

UNIVERSITY OF CALIFORNIA
College of Engineering
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EECS105

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Amplifier Categories based on Need

When we have:			We need:				We use:	
Source	R_s	R_L	R_{in}	R_{out}	Type of Amp	Function	Bipolar	MOS
voltage	big	small	HUGE	TINY	Voltage	voltage buffer	CC	CD
current	small	big	TINY	HUGE	Current	current buffer	CB	CG
voltage	big	small	HUGE	TINY	G_m	Voltage Gain	(CC) – CE – (CC)	CS – (CD)
current	small	big	TINY	HUGE	R_m	Current Gain	(CB) – CE – (CB)	(CG) – CS – (CG)

