NMOS Varactor Device Truth Table Update
for CR018 GP and GPII

Summary

- **This notice is to inform customers the NMOS Varactor has difference SPICE name and device truth table for the upcoming CR018 GPII enhanced model compare with CR018 GP.**

- **Update the typo of device truth table for NMOS Varactor in GP. And also add new device truth table for NMOS Varactor for GPII.**

  - **In GP, "moscap_rf" & "moscap_rf33" are process without DNW, the device truth table for NMOS Varactor needs to be modified in the DRM "T-018-LO-DR-001" for DNW layer.**

  - **In GP2, "moscap_rf" and "moscap_rf33" is process with DNW, and add extra two devices "moscap_rf_nw" and "moscap_rf33_nw" are process without DNW.**

  - **The NMOS Varactor SPICE name in GP and GPII, please refer to the related SPICE SOTE.**

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Device Truth Table Update for NMOS Varactor in CR018 GP and GPII

SPICE MODEL	T-018-CM-SP-018		Design Levels												Special Layers							
CR018 GPII	Device	SPICE Name	DNW	OD	NWELL	NT_N	OD2	VTM_N	VTM_P	POLY	NP	PP	HRI	RPO	VARDMY	RFDUMMY(160:1)	RFDUMMY(160:3)	RFDUMMY(160:4)	DRAIN(3:3)	SBDDMY	RLPPDMY	RPDMY
	1.8V NMOS Varactor without DNW	moscap_rf_nw	0	1	1	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0
	1.8V NMOS Varactor with DNW	moscap_rf	1	1	1	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0
NMOS	3.3V NMOS Varactor without DNW	moscap_rf33_nw	0	1	1	0	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0
Varactor	3.3V NMOS Varactor with DNW	moscap_rf33	1	1	1	0	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0

SPICE MODEL	T-018-MM-SP-001		Design Levels												Special Layers							
CR018 GP	Device	SPICE Name	DNW	OD	NWELL	NT_N	OD2	VTM_N	VTM_P	POLY	NP	PP	HRI	RPO	VARDMY	RFDUMMY(160:1)	RFDUMMY(160:3)	RFDUMMY(160:4)	DRAIN(3:3)	SBDDMY	RLPPDMY	RPDMY
NMOS	1.8V NMOS Varactor without DNW	moscap_rf	0	1	1	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0
Varactor	3.3V NMOS Varactor without DNW	moscap_rf33	0	1	1	0	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0

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