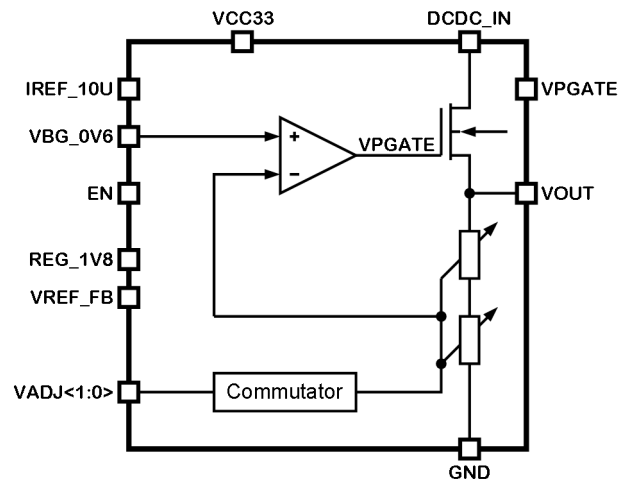


10mA low noise LDO voltage regulator (output voltage 1.0V/1.2V/1.5V/1.8V)
OVERVIEW

180SMIC_LDO_06 IP is a cap-based LDO voltage regulator designed to convert external voltage range from 2.7V to 3.6V to stable voltage 1.0V, 1.2V, 1.5V or 1.8V and supply circuits with load up to 10mA. Reference voltage 600mV and reference current 10uA should be applied for IP operation. Feedback (FB) allows for voltage drop on the wire by which stabilized voltage is supplied to the circuits.

IP technology: SMIC 180nm CMOS.
 IP status: silicon proven.
 Silicon area: 0.02mm².


ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Supply voltage	VCC33	-	2.7	3.15	3.6	V
Operating temperature range	T _j	-	-45	27	+90	°C
Reference current	I _{i10u}	-	-	10	-	uA
Reference voltage	V _{VBG}	-	-	600	-	mV
Current consumption	I _{CC}	V _{OUT} = 1.0V	-	14.1	-	uA
		V _{OUT} = 1.2V	-	16.4	-	
		V _{OUT} = 1.5V	-	20.5	-	
		V _{OUT} = 1.8V	-	24.6	-	
Standby current	I _{stby}	-	-	0.01	-	nA
Maximum load current	I _{load}	-	-	10	-	mA
Output voltage	V _{OUT}	V _{adj} = "00"	0.99	1.0	1.06	V
		V _{adj} = "01"	1.16	1.2	1.24	
		V _{adj} = "10"	1.45	1.5	1.55	
		V _{adj} = "11"	1.75	1.8	1.86	
Output voltage accuracy	dV _{OUT}	-	-	3.14	-	%