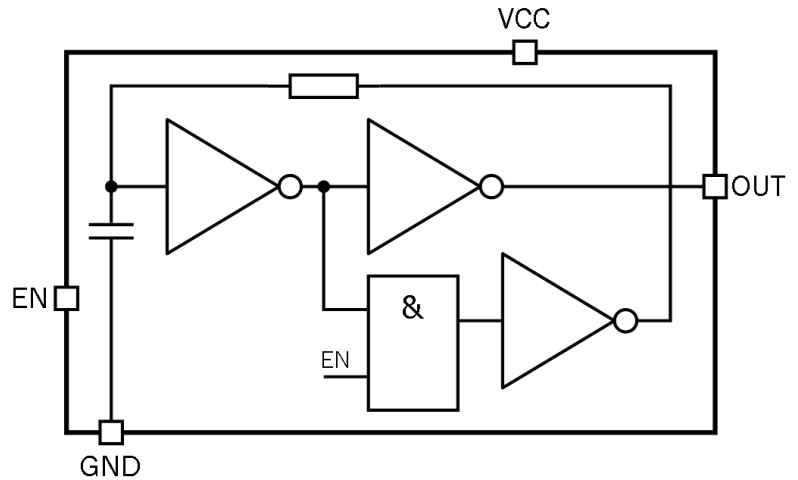


5.5 MHz RC Oscillator

OVERVIEW

065TSMC_OSC_03 is a low power high resolution RC oscillator nominally operates at 5.5 MHz output clock from a 1.2 V supply. The block consumes only 4.6 uA as a worst case at the maximum oscillation frequency. No external components are required. The oscillator operates in a voltage range of 1.2 V $\pm 10\%$ and is qualified over a broad temperature range of -40°C to 85°C . The oscillator has excellent nominal duty cycle specifications ($50\% \pm 10\%$).
 IP technology: TSMC CMOS 65 nm.
 IP status: silicon proven.
 Area: 0.00042mm².



ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Supply voltage	V_{cc}	-	1.1	1.2	1.3	V
Operating temperature range	T	-	-40	27	85	$^{\circ}\text{C}$
Startup time	t_{ST}	-	-	<10	-	cycle
Output frequency	F_{out}	-	4.546	5.5	6.391	MHz
Current consumption	I_{cc}	-	-	4.6	11	μA
Duty cycle	DC	-	45	50	55	%
Current consumption in a standby mode	I_{stb}	-	-	-	28	nA