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1985




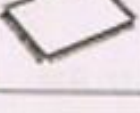
Establishment of technology for surface mounting

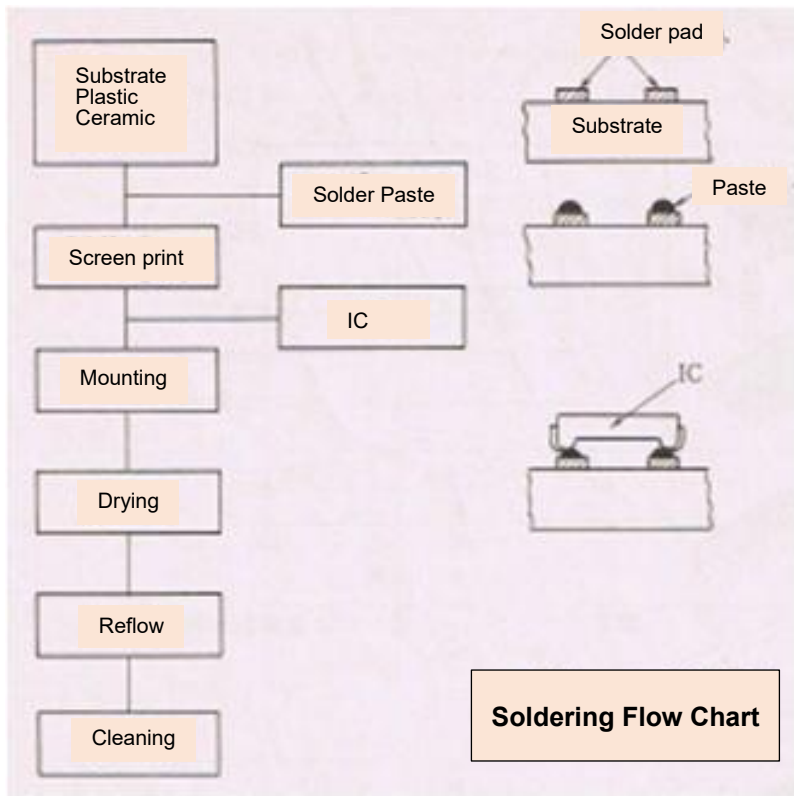
~ Packaging ~

Around 1985, various types of surface mount packages were developed in Japan and abroad, such as SOIC, PLCC, SOJ, PCC, etc., as well as multi-pin and miniaturization development of QFP, and then, the mounting methods of these surface mount packages on PCBs became an issue. Solder-paste materials, paste printing methods, mounting equipment, and soldering methods were studied, and materials and equipment development was promoted. In particular, on the narrow pitch QFP, a team of soldering method development started at Hitachi as the center of its development, and the studies were carried out with the cooperation of material manufacturers and equipment manufacturers. It was also discussed at the Package Outline Committee of EIAJ's later.

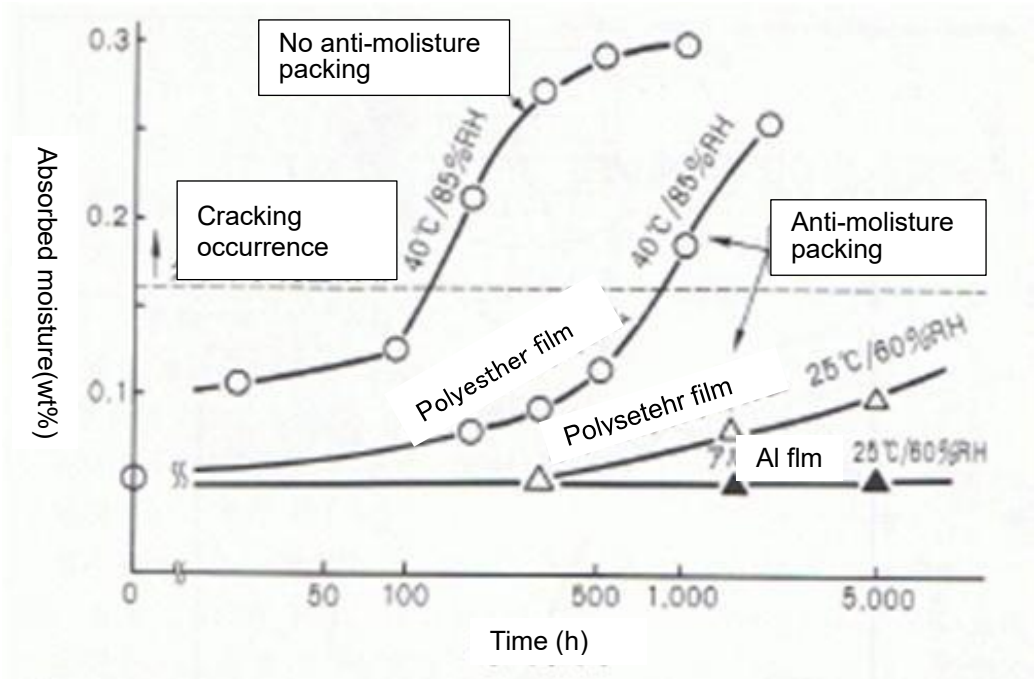
Since the process of surface mounting technology affects the quality of package joint to PCB, public awareness activities such as standardization of soldering methods were actively conducted. The awareness campaign aimed at establishing a unified process throughout the industry by presenting solder mounting manuals which included recommended soldering conditions and methods from semiconductor companies to customers.

In plastic packages, due to moisture absorption, packages were broken in the solder reflow process and defects such as gold wire breakage occurred. Then, the anti-moisture countermeasures for shipping packages was developed.

Multi-pin proliferation of FPP package									
Pkg name	外形	Body size	LxW	T	Pin Count (pcs)	Pin Pitch (mm)	Lead soldeer portion		
		(mm)	(mm)	(mm)			L (mm)	W (mm)	I (mm)
FP1H-54		14x20	19.6 x 25.6	max 2.9	54	1.0	1.7	0.35	0.15
FP1H-64		*	*	*	64	*	*	*	*
FP1H-80		*	*	*	80	0.8	*	*	*
FP1H-100		*	*	*	100	0.65	*	0.3	*



Type of method		実装方法
Single part mount	Soldering iron heating	ハンダゴテ
	Pulse heater heating	パルス電流 ヒータ
Multiple part mount	IR heating reflow	赤外線ヒータ
	Vapor phase reflow	冷却コイル フロリナート蒸気 フロリナート ヒータ
	Hot air reflow	ホットエア



Packing materials for surface mount package shipping:

Polyester or aluminum packs are effective to avoid moisture absorption of surface mount plastic packages.