



## TSMC65\_EFUSE\_DOCUMENTATION

TSMC 65 nm Electrical Fuse and ESD Macros

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**Function:** Electrical Fuse ESD Macro and 32bits Serial Interface Electrical Fuse

**Technology:** TSMC 65nm Technology

**Doc. Version:** 1.0

### Description:

The Virtuosolibrary folder includes:

- **Electrical Fuse ESD Macro** (folder name: **FUSES\_tef65lpesd**): ESD protection circuit to protect Electrical Fuse macro from ESD Damage. A detailed documentation can be found [here](#).
- **32bits Serial Interface Electrical Fuse** (folder name: **FUSES\_TEF65lp32x1s\_i**): 32bit one time programmable Electrical Fuses with Serial Interface. A detailed documentation can be found [here](#).

### Note to the user:

- LVS waivers: Multiple “Property errors” are reported running the LVS check. As these errors are linked to a macro directly provided by TSMC, they can be considered as negligible.

In order for the user to distinguish between LVS errors derived from the EFUSE and LVS errors arose from the design, the “EFUSES\_32bit\_schematic.sp” provided [here](#) should be used as a replacement of the schematic spice netlist.

### Changes list:

- 02/2019 – First release