

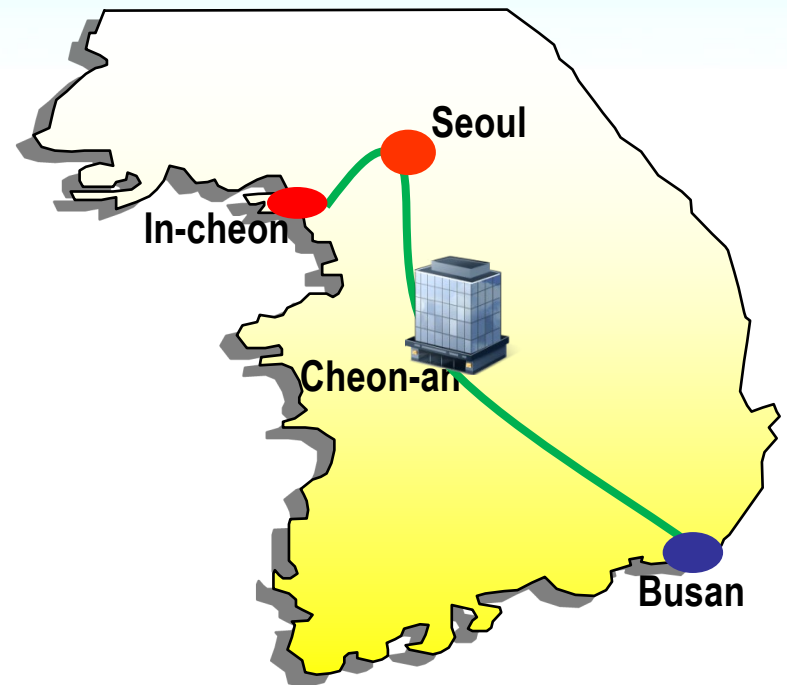
Companies Presentation



Nov. 2018

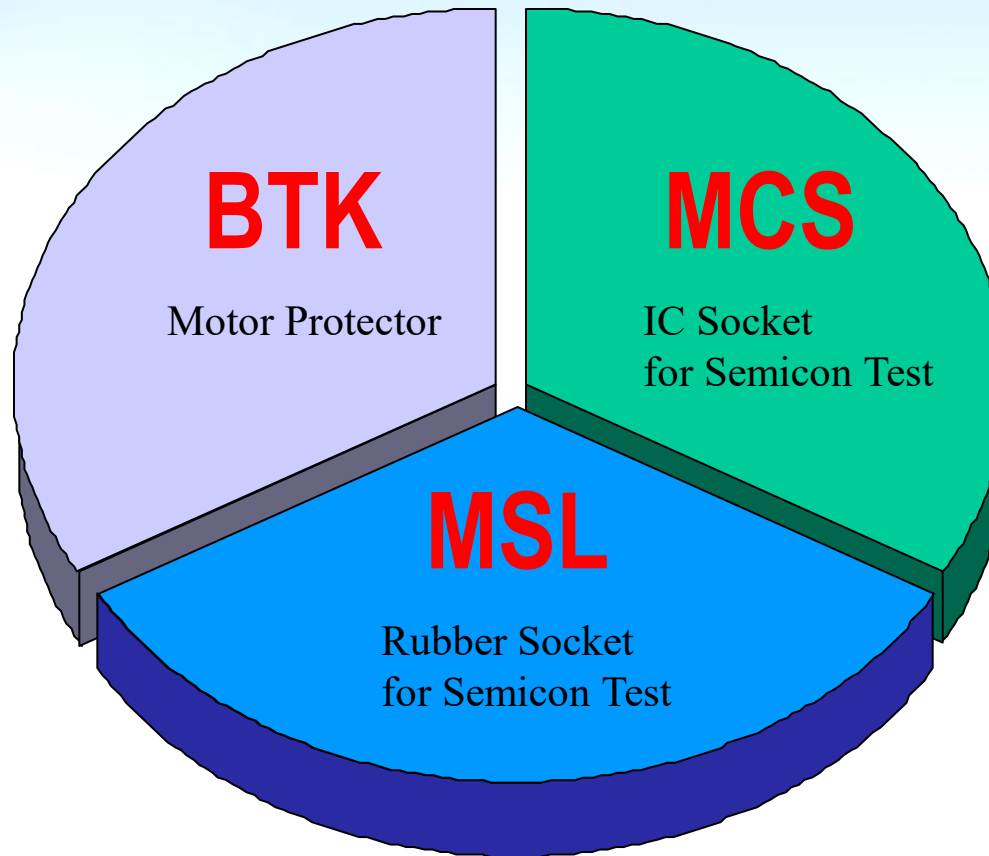
1. Introduction

- Company name : Micro Contact Solution Co., LTD.
- Head office : 15-21 O-song 2gil, Seongeo-eup, Seobuk-gu
Cheon-an , Chung-nam, 331-831, South Korea
- Date of establishment : 1999.12.28
- President & CEO : S.E.Yang
- Revenue : 2016 Year USD 43 Million
2017 Year USD 36 Million
(2018 Year USD 40 Million)
- Listed KOSDAQ : Sep. 23rd 2008
- M&A MSL, BTK : Sep. 2013

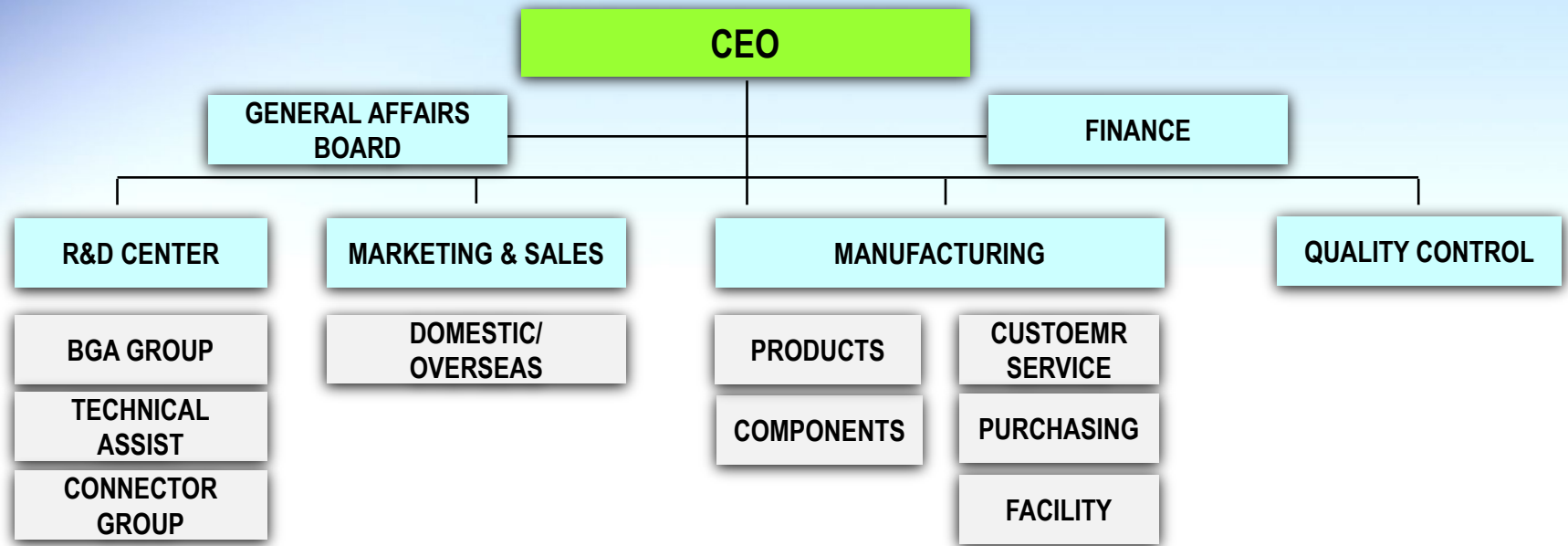


1. Introduction

MCS is composing by 3 companies which are MCS by socket manufacturing, MSL by Rubber contact provider, BTK who is providing of Motor Protector .



1. Introduction



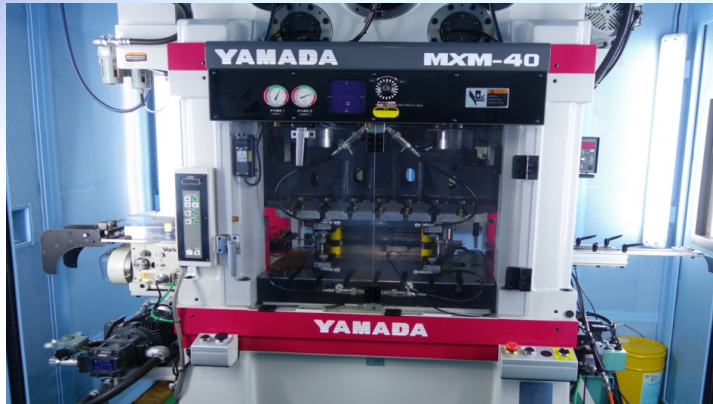
■ Employee

R&D	MANUFACTURE	QC	MARKETING	ETC	TOTAL
28	43	28	12	39	150

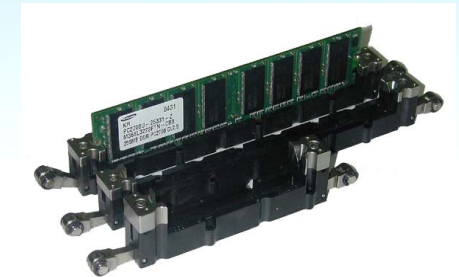
* Include 5 Japanese engineers.

2. Productions

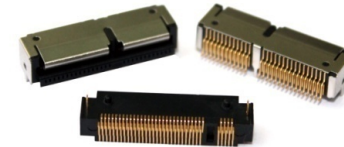
MCS who was marked at 1st localized socket manufacturer in domestic has grown up top vender over the world Semicon test field. Accuracy and fast delivery can meet customers requirements by self-operation parts manufacturing.



LGA



MODULE



CONNECTOR



BGA

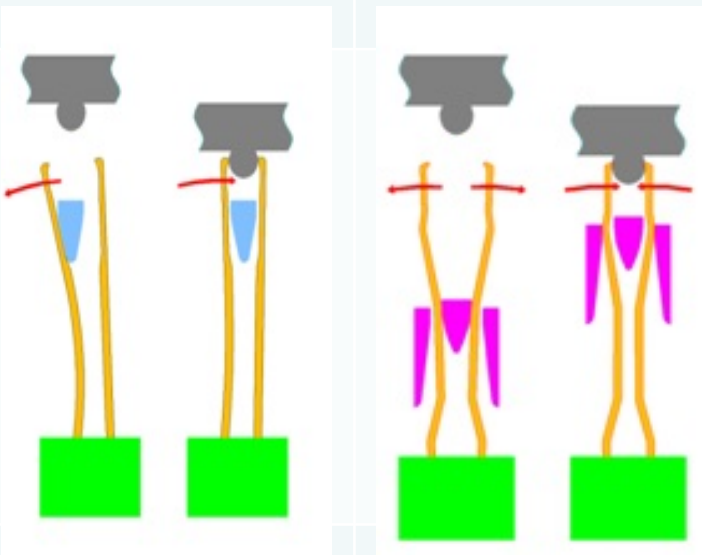


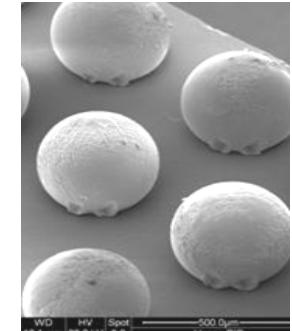
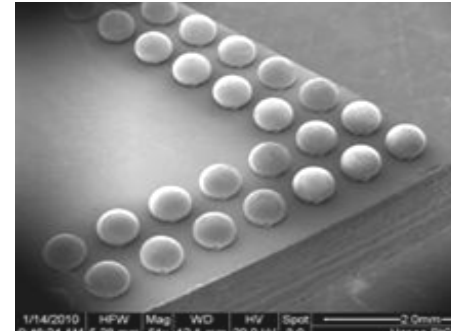
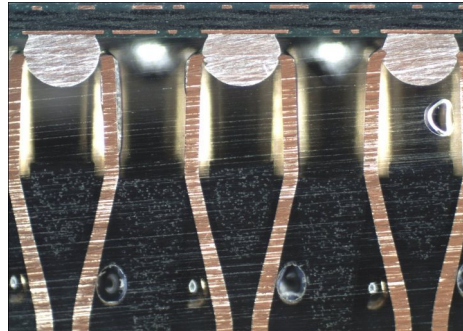
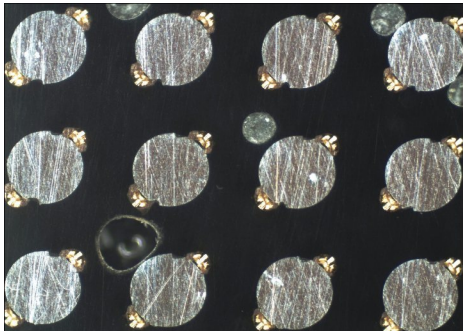
SSD GENDER



2. Productions

Under the control capability of both side pinching socket for Ø0.3 mm ball terminal, MCS has providing satiation to every customers and this is the reason of why each customers want MCS' ones.

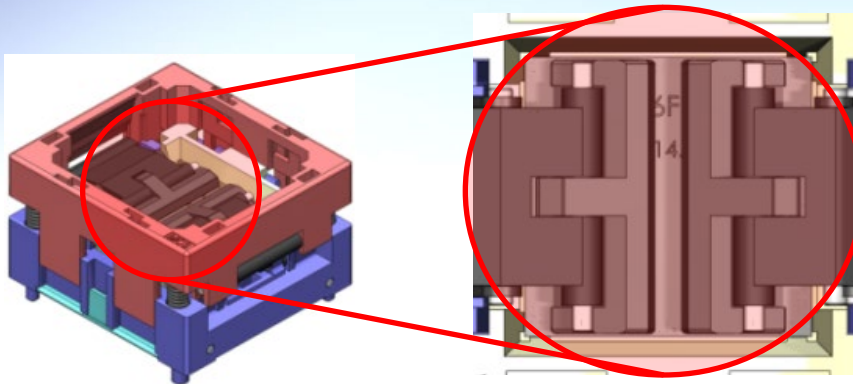
Pitch	Socket size	NORMAL	MOS
0.25P	26X29		
0.30P	26x29, 28x28		
0.35P	28x26, 26x28		
0.40P	22x26, 26x26		
0.50P	19.5x26, 26x26		
0.65P	26x26, 22x28		
0.75P	19.5x26		
0.80P	20x20, 26x26		
1.0P	26X26, 26X28		



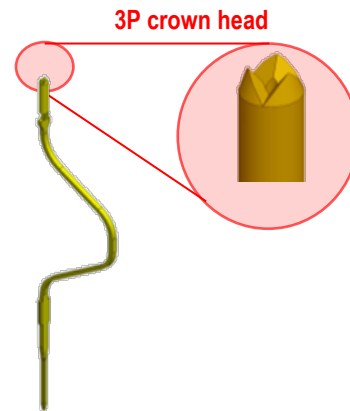
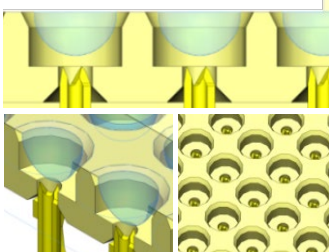
2. Productions

BOW SHAPE CONTACT

Solution for PKG warpage



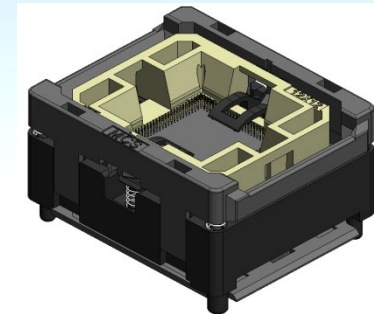
All ball guide
Ball cup adapter



PINCHING CONTACT

Features

- Double side pinch
- Strong contact force
- Excellent loading performance
- Very stable matching



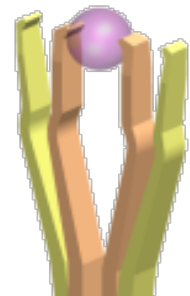
Characteristics

•Electrical

Contact self inductance : 10nH maximum @ 50MHz
Contact resistance : <50mΩ @ 10mA, 20mV
Insulation resistance : >1,000mΩ @ 100VDC
Withstanding voltage : 1,000VAC / 1minute
Current rating : 0.9A

•Mechanical

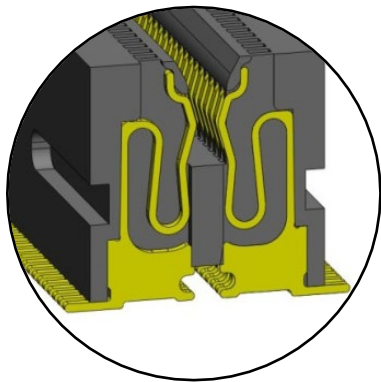
Contact force : $20 \pm 3g \cdot f$
Temperature rating : $-55^{\circ}C \sim +150^{\circ}C$
Cover actuation force : MAX $3.5 \pm 1kg \cdot f$
Life cycle : Min. 10,000cycle (1cycle =load & unload)



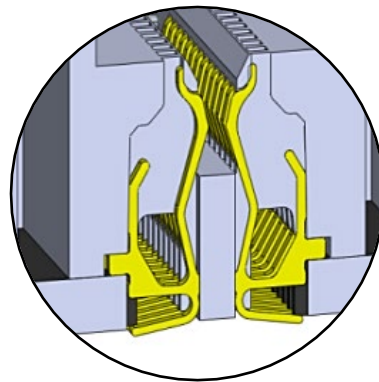
2. Productions

Clock (MHz)	266,333,400	400,533,667,800	800,1066,1333,1600	1600+
Semi cantilever	200SODIMM	200SODIMM, 240UBDIMM 276NEBULADIMM, 240FBDIMM	204SODIMM 240DIMM	260SODIMM 288DIMM
Cantilever	184DIMM 200SODIMM	200SODIMM, 240UBDIMM 240FBDIMM, 240VLPDIMM 276TDIMM, 276LPDIMM 276NEBULADIMM, 232NGDIMM	204SODIMM 240DIMM	288DIMM

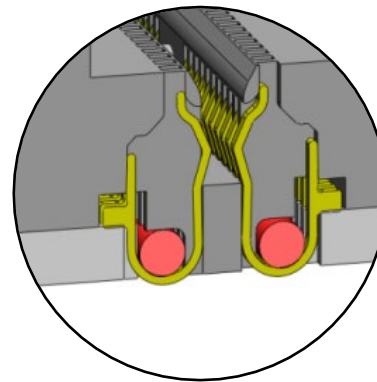
Feature



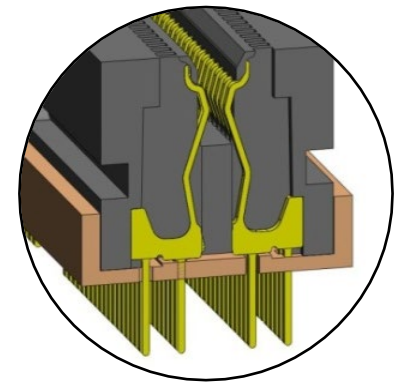
Soldering



Bolting

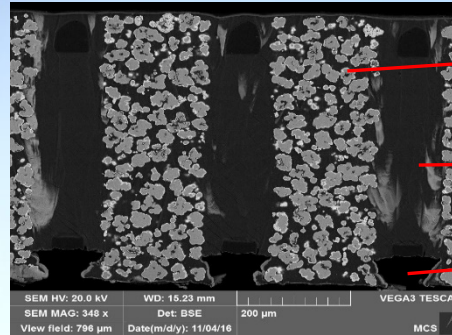
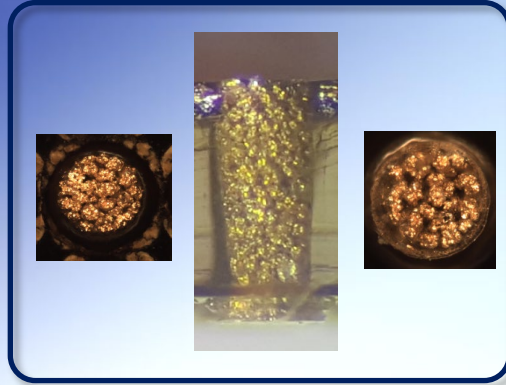


Bolting



Dip type

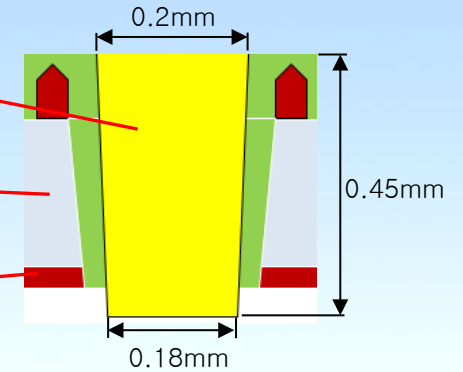
2. Productions



Au-plated powder
< 30 μ m
+ Silicone rubber

Silicone rubber

Frame
(SUS or FR-4)



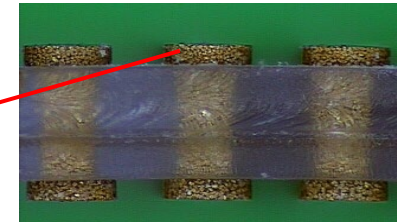
(Incase of 0.3 pitch)

■ Main Technology

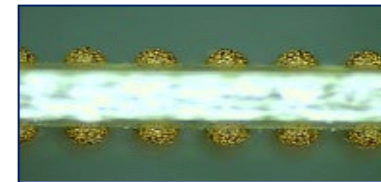
Silicone hardness control

Bump height control for Resistance and/or Life

Bump
height
<50 μ m



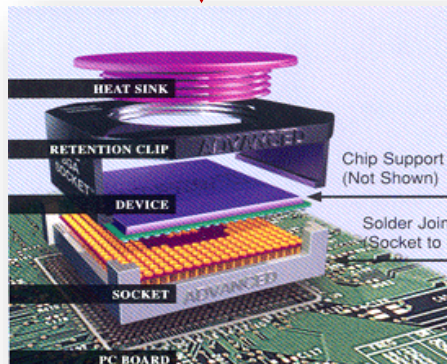
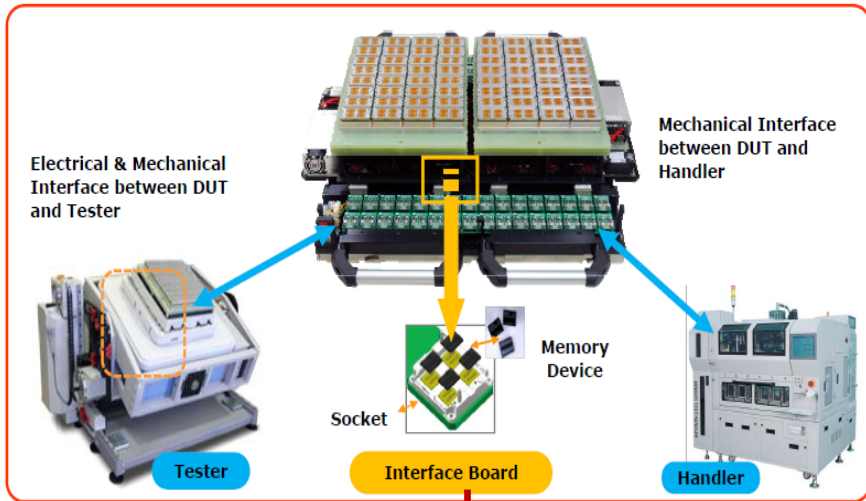
Silicone
hardness
control



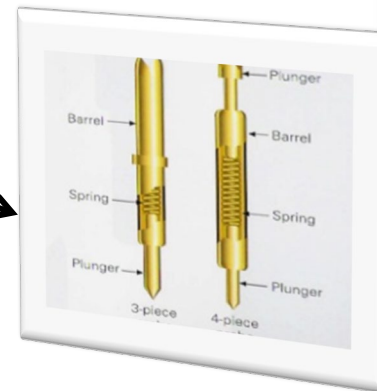
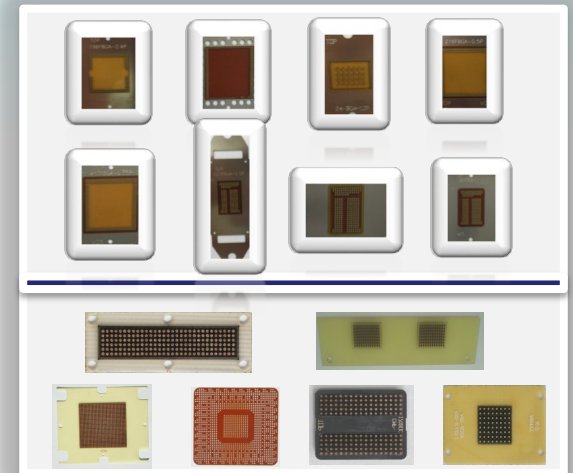
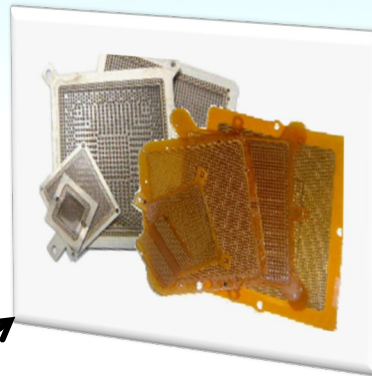
2. Productions

MSL provides most precision rubber contact for semiconductor test and can cover 0.2mm pitch for 1.5~2k q'ty ball terminals on 1 IC.

Package Test Interface



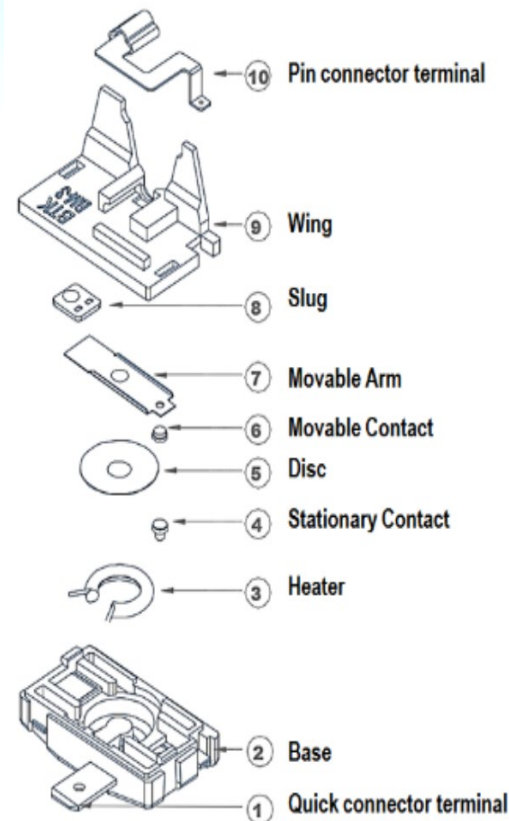
Rubber Test Socket



Pogo-Pin Test Socket

2. Productions

BTK presents New Protector with more longer life under accuracy operation to refrigerator application. This was designed by last experienced Tier and compensated those days problems which are not solved by current vender at quality and/or manufacturing topics.



Agency Approval Note

UL 225267, 238541

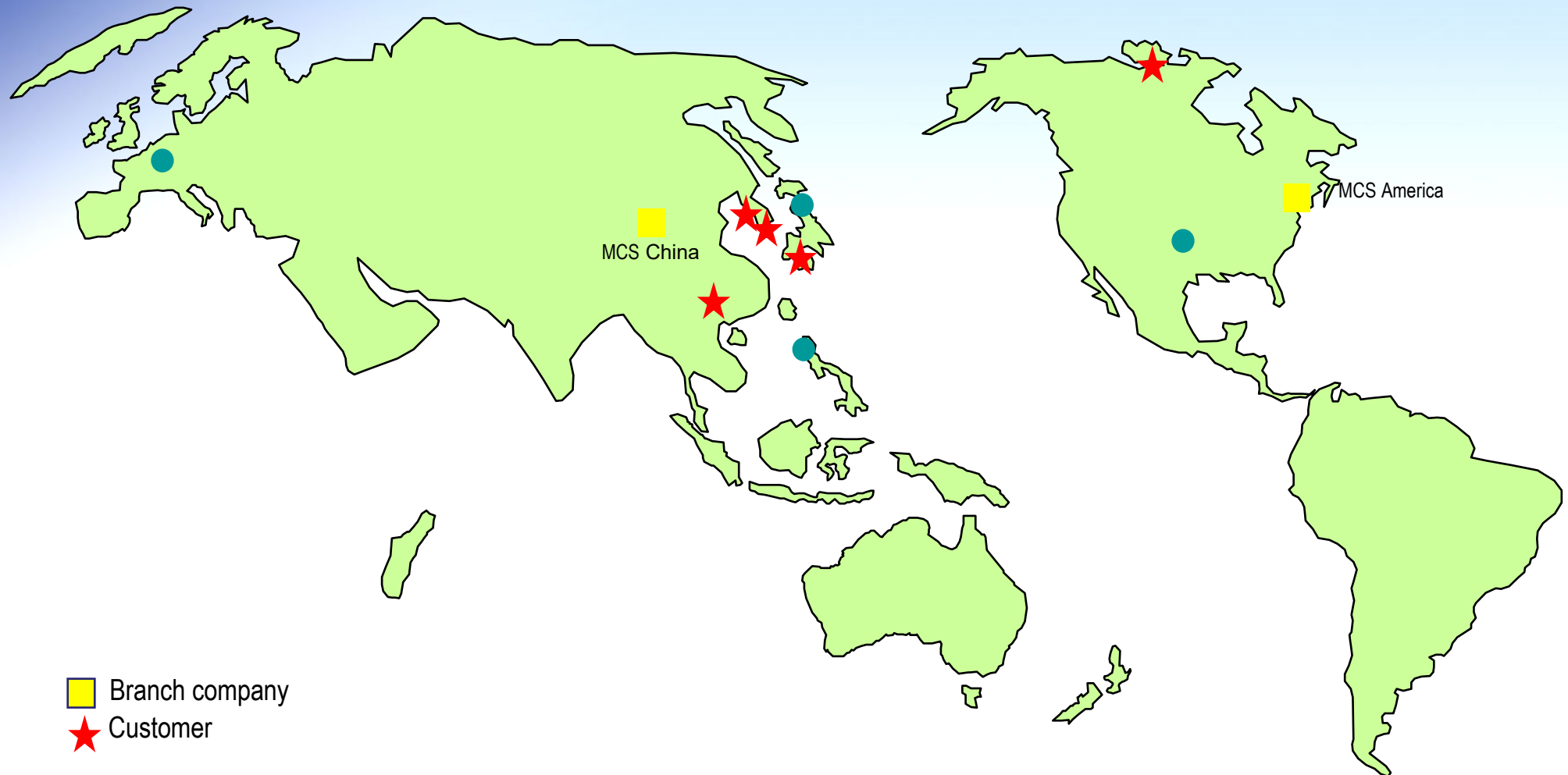
VDE 40003602, 400015734
400027834

CQC 11002057564

KC YH02017-15001

3. World wide Network

MCS' stage for business for test sockets is not only domestic but cover whole world where produce Semiconductor From east to west.



Thank you