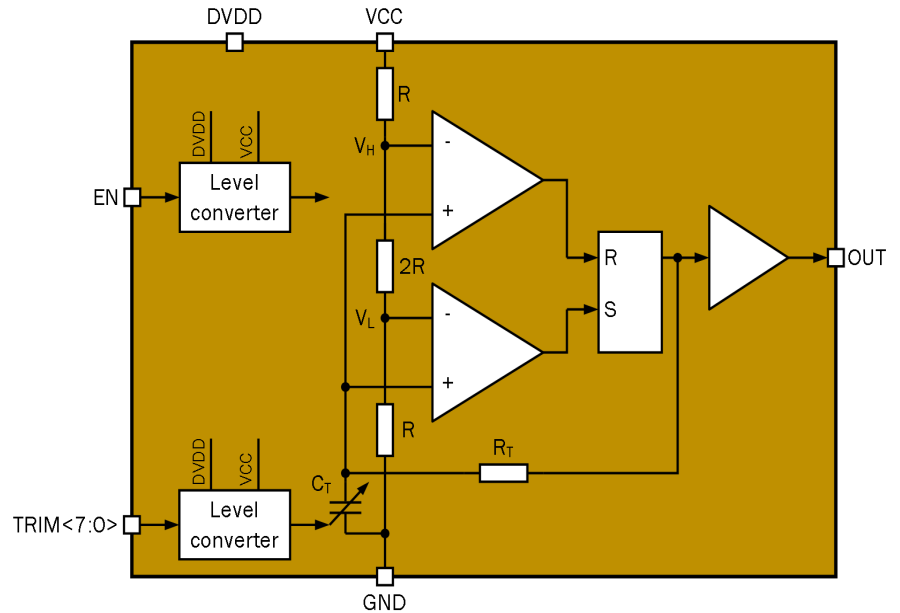


100 MHz RC oscillator

OVERVIEW

055GF_OSC_03 is a low power high resolution RC oscillator nominally operates at 100 MHz output clock from a 1.2 V supply. No external components are required. The oscillator operates in a voltage range of 1.2 V +/-5% and is qualified over a broad temperature range of -40°C to 85°C. The oscillator has excellent nominal duty cycle 51% within +/-10%.
 IP technology: Global Foundries CMOS 55nm.
 IP status: silicon proven.
 Silicon area: 0.0036mm².



ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Supply voltage	V _{CC}	-	1.14	1.2	1.26	V
	V _{DVDD}	-	-	1.2	-	V
Operating temperature range	T _j	-	-40	27	85	°C
Output frequency	F _{OUT}	After trimming	-	100	-	MHz
Frequency trimming range	R	-	80	-	140	MHz
Frequency accuracy	A _F	After trimming	-	3	-	%
Duty cycle	DC _{OSC}	-	45	51	55	%
Supply current	I _{CC}	-	-	-	100	uA
Standby current	I _{stb}	-	-	-	500	nA
Start-up time	T _{start}	-	-	10	-	cycle
Input logic-level low	V _{IL}	For input digital signals	-	-	0.3*V _{CC}	V
Input logic-level high	V _{IH}		0.7*V _{CC}	-	-	V
Output logic-level low	V _{OL}	For output signal	0	-	0.2*V _{CC}	V
Output logic-level high	V _{OH}		0.8*V _{CC}	-	V _{CC}	V