

## Carrier lifetimes of amorphous/crystalline silicon substrates with the high-low junction

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**Abstract** : In this paper, the carrier lifetime of the amorphous/crystalline silicon high-low junction was investigated by the Quasi-steady-state photoconductance measurement. The high-low junction is used as the front-surface-field (FSF) on the front side of the interdigitated back contact solar cell. The doped amorphous silicon layers were prepared on the crystalline silicon wafers with under various deposition conditions by plasma-enhanced chemical vapor deposition. The carrier lifetimes of the silicon substrates with high-low junction were influenced by the doping type and the doping concentration of the doped amorphous silicon layer.

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