課題番号　　:F-13-IT-0020
利用形態　　:共同研究
利用課題名（日本語）　:電波望遠鏡応用に向けた低雑音 HEMTs
Program Title (English)　:Low Noise InP HEMTs for Radio Telescope Applications
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1. 概要（Summary）

The objective of this research is to develop ultra-low noise InP HEMTs for cryogenic amplification in radio telescope applications. The 60 nm gate E-beam lithography (EBL) on dummy wafers showed good alignment.

2. 実験（Experimental）

Some dummy wafers were fabricated to verify the E-beam lithography for the new maskset. The new EBL strategy was to divide the 2 x 2 cm^2 wafers into six different unit cells as shown in Fig. 1.

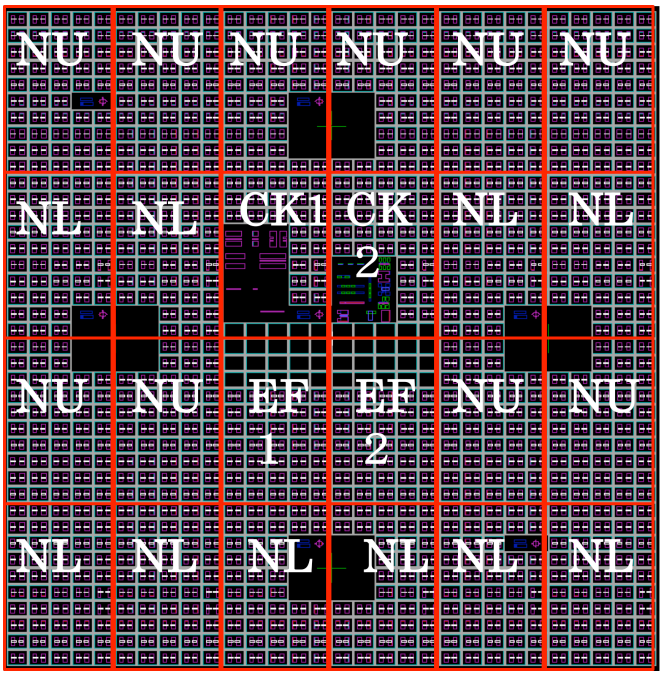

Fig.1 Six unit cells for 60 nm gate EBL on the dummy wafers.

3. 結果と考察(Results and Discussion）

OM photo of the dummy wafer after EBL is shown in Fig. 2. As seen, the 60 nm gates were fabricated with high alignment accuracy by using E-beam exposure (JBX-6300 at Tokyo Tech).

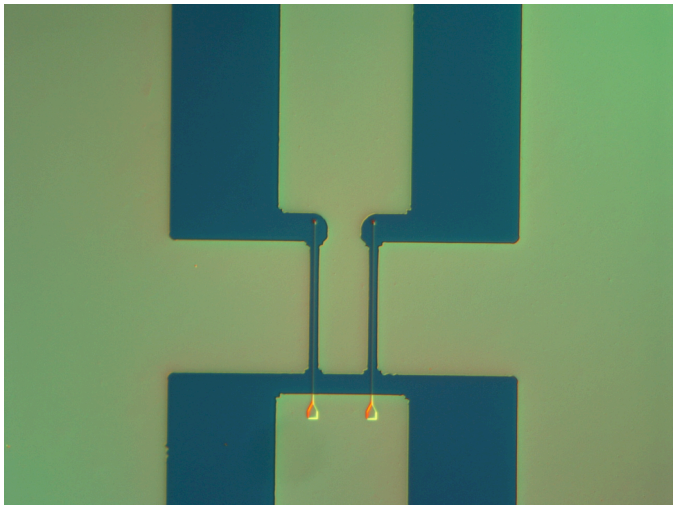

Fig. 2 OM photo after 60 nm gate EBL

4. その他・特記事項（Others）

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5. 論文・学会発表（Publication/Presentation）

None

6. 関連特許（Patent）

None