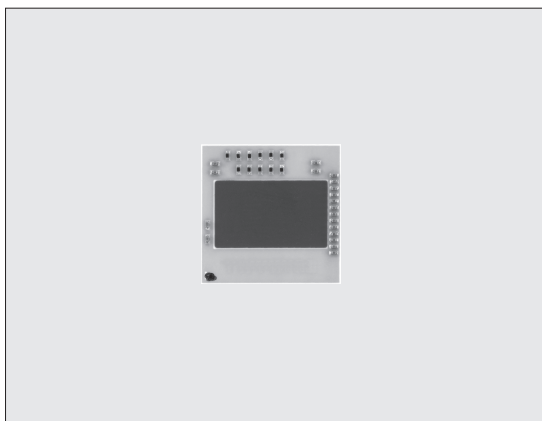
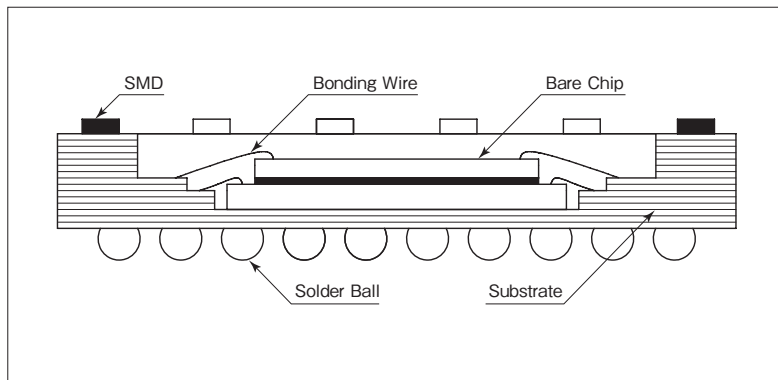


## MCM ■ 多片模块·系统套装包装 (SiP)

Multi Chip Module • System in Package



### ■ 结构图 Construction



### ■ 特点 Features

- 由编入复数的半导体一个包装，实现系统的小型化，高功能化，标准化
- 由于增大基板·多层精巧焊盘使得线路面积的降低，配线距离的缩短能解除信号延迟的问题
- SMD零部件混载的（表面安装型Hybrid IC）的展开
- 由于功能调整能实现组件高精度
- 由于外部端子减少贴装不良率降低
- Plural semiconductors in one package offers downsized system with high performance and standardization.
- Wiring space saving by multilayer fine patterns on build-up substrate. No signal delay by shortened wiring distance.
- Development with surface mounting type Hybrid IC to consolidate SMD parts
- High precision modules by function trimming.
- Less mounting problem because of the decreasing number of the terminals.

### ■ 贴片规格 Mounting Specifications

项目 Item	单位 Unit	minimum	Standard	Maximum	Note	
基板外形尺寸 Substrate Dimension	mm	50×20	120×100	320×140		
基板厚度 Substrate Thickness	mm	0.3	—	1.6		
裸芯片管脚间距 Bare Chip Pad Pitch	μm	100	—	—		
裸芯片管脚尺寸 Bare Chip Pad Dimension	μm	70	—	—		
裸芯片管脚厚度 Bare Chip Thickness	mm	0.1	0.2	—		
封装高度 Molding Height	mm	0.3	1.0	1.2	芯片表面开始的高度 Height from the chip surface	
线长 Wire Length	mm	0.3	—	3.0		
线环高度 Wire Loop Height	μm	100	200	—		
线径 Wire Diameter	Al	μm	200	300	500	for Power Module
	Au	μm	20	25	40	
基板电镀 Plating	电解·无电解镀金 Electrical/non-electrical Au Plating					
基板 Substrate	<ul style="list-style-type: none"> <li>• FR-4</li> <li>• FR-5</li> <li>• Alumina</li> <li>• LTCC</li> <li>• FPC</li> </ul>					

### ■ 包装规格 Package Specifications

项目 Item	内容 Content
端子间距 Terminal Pitch	0.8mm~
可焊接产品 Mountable device	<ul style="list-style-type: none"> <li>• SMD</li> <li>• Bare Chip</li> <li>• Printed Resistor (Trimable)</li> </ul>
可对应包装 Package	<ul style="list-style-type: none"> <li>• SON</li> <li>• BGA</li> <li>• LGA</li> </ul>
包装基材 Substrate for Package	<ul style="list-style-type: none"> <li>• FR-4</li> <li>• FR-5</li> <li>• Alumina</li> <li>• LTCC</li> </ul>