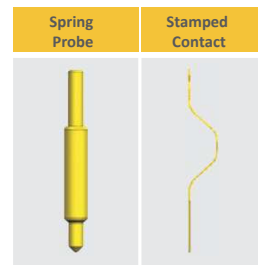


Socket and contact Availability

Socket Availability Summary

Series	Socket Outlines	Maximum Package Size	Package Pitch	Maximum Matrix	Maximum Pin Count	Seating Height
TSH	38.0 x 53.0	22 x 20	0.40	43 x 46	1978	8.6
			0.80	22 x 23	506	8.6
			0.50	55 x 55	3025	6.42
			0.65	53 x 53	2809	6.42
TLC	57.5 x 68.5	37.5 x 37.5	0.80	43 x 43	1849	5.12
			1.00	36 x 36	1296	5.12
			1.27	28 x 28	784	5.12
			0.50	55 x 55	3025	6.42
			0.65	53 x 53	2809	6.42
TLH	83.15 x 65.0	37.5 x 37.5	0.80	43 x 43	1849	5.12
			1.00	36 x 36	1296	5.12
			1.27	28 x 28	784	5.12

Availability Contact



TSH Series

Socket Specifications	
Socket Outline	38.0 x 53.0 mm
Socket Height	21.05 mm
Seating Height	8.06 mm
Applicable Pad Pitch	0.4 mm (0.8 optional)
Max, PKG Size	22 x 20 mm
Max, Matrix	43x46(0.4P),22x23(0.8P)
MAX, Pin count	1978pin(0.4P),506pin(0.8P)
Applicable PKG Type	BGA, LGA
Contact Force	17gf@0.4mm Stroke
Contact Resistance	50mΩ or less@10mA
Contact Type	Buckle Bean
Life Cycle	10,000 Times Min
Operating Temperature	-40°C ~ +150°C



Contact Specifications	
Insulation Resistance	1,000 mΩ at 100V DC
Dielectric Withstanding Voltage	100V DC for 1 min
Resistance (initial)	50mΩ at 10mA
Current rating	Max 1A Per Pin
Operating Temperature	-40°C ~ +150°C

TLC Series

Socket Specifications	
Socket Outline	57.5 x 68.5 mm
Socket Height	32.5 mm
Seating Height	6.24 mm 5.12mm
Applicable Pad Pitch	0.5, 0.65, 0.8, 1.0, 1.27mm
Max, PKG Size	37.5x37.5 mm
Max, Matrix	55x55/53x53, 43x43/36x36/28x28
MAX, Pin count	3025,2809,1849,1296,784 Pin
Applicable PKG Type	BGA, LGA
Contact Force	25gf@0.5mm Stroke
Contact Resistance	100mΩ or less@10mA
Contact Type	Okins PB01
Life Cycle	10,000 Times Min
Operating Temperature	-65°C ~ +150°C



Contact Specifications	
Insulation Resistance	1,000 mΩ at 100V DC
Dielectric Withstanding Voltage	100V DC for 1 min
Contact Resistance (init)	100mΩ at 10mA
Current rating	Max 3A Per Pin
Operating Temperature	-65°C ~ +150°C

TLH Series

Socket Specifications	
Socket Outline	65.0 x 83.15 mm
Socket Height	36.15 mm
Seating Height	6.42mm 5.12mm
Applicable Pad Pitch	0.5, 0.65, 0.8, 1.0, 1.27mm
Max, PKG Size	37.5x37.5 mm
Max, Matrix	55x55/53x53, 43x43/36x36/28x28
MAX, Pin count	3025,2089,1849,1296,784 pin
Applicable PKG Type	BGA, LGA
Contact Force	25gf@0.5 mm Stroke
Contact Resistance	100mΩ or less@10mA
Contact Type	Okins PB01
Life Cycle	10,000 times Min
Operating Temperature	-65°C ~ +150°C

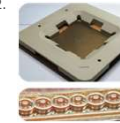


Contact Specifications	
Insulation Resistance	1,000 mΩ at 100V DC
Dielectric Withstanding Voltage	100V DC for 1 min
Contact Resistance (initial)	100mΩ at 10mA
Current rating	Max 3A Per Pin
Operating Temperature	-65°C ~ +150°C

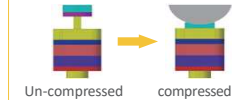
RF MEMS Coaxial Socket

3D MEMS Co-axial Socket

- Pin Height:350um / 550um / 750um / 1000um 2. Stroke:80um / 150um / 250um / 400um
- The stroke is strongly recommended within range because the coaxial structure can be broken when over-stroke is happened.



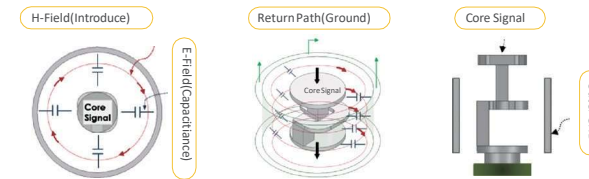
3D MEMSProbe



Simulation and Measurement Pin Displacement

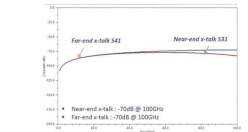


3D MEMS Co-axial Performance

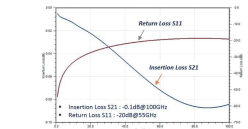


- Protects the inner core signal from electric field interference.
- Keeps the core signal distance from the GND shield with a specific dielectric constant(PDMS ε=2.63).
- Causes the signal well-defined impedance to high frequency signal quality.

Co-axial Pin S21,S11@HFSS,ANSYS



Co-axial Pin S31,S41@HFSS,ANSYS



3D MEMS Co-axial Paramater

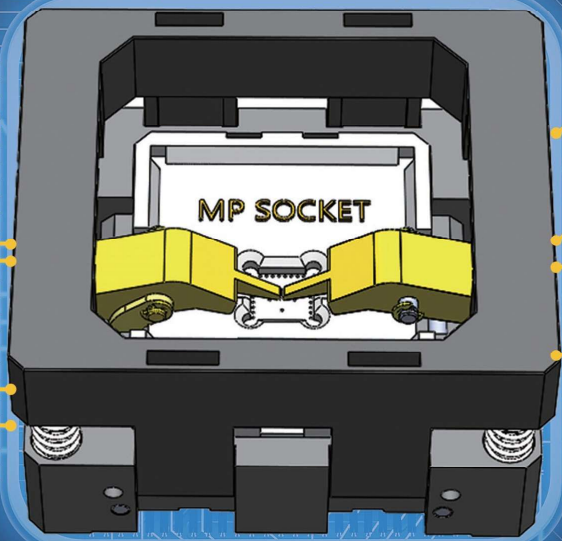
Socket	Display	Pin Pitch	Pin Counts	Insertion loss	Pin Height	Max Current	Stoke	Life Cycle	Pin Force
3D MEMS Co-axial Socket		0.5 mm	16 EA	≥ 50 GHz	0.45 ~ 1.2 mm	≤ 1.5 A	0.05 ~ 0.25 mm	≤ 200K	2.5 ~ 11 gf/mil
3D MEMS Co-axial Socket		0.175mm	36 EA	≥ 100 GHz	0.35 ~ 0.7 mm	≤ 1.5 A	0.05 ~ 0.25 mm	≤ 200K	2.5 ~ 11 gf/mil
3D MEMS Co-axial Socket		0.4 mm	124 EA	≤ 70 GHz	0.35 ~ 0.7 mm	≤ 1.5 A	0.05 ~ 0.25 mm	≤ 200K	2.5 ~ 11 gf/mil
3D MEMS Co-axial Socket		0.3 mm	112 EA	≥ 70 GHz	0.35 ~ 0.7 mm	≤ 1.5 A	0.05 ~ 0.25 mm	≤ 200K	2.5 ~ 11 gf/mil
3D MEMS Co-axial Socket		1.0 mm	2778 EA	≤ 50 GHz	0.35 ~ 0.7 mm	≤ 1.5 A	0.08 ~ 0.25 mm	≤ 200K	2.5 ~ 11 gf/mil
3D MEMS Co-axial Socket		0.76 mm	7 EA	≥ 50 GHz	0.35 ~ 0.7 mm	≤ 1.5 A	0.05 ~ 0.25 mm	≤ 200K	2.5 ~ 11 gf/mil

MP SOCKET

IC Application

Coverage IC Size From 1x1mm to 16x20mm

芯片



应用领域

高频高速测试、可靠信赖性测试
烧录测试、老化测试、ATE Final Test 应用

Design Features

- ◆ Socket outlines: 28x32mm
- ◆ Applicable Max. PKG Size : 16x20mm
- ◆ Applicable Min. PKG Size : 1x1mm
- ◆ Contact Force: 12gf & 25 gf / option pin
- ◆ Operation Force: AVR 3.0 ~ 3.5kg
- ◆ Insulation Resistance: >1000mΩ at 100V DC
- ◆ Temperature Rating: -40°C ~ +155°C



Pogo-Pin



Thanks so much!

Contact Window:

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Website: www.oksolution.cn

E-mail: contact@oksolution.cn

