

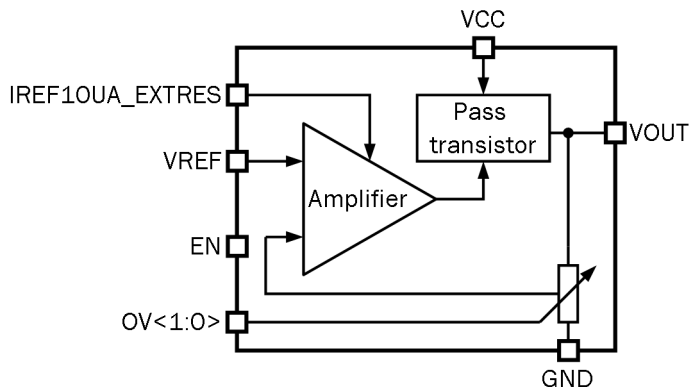
**2mA LDO Voltage regulator (output voltage value 1.9V, 2.0V, 2.1V, 2.2V)**
**OVERVIEW**

180TSMC\_LDOVR\_02 the voltage regulator consists of a differential amplifier which compares reference voltage with voltage from a feedback divider. It adjusts the impedance of a pass PMOS transistor for stabilization of output voltage at a set level. The output voltage adjustment is defined by the digital code **OV<1:0>**. It is able to change a feedback divider transfer ratio in range of 0.6 / 0.7 / 0.8 / 0.9.

IP technology: TSMC SiGe BiCMOS 180nm.

IP status: silicon proven.

Area: 0.0096mm<sup>2</sup>.


**ELECTRICAL CHARACTERISTICS**

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Supply voltage	V <sub>CC</sub>	-	2.4	3.0	3.6	V
Operating temperature range	T	-	-40	+27	+85	°C
Reference voltage	V <sub>REF</sub>	-	0.9	1.16	-	V
Supply current	I <sub>CC</sub>	-	-	30	-	uA
Reference current	I <sub>REF</sub>	-	-	10	-	uA
Stand-by current	I <sub>STB</sub>	-	-	1	-	nA
Maximum load current	I <sub>OUT</sub>	-	-	-	2	mA
Output voltage	V <sub>OUT</sub>	OV<1:0> = "00"	-	1.6×V <sub>REF</sub>	-	V
		OV<1:0> = "01"	-	1.7×V <sub>REF</sub>	-	
		OV<1:0> = "10"	-	1.8×V <sub>REF</sub>	-	
		OV<1:0> = "11"	-	1.9×V <sub>REF</sub>	-	
Input logic-level high	V <sub>IH</sub>	For digital inputs	0.9×V <sub>CC</sub>	-	1.1×V <sub>CC</sub>	V
Input logic-level low	V <sub>IL</sub>		-0.2	-	0.2	V