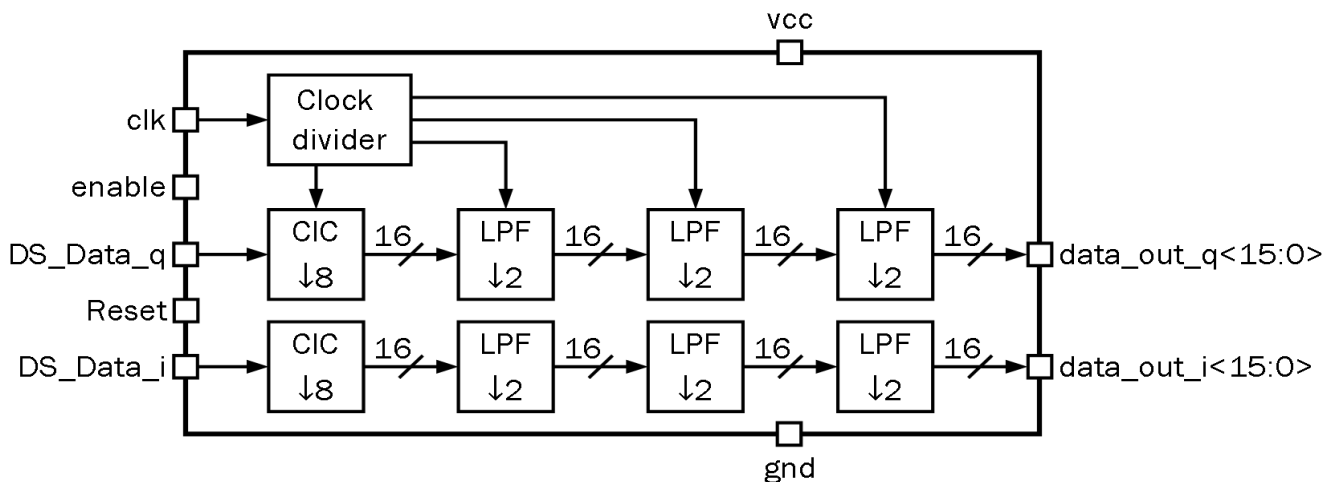


**Digital filter with input sampling rate 2.56 MHz**
**OVERVIEW**


250iHP\_DIGFIL\_01 consists of 4 serially connected low pass filters. Decimation takes place during a filtration process after each stage. The total decimation coefficient is 64. Digital filter supply voltage: 1.8V.

IP technology: iHP SiGe BiCMOS 0.25  $\mu\text{m}$ .

IP status: silicon proven.

Area: 1.4mm<sup>2</sup>.

**ELECTRICAL CHARACTERISTICS**

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Supply voltage	$V_{cc}$	-	1.5	1.8	2.7	V
Operating temperature range	$T_j$	-	-45	+27	+85	°C
Current consumption	$I_{cc}$	-	-	80	-	$\mu\text{A}$
Input resolution	$N_{in}$	-	-	1	-	bit
Output resolution	$N_{out}$	-	-	16	-	bit
Decimation coefficient	R	-	-	64	-	-
Input sampling rate	$F_S$	-	-	2.56	-	MHz
Output sampling rate	$F_{Sout}$	-	-	40	-	kHz
Cut-off frequency	$F_{cut}$	-	-	7.5	-	kHz
Rejection	$A_{stop}$	Frequency >20 kHz	-	<-60	-	dB
Input logic-high level	$V_{IH}$	-	$0.7V_{cc}$	-	$V_{cc}+0.25$	V
Input logic-low level	$V_{IL}$	-	-0.25	-	0.3	V