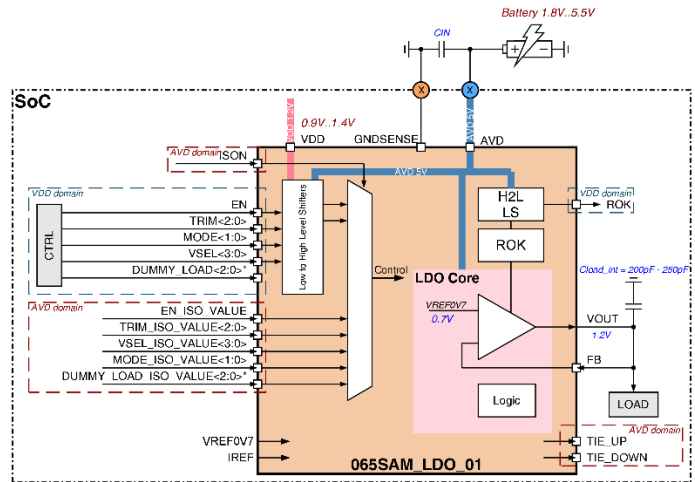


50 mA LDO voltage regulator (output voltage 0.9V/1.2V/1.34V)
OVERVIEW

065SAM_LDO_01 is a low drop out voltage regulator designed to supply integrated circuits with stable and precise voltage. The LDO inputs voltage AVD from 1.8V to 5.5V and converts this voltage into a voltage VOUT 0.9V/1.2V/1.35V with 50mA load capacity. A Regulation OK (ROK) signal inform the system that LDO has completed its booting sequence and if its output is maintaining regulation for the current drawn by the load.

IP technology: Samsung 65nm.
 IP status: silicon proven.
 Area: 0.085mm².


ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Unit
			min	typ.	max	
Supply voltage	AVD	-	1.8	-	5.5	V
Input logic Supply voltage	VDD	-	0.81	-	1.4	V
Ambient temperature	T _j	-	-40	+25	+125	°C
Quiescent current	I _{VDD_HV}	I _{load} = 0mA, Normal mode	-	300	540	μA
		I _{load} = 0mA, LP mode	-	15	25	nA
Shutdown current	I _{SD}	At T=25°C	-	15	35	nA
Reference voltage	V _{VBG}	-	-	0.7	-	V
Reference current	I _{ref}	-	-	10	-	nA
Maximum load current	I _{load}	Normal mode	-	-	50	mA
		LP mode	-	-	0.5	mA
Output voltage	V _{OUT}	Programmable	0.9	1.12	1.35	V
Drop-out voltage	V _{DO}	-	400	-	-	mV
Output voltage deviation	ΔV _{OUT}	PVT, including Line and Load Regulation	-2.8	-	+2.8	%
Load Transient Amplitude on VOUT	ΔV _{OUT} / V _{OUT}	I _{LOAD} = 100 uA to 50mA in 1 us, C _{LOAD} = 700 pF, Normal mode	-	3	7.3	%
VOUT Power Supply Rejection Ratio	PSRR	DC, ideal VREF	-	-61	-50	dB
		F = 10 kHz, ideal VREF	-	-39	-34	dB
Power-up time	T	From power-off state to normal mode, I _{LOAD} = 0 mA. ideal VREF	-	55	80	μs