TCD1103 calculations

For ICG signal

At F_{DATA} = 250Khz data rate

1546 elements x 1/250khz = 6184us

Rounding to 6200us taking as read out time

Frequency for ICG = 1/6184us = 161.7 Hz

Duty cycle = integration time /6200us

For SH signal

For the MKR1000 freq = 48MHZ

Period = 20.833ns

Characteristics	Symbol	Min	Typ.	Max	Unit
ICG pulse delay	t1	1000	5000	—	ns
Pulse timing of ICG and SH	t2	100	500	1000	ns
Shift pulse width	t3	1000	—	—	ns
Pulse timing of ICG and ϕM	t4	0	20	*	ns

* : To keep ϕM "H" level when ICG switch from "L" to "H" level.

Taking t3 to be 1000ns

Frequency =1/integration time

Duty cycle = 1000ns/integration time