

TABLE 4.2
SPICE Parameter Equivalences

PARAMETER	TEXT	PSPICE	DEFAULT
Transconductance	K'_n or K'_p	KP	20 $\mu\text{A}/\text{V}^2$
Threshold voltage	V_{TN} or V_{TP}	VT	—
Zero-bias threshold voltage	V_{TO}	VTO	1V
Surface potential	$2\phi_F$	PHI	0.6 V
Body effect	γ	GAMMA	0
Channel length modulation	λ	LAMBDA	0
Mobility	μ_n or μ_p	UO	600 $\text{cm}^2/\text{V} \cdot \text{s}$
Gate-drain capacitance per unit width	C_{GDO}	CGDO	0
Gate-source capacitance per unit width	C_{GSO}	CGSO	0
Gate-bulk capacitance per unit length	C_{GBO}	CGBO	0
Junction bottom capacitance per unit area	C_J	CJ	0
Grading coefficient	MJ	MJ	0.5 $\text{V}^{0.5}$
Sidewall capacitance	C_{JSW}	CJSW	0
Sidewall grading coefficient	MJSW	MJSW	0.5 $\text{V}^{0.5}$
Oxide thickness	T_{ox}	TOX	100 nm
Junction saturation current	I_S	IS	10 fA
Built-in potential	ϕ_j	PB	0.8 V
Ohmic drain resistance	—	RD	0
Ohmic source resistance	—	RS	0