

1986

Reporting QFP design outline to the world

~ Packaging ~

EIAJ's Semiconductor Package Outline Committee began activities to spread the QFP globally which was developed in Japan, and the explanation of design outline of QFP was given at the 4th IMC (International Microelectronics Conference) in 1986. The package outline dimensions were standardized as 5mm and 7mm as the base, and its multiples. As for the lead pitch, its standardization was proposed to proceed to the narrower pitches based on the design philosophy of "Fixed Body Variable Pin Pitch" in which lead pitches are made narrower with reference to the state-of-the-art surface mount technology.

At this international conference, Adams (A.L.Adams) from TI who developed PLCC representing US, Beenakker (O.I.N.Beenakker) from Phillips who was promoting SOIC (Small Outline IC) representing Europe, and Gen Murakami who developed GFP representing Japan made presentations, and the features of these packages were discussed.

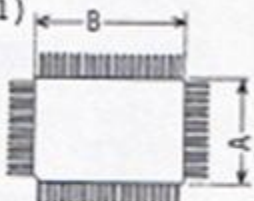
The picture below shows the panelists discussing the features of packages at that time. Murakami, Adams, Beenakker from left to right.

The figures at the bottom show the table of package outline and the superior assembly efficiency of QFP which was presented at the meeting.



Table 3 QFP main body dimension


Square series	Rectangular series
A x B	A x B
5 x 5	5 x 7
7 x 7	7 x 10
10 x 10	10 x 14
14 x 14	14 x 20
20 x 20	20 x 28
28 x 28	28 x 40
40 x 40	


(Note 1) 

(1) Where Square $B = A$

(2) Where Rectangular $B = \sqrt{2} A$

(Note 2)

 Dimension of body standardized and in mass quantities

 Dimension of standard body of ultra 100-pin

