Researchers from all around the world have been captivated by the organic metal halide perovskite (PVK) based solar cell due to its growing efficiency, easy and affordable manufacturing method, and versatility.To increase the efficiency, a comprehensive theoretical analysis that can identify the reason for these losses is needed.Nevertheless, lead, a toxic component of PVK solar cells, results in a number of problems that either directly or indirectly affect the environment and the health of living creatures.However, intrinsic losses mean that the conversion efficiency is still below expectations.In this work, methylammonium tin iodide (MASnI3), a unique PVK material, is utilized.Many lead-free perovskite solar cells have been developed and produced in order to get around this.It keeps PVK-based solar cells from being commercial.