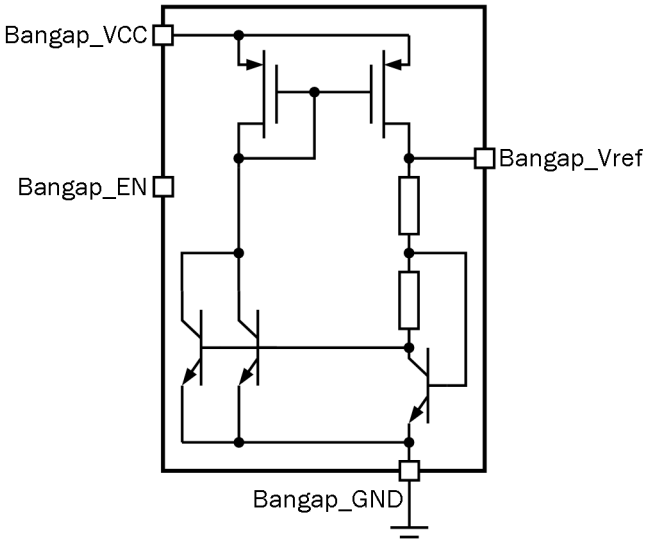
1.16 V Bandgap voltage reference

OVERVIEW

180TSMC_BVR_01 a bandgap voltage reference produces temperature independent voltage level around 1.16V (at **Bangap_Vref** pin) using temperature dependencies of bipolar diodes and integrated resistors. It is widely used to supply integrated circuits with a stable and precise reference voltage across temperature and supply voltage. For proper operation the block should be supplied with 2.375V – 2.625V voltage applied to **Bangap_VCC** pin.
IP technology: TSMC018 SiGe BiCMOS 0.18 um.
IP status: silicon proven.
Area: 0.0091mm^2.



ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Supply voltage	V_{CC}	-	2.375	2.5	2.625	V
Operating temperature range	T	-	-40	27	85	°C
Output reference voltage	V_{REF}	-	-	1.16	-	V
Output voltage variation in temperature range	dT	-	-	-	0.2	%
Current consumption	I_c	-	-	17	-	uA
Stand-by mode current	I_{sb}	-	-	-	200	nA
Logic high level	V_{IH}	For digital inputs	$0.9V_{CC}$	-	V_{CC}+0.15	V
Logic low level	V_{IL}		-0.2	0	0.2	V