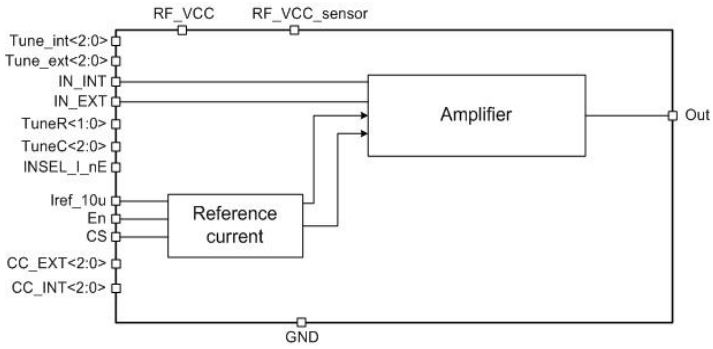
Multiplexer - amplifier

OVERVIEW

180SMIC_MUX_02 is combined into one block multiplexer and amplifier. The multiplexer selects one of the required inputs by a combination of control signals and transmits the amplified signal to the output.
Temperature compensation mode is used to compensate gain vs. environment temperature.



IP technology: SMIC CMOS 0.18 µm.
IP status: silicon proven.
Area: 0.5mm^2.

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Supply voltage	V_{cc}_RF	-	1.7	1.8	1.9	V
Operating temperature range	T	-	-45	27	85	ºC
Input frequency range	F_{in}	Band L1	1571	-	1579	MHz
		Band L2	1598	-	1606	
Input VSWR	$VSWR_{MA\_IN}$	-	-	1.1	2.0	-
Output VSWR	$VSWR_{MA\_OUT}$	-	-	1.6	2.0	-
Input 1dB compression point	P_{1dB_MA}	For inputs IN_INT and IN_EXT	-	-12.6	-	dBm
Insertion loss	G_{MA}	-	-	7.1	-	dB
Noise figure	NF_{MA}	-	-	4.2	-	dB
Current consumption in an active mode	Icc	-	-	2.7	-	mA
Current consumption in a standby mode	Istb	-	-	7	800	nA
Input logic-high level	V_{IH}	For digital inputs	0.7 V_{cc}_RF	-	3.6	V
Input logic-low level	V_{IL}		-0.25	-	0.3	V