



Date: Feb 25, 2025
NDK Ref. No.: EXC10B- (1/2)
S/No.: EXC03B- (ME25026)

To: Continental Automotive Technologies GmbH

Project Name: CSM3-1_STLA (B0 sample) - Current Sensor

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Checked by: ***
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NDK-E Development Engineer

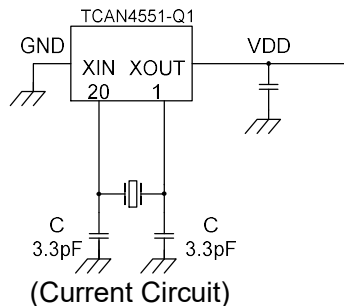
Thank you for your inquiry and we are pleased to report you our circuit analysis report as follows.

Preliminary - Circuit Analysis Report

1. CONDITION

Test IC	TCAN4551-Q1	
Crystal	Holder	NX2016SA
	Frequency	40.000 MHz
	Load capacitance	CL= 8pF [IEC]
	Customer Spec. No.	A2C04616800
	NDK Spec. No.	EXS00A-CS10389
Test Circuit	IC labeling	--
	VDD	VPCB= +12V
	PCB	--

2. CIRCUIT DIAGRAM



3. RESULTS

- 1) Recommended negative resistance target: $-R=300\Omega$ to 900Ω .
- 2) Circuit Characteristic:

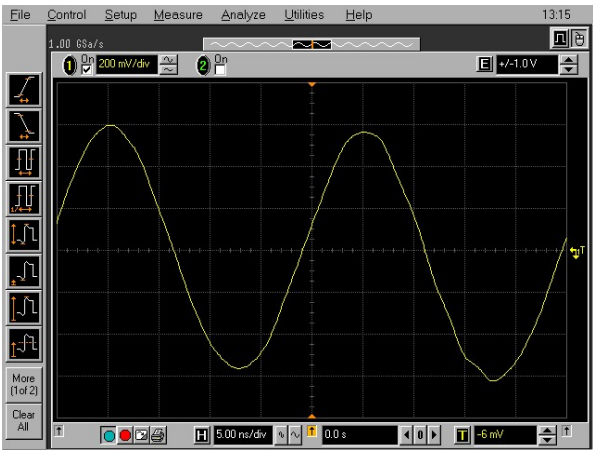
Circuit	C [pF]	Negative Resistance $-R[\Omega]$	Frequency deviation $dF/F [\times 10^{-6}]$	Drive Level $DL[\mu W]$	Startup time $T_{str} [ms]$	Amplitude	
						Xin [V]	Xout [V]
Current	3.3	410	-11	90	2	1.2	1.2

- 3) The current circuit has enough negative resistance for stable oscillation.
- 4) We recommend using the current circuit.
- 5) Circuit function and quality are not guaranteed by this report.
Please also check there is no problem in the system on your side before use.

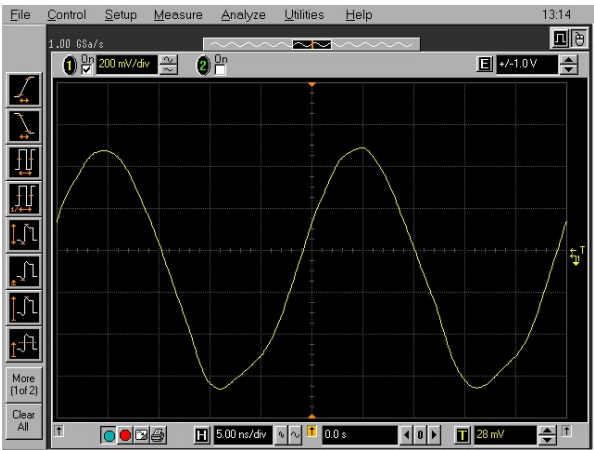
6) Temperature Characteristics (current circuit).

Temp. T (°C)	Negative Resistance -R (Ω)
-40	510
+25	410
+105	270

7) Waveforms.



Xin



Xout



At Start Up