

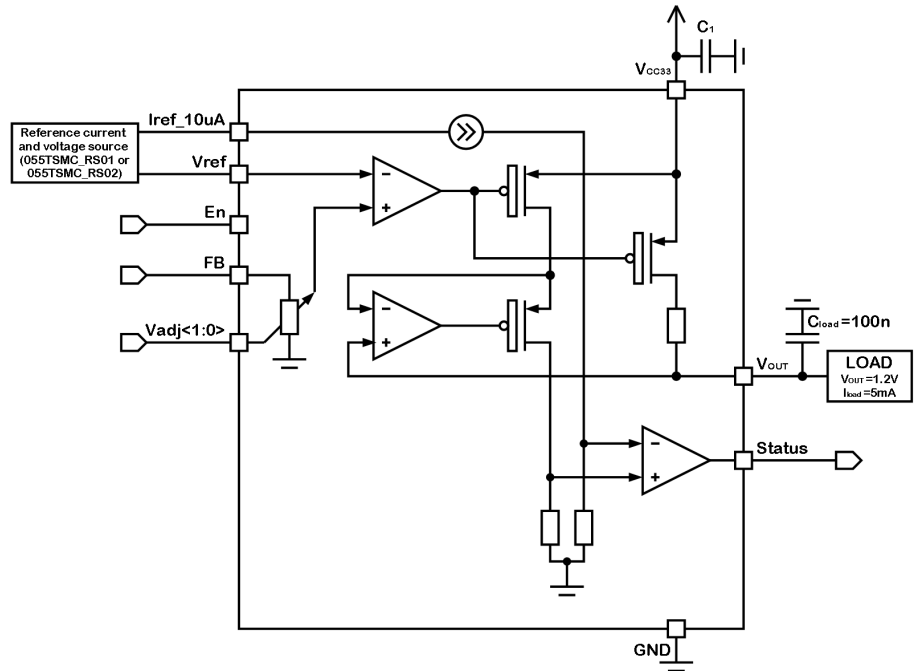
Power Management Unit (1.1 – 1.4V output voltage, load current 5 mA)
OVERVIEW

055TSMC_PMU_01 is designed to form stabilized voltage with overcurrent indication (bit Status). The block has configurable output voltage (1.1/1.2/1.3/1.4V) with parameters specified for 5 mA output current. The Status bit is set to "1", when the load current is greater than 15 mA.

IP technology: TSMC CMOS 55nm technology.

IP status: silicon proven.

Silicon area: 0.037 mm².


ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Units	
			min	typ.	max		
Supply voltage	V _{CC33}	-	2.25	2.5	3.6	V	
Operating temperature range	T _j	-	-40	+27	+85	°C	
Current consumption	I _{CC33}	I _{LOAD} = 5 mA	197	200	204	uA	
		Shutdown mode	0.8	1.5	7.5	nA	
Reference voltage	V _{REF}	-	-	600	-	mV	
Reference current	I _{REF}	-	-	10	-	uA	
Maximum load current	I _{LOAD}	-	-	-	5	mA	
Overcurrent value	I _{OVC}	Threshold	14.9	15.2	-	mA	
Output voltage	V _{OUT}	1 < I _{LOAD} < 5 mA; 2.25 < V _{CC33} < 3.6 V	V _{adj} = "00"	1.101	1.103	1.119	V
			V _{adj} = "01"	1.200	1.201	1.205	
			V _{adj} = "10"	1.300	1.302	1.311	
			V _{adj} = "11"	1.400	1.401	1.404	
Output voltage accuracy	ΔV _{OUT}	I _{LOAD} = 1 mA; T = 25°C	-0.75	-	+0.75	%	
		1 < I _{LOAD} < 5 mA; (V _{OUT} + 0,5 V) < V _{CC33} < 3.6 V	-1.25	-	1.25		
Drop voltage	V _{DROP}	V _{CC33} = 3.3 V, I _{LOAD} = 5 mA	56	87	135	mV	
Load capacity	C _{LOAD}	-	-	100	-	nF	
Input logic-high level	V _{IL}	For digital inputs	0	-	0.2V _{CC33}	V	
Input logic-low level	V _{IH}		0.8 V _{CC33}	-	V _{CC33}		
Output logic-high level	V _{OL}	For digital outputs	0	-	0.4	V	
Output logic-low level	V _{OH}		V _{CC33} -0.4	-	V _{CC33}		