

gmoverID Design methodology

1. As a MOSFET is biased deeper into subthreshold, all the following MOSFET parameters saturate except .

A	V _{DSat}	B	Intrinsic gain	C	Efficiency	D	Intrinsic speed
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2. We can differentiate between the gm/ID charts of NMOS and PMOS devices using the chart.

A	V _{dsat}	B	gm * ro	C	V _{GS}	D	JD = ID/W
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3. For a MOSFET device, the highest speed (f_T) can be obtained by biasing it in .

A	All are wrong	B	SI	C	MI	D	WI
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4. For gm*ro vs gm/ID chart, the L is the top curve.

A	Median	B	Shortest	C	Longest	D	All are wrong
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5. For a MOSFET device, the highest efficiency (gm/ID) can be obtained by biasing it in .

A	All are wrong	B	SI	C	MI	D	WI
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6. For a long channel device biased in WI, the largest component of gate capacitance is .

A	C _{gb}	B	C _{gd}	C	C _{gs}	D	All are wrong
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7. For a MOSFET device, the best compromise between efficiency and speed is usually obtained by biasing it in .

A	All are wrong	B	SI	C	MI	D	WI
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8. For JD=ID/w vs gm/ID chart, the ___ L is the top curve.

A	Median	B	Shortest	C	Longest	D	All are wrong
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9. A MOSFET in WI is in saturation if V_{DS} > .

A	V _T	B	0	C	V _{ov}	D	2nV _T
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10. For a MOSFET in WI, the subthreshold slope factor (n) is typically around .

A	1.5	B	3.5	C	2.5	D	0.5
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