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(71) 申请人 中国石油化工股份有限公司

地址 100728 北京市朝阳区朝阳门北大街
22 号

申请人 中国石油化工股份有限公司石油物
探技术研究院

(72) 发明人 周枫 马中高 赵群 周中彪
奚相

(74) 专利代理机构 北京思创毕升专利事务所
11218

代理人 郭韞

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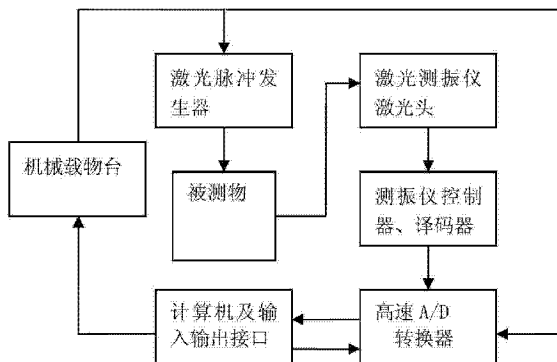
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(54) 发明名称

一种非接触式检测岩石声波速度的方法

(57) 摘要

本发明提供了一种非接触式检测岩石声波速度的方法,属于岩石物理研究领域。所述方法利用激光脉冲发生器产生的激光脉冲轰击被测物体表面,在被测物体中形成超声波,同时,在被测物体的另一侧采用激光测振仪激光头检测被测物体表面的振动信号,并将振动信号转化为电信号,然后根据所述电信号绘制成超声波波形,最后根据超声波的初至时间计算出超声波在物体中的传播速度。利用本发明能够对各种岩芯样品进行激光测振实验,实现了在不损伤岩芯的情况下,获得岩芯声波速度数据,提高的岩芯重复使用率,减少了重复采芯次数;利用本发明可以计算岩芯任意位置的声波速度值,根据其结果能够建立岩芯速度场,便于研究岩芯的各向异性特征。



1. 一种非接触式检测岩石声波速度的方法,其特征在于:所述方法利用激光脉冲发生器产生的激光脉冲轰击被测物体表面,在被测物体中形成超声波,同时,在被测物体的另一侧采用激光测振仪激光头检测被测物体表面的振动信号,并将振动信号转化为电信号,然后根据所述电信号绘制成超声波波形,最后根据超声波的初至时间计算出超声波在物体中的传播速度。

2. 根据权利要求1所述的非接触式检测岩石声波速度的方法,其特征在于:所述将振动信号转化为电信号是这样实现的:

将激光测振仪激光头检测到的振动信号经过激光测振仪控制器、译码器和A/D转换器的处理得到电信号。

3. 根据权利要求2所述的非接触式检测岩石声波速度的方法,其特征在于:所述方法将被测物体安装在机械载物台上,在所述机械载物台上安装有电极,能够根据计算机的控制进行旋转。

4. 根据权利要求3所述的非接触式检测岩石声波速度的方法,其特征在于:所述激光脉冲发生器和A/D转换器是安装在所述机械载物台上的。

5. 根据权利要求4所述的非接触式检测岩石声波速度的方法,其特征在于:所述超声波波形是振幅-时间曲线,时间为横坐标,振幅为纵坐标。

6. 根据权利要求5所述的非接触式检测岩石声波速度的方法,其特征在于:所述根据超声波的初至时间计算出超声波在物体中的传播速度是这样实现的:

在所述振幅-时间曲线上拾取超声波初至时刻T,然后将初至时刻T作为时间代入公式:速度=长度/时间计算出超声波穿透被测物体的速度;

所述长度是通过安装在激光脉冲发生器和激光测振仪激光头上的激光测距仪测量得到的。

7. 根据权利要求6所述的非接触式检测岩石声波速度的方法,其特征在于:所述拾取超声波初至时刻T是这样实现的:在振幅-时间曲线图中找到第一个波峰或波谷与时间轴的交叉点,其时间值即为超声波的初至时刻T。

一种非接触式检测岩石声波速度的方法

技术领域

[0001] 本发明属于岩石物理研究领域,具体涉及一种非接触式检测岩石声波速度的方法。

背景技术

[0002] 岩石超声波速度测试技术:岩石声波速度是岩体质量评价的重要指标,测量声波速度的方法基本可以分为三类:共振法、脉冲法和干涉法。目前常用的测试方法是超声脉冲方法,采用超声-时间方法测试岩石的声波速度。该法主要利用弹性脉冲,即弹性波在固体介质中的传播时间来计算速度。具体方法见图1,即由发射探头发射一个中心频率为0.5MHz的超声脉冲,测量该脉冲透过岩样到达接收探头的纵、横波初至时间,扣除纵横波在发射探头和接收探头内的传播时间(即零时),获得纵、横波实际透过岩样的传播时间。根据该时间和岩样长度即可计算出超声波穿过岩样的纵横波速度。

[0003] 声波在岩石中传播时会产生自然衰减,因此现有的岩石声波速度测试方法对岩芯的大小和形状都有比较严格的要求。在测试前必须要对岩芯进行切割和加工,并且能够进行测试的岩芯的大小与超声波的能量有密切关系。这样的测试方法对岩芯造成了不可逆转的破坏,限制了岩芯的重复使用,而石油行业的钻井岩芯通常取自地下数千米,成本极高。另外,超声测试是测试加工后的岩芯样品整体的速度值,而自然界的岩石是不均一的各向异性体,测试结果不能很好的展现岩芯的各向异性特征。

[0004] 激光测振技术:激光超声波法是利用激光来产生和接收超声波实现材料特性和缺陷检测的技术。图2是实验室进行激光发射-激光接收的示意图,图2的右侧是一脉冲激光光源,用它可以在被测物体表面产生超声波信号。图2的左侧是一激光干涉仪用于振动信号的接收,它将被测物体表面的振动信号(位移或速度)转换为电信号,然后送给计算机进行分析处理。

[0005] 激光超声技术以其独有的特点,成为无损检测及实验力学领域的一个新分支,该技术之所以备受关注,是由于它与传统的超声无损检测技术相比,具有非常突出的优点,使其在某些场合,应用前景十分广阔。

[0006] (1) 非接触性

[0007] 采用压电晶体探头的常规超声波检测,是一种物理接触式方法。探头与试件间的能量交换要依靠第三种介质-耦合剂来完成。而激光超声的产生是非接触式的,再配以非接触式的激光干涉仪接收超声波,这种技术是完全非接触式超声波检测技术,取消了使用耦合剂的必要性。这样的优点是:

[0008] ①不会产生由于耦合层的变化而引起超声波幅度及频率响应的变化;

[0009] ②试件不受探头的附加荷载的影响;

[0010] ③试件不受耦合剂的污染(这对于某些复合材料特别重要);

[0011] ④试验的重复性好。

[0012] (2). 远距离遥测

[0013] 在激光超声检测系统中,激光器及其光学元件可以远离被测试件几十厘米之远,需要时可达数十米远。因此,这种技术不仅是一种非接触式,而且是远距离遥测式的检测技术。尽管电磁声换能器 E(MAT),空气超声换能器以及电容换能器(ESAT)等也具有非接触式的特点,但这些换能器离开试件的距离不能太大($< 1\text{mm}$),换能器的换能效率与换能器和试件表面间的距离关系甚大。从这方面来讲激光超声无损检测技术的应用范围更大。比如,当试件的温度超过 500°C 以上,或者更高,没有可靠的超声换能器可以接近试件表面,而激光超声技术则可遥测。激光束可以透过头一透明窗口,进入密封的试件舱,因此可以应用在有毒、高压、有放射性的恶劣环境之下。

[0014] (3). 快速全方位扫描

[0015] 从原理上讲,光学技术具有快速扫描的特点,利用棱镜、反射镜或者电光装置,可以方便地进行全方位快速扫描。采用全光学型的激光超声测量系统,可以利用这一特点,对试件进行快速扫描。扫描的上限速度与压电换能器的扫描速度相比高得多,它仅受激光脉冲的复重频率及数据采集频率的限制。

[0016] (4). 空间分辨率高

[0017] 理论上讲,用于产生和探测超声脉冲的激光束可以聚到很小,约 μm 量级,因此可以获得很高的空间分辨率。在实践中,激光超声检测系统将接收激光束聚焦到 $10\mu\text{m}$ 以下是容易的。显然这样可提高空间分辨率,但对于产生超声波的激光束而言,这样势必导致试件表面形成等离子体,以致严重损伤试件表面。一般来讲,几百 μm 的超声源较为常用,与压电晶体探头相比,这样的空间分辨率已经很高了。高的空间分辨率,对于缺陷的精确定位和尺寸量度是相当有利的。同时,由于该技术可以近似做到点测量,激光激发的超声源非常接近点源,与得到理论解的假设条件相一致。因此,可以用来验证理论解。

[0018] (5). 对检测部位的空间位置要求不高

[0019] 常规的超声换能器,由于其体积较大,对被检构件的被检位置有一定要求,如要求被检位置的曲率半径不能太小。对于一些难以接近部位,或没有足够空间的位置(如拐角)就无法检测。由于激光超声技术具有远距离遥测的特点,加之激光束可小到 μm 级,因此它可以检测大曲率的曲面,还可以通过光导纤维将激光诱导到难以接近的区域。这为形状较为复杂的构件提供了一种检测手段。

[0020] 但是,通常岩石超声波速度的测试需要根据测试设备的要求,先将岩芯样品切割规则的形状(方形、圆柱形等),才能进行速度测试。测试得到的速度数据的准确性收到声波探头与岩芯样品耦合程度、岩芯样品本身对超声波的衰减能力等因素的影响。这样的测试方法,破坏了钻井取得岩芯的完整,也将大量的人力和时间耗费在岩芯样品加工上。

发明内容

[0021] 本发明的目的在于解决上述现有技术中存在的难题,提供一种非接触式检测岩石声波速度的方法,利用多普勒激光测振技术,通过激光检测超声波穿过岩石后在岩石表面产生高频振动的方法,捕捉超声波波形,计算得到岩芯的速度,避免了破坏岩芯,实现重复使用岩芯样品,能够缩减钻井取芯的数量,节约取芯费用和岩芯加工的人力、物力消耗。另外,本发明提供的方法能够计算岩石任何位置的速度值,能更好的实现岩芯各向异性特征的分析。

[0022] 本发明是通过以下技术方案实现的：

[0023] 一种非接触式检测岩石声波速度的方法，所述方法利用激光脉冲发生器产生的激光脉冲轰击被测物体表面，在被测物体中形成超声波，同时在被测物体的另一侧采用激光测振仪激光头检测被测物体表面的振动信号，并将振动信号转化为电信号，然后根据所述电信号绘制成超声波波形，最后根据超声波的初至时间计算出超声波在物体中的传播速度。

[0024] 所述将振动信号转化为电信号是这样实现的：

[0025] 将激光测振仪激光头检测到的振动信号经过激光测振仪控制器、译码器和 A/D 转换器的处理得到电信号。

[0026] 所述方法将被测物体安装在机械载物台上，在所述机械载物台上安装有电极，能够根据计算机的控制进行旋转。

[0027] 所述激光脉冲发生器和 A/D 转换器是安装在所述机械载物台上的。

[0028] 所述超声波波形是振幅 - 时间曲线，时间为横坐标，振幅为纵坐标。

[0029] 所述根据超声波的初至时间计算出超声波在物体中的传播速度是这样实现的：

[0030] 在所述振幅 - 时间曲线上拾取超声波初至时刻 T，然后将初至时刻 T 作为时间代入公式： $\text{速度} = \text{长度} / \text{时间}$ 计算出超声波穿透被测物体的速度；

[0031] 所述长度是通过安装在激光脉冲发生器和激光测振仪激光头上的激光测距仪测量得到的。

[0032] 所述拾取超声波初至时刻 T 是这样实现的：在振幅 - 时间曲线图中找到第一个波峰或波谷与时间轴的交叉点，其时间值即为超声波的初至时刻 T。

[0033] 与现有技术相比，本发明的有益效果是：

[0034] 利用本发明能够对各种岩芯样品进行激光测振实验，实现了在不损伤岩芯的情况下，获得岩芯声波速度数据，提高的岩芯重复使用率，减少了重复采芯次数；

[0035] 利用本发明可以计算岩芯任意位置的声波速度值，根据其结果能够建立岩芯速度场，便于研究岩芯的各向异性特征。

附图说明

[0036] 图 1 是超声波速度测量原理示意图。

[0037] 图 2 是激光测振原理图。

[0038] 图 3 是本发明方法的原理图。

[0039] 图 4 是实施例中的振幅 - 时间曲线图。

具体实施方式

[0040] 下面结合附图对本发明作进一步详细描述：

[0041] 如图 3 所示，本发明通过激光脉冲发生器产生激光脉冲，轰击被测物体表面，在固体中形成弹性波 - 超声波。同时在被测物另一侧采用激光测振仪激光头测试被测物表面的振动，将振动信号通过信号转换器（指图 3 中的测振仪控制器、译码器和高速 A/D 转换器），将记录下的振动信号转化为电信号，传输到计算机中。研究人员通过计算机将电信号绘制成超声波波形（信号转换器接收到的电信号通过计算机中的控制软件，按照信号强度 - 时

间绘制成正弦波曲线,即为超声波传播的波形,也就是振幅-时间曲线,该过程由计算机自动完成。)。超声波在空气中的传播距离通过安装在激光脉冲发生器和激光测振仪激光头上的激光测距仪测量得到(在激光脉冲发生器和激光测振仪激光头上均安装一个激光测距仪,由激光测距仪分别测出脉冲发射器和激光头到样品的距离,两者之和即为超声波在空气中的传播距离),然后根据超声波的初至时间计算出超声波在物体中的传播速度。

[0042] 图3中整套装置是对现有设备进行局部改造得到的,改造的部分包括加装了激光测距仪、机械载物台。其中,图3中的机械载物台主要是用来固定试件,并且能够按照一定的速度和角度进行旋转,从而实现对试件的多方位的连续检测。在所述机械载物台中安装了电机,在计算机中可以通过操作软件,对载物台实现操控。激光脉冲发射器和A/D转换器是安装在载物台上的。

[0043] 本发明的一个实施例如下:

[0044] D50-12号岩芯是采自鄂尔多斯某钻井的一块岩芯样本,该井是一口高声波高电阻特征的高产气井。在整段岩芯上钻取了直径25cm,长5cm的圆柱体样品,采用超声波-时间方法测试对D50-12样品进行了速度测试,得到的纵波速度4640m/s,横波速度2565m/s。

[0045] 对该样品进行了本发明所述的激光测振实验,并根据采集到的超声波波形利用下面所述的速度=长度/时间公式计算出了岩芯的超声波速度,得到的纵、横波速度分别为4640m/s和2565m/s(横波和纵波的振动方式是不同的,其传播速度也相差很大,有专业知识的人员在超声波波形图上能够区分出两种不同的波),两种方法得到的速度数据是相互匹配的,这也就证明本方法的准确性。

[0046] 实验采用的设备为Polytec PSV-400-M2型多普勒激光测振仪,其主要技术指标如下:

[0047] 1. 振动速度范围:

[0048] 最大:±10米/秒,共11档速度量程

[0049] VD-03型模拟式解码器10,100,1000mm/s/V三档速度量程

[0050] VD-07型数字式解码器七档速度量程

[0051] 2. 频率范围:0-1MHz

[0052] 3. 扫描点数:1到512X512点

[0053] 4. FFT:6400线,扫描过程中,所有点的振动以频谱方式逐点存储

[0054] 5. 激光功率:1mW,激光自动聚焦

[0055] 6. 测量距离:0.53米到大于50米(视目标反射特性而定)

[0056] 7. 最小振动分辨率:0.1μm/s(每Hz带宽上)

[0057] 下面以20号点(后面的3809个点是指在这一点采集到的3809个振动信号)。为例子,计算超声波在该点的传播速度。数据采集以0.2微秒为间隔,共采集3809个点(如表1所示),绘制成振幅-时间曲线(如图4所示)。

[0058] 超声波速度的计算

[0059] 从图4中拾取超声波初至时刻T,具体的方法为:在图中找到第一个波峰(波谷)与时间轴的交叉点,其时间值即为超声波的初至时刻T。该实例中,T的值为15.9微秒。

[0060] 得到T后,根据公式:速度=长度/时间,计算出超声波穿透样品的时间,实例中的速度(V)为

[0061] $V = 0.054\text{m}/0.0000159\text{s} = 3396.2\text{m/s}$

[0062] 试件的长度是采用激光测距仪测量得到的。

[0063] 本发明是一种新的岩芯超声波速度计算方法。该方法利用激光测振技术扫描岩芯,采集超声波穿过岩芯后的波形数据,在波形曲线上拾取声波初至时刻,计算得到超声波在岩芯中的传播速度。相对于现有的岩芯超声波速度测试方法,本发明无需对岩芯进行破坏性处理,能够实现对样品任意位置的超声波速度测试,检测点的尺度能够达到微米级,检测结果能够从多角度和更小尺度来反映岩石的各向异性。

[0064] 上述技术方案只是本发明的一种实施方式,对于本领域内的技术人员而言,在本发明公开了应用方法和原理的基础上,很容易做出各种类型的改进或变形,而不仅限于本发明上述具体实施方式所描述的方法,因此前面描述的方式只是优选的,而并不具有限制性的意义。

[0065]

T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
1.00E-07	0.00512695	8.30E-06	0.0065918	1.65E-05	0.00756836	2.47E-05	-0.0083008
3.00E-07	0.00561523	8.50E-06	0.00708008	1.67E-05	0.00732422	2.49E-05	-0.0114746
4.00E-07	0.00512695	8.60E-06	0.0065918	1.69E-05	0.00708008	2.51E-05	-0.0131836
6.00E-07	0.00585938	8.80E-06	0.0065918	1.70E-05	0.00634766	2.53E-05	-0.0136719
8.00E-07	0.00512695	9.00E-06	0.00561523	1.72E-05	0.00610352	2.54E-05	-0.0151367

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1.00E-06	0.00512695	9.20E-06	0.00610352	1.74E-05	0.00585938	2.56E-05	-0.0158691
1.20E-06	0.00537109	9.40E-06	0.00585938	1.76E-05	0.00585938	2.58E-05	-0.017334
1.40E-06	0.00537109	9.60E-06	0.00634766	1.78E-05	0.00561523	2.60E-05	-0.0185547
1.60E-06	0.00488281	9.80E-06	0.00561523	1.80E-05	0.00512695	2.62E-05	-0.0200195
1.80E-06	0.00512695	1.00E-05	0.00610352	1.82E-05	0.00415039	2.64E-05	-0.0209961
2.00E-06	0.00537109	1.02E-05	0.00585938	1.84E-05	0.00463867	2.66E-05	-0.0227051
2.20E-06	0.00512695	1.04E-05	0.00512695	1.86E-05	0.00415039	2.68E-05	-0.0236816
2.40E-06	0.0065918	1.06E-05	0.00488281	1.88E-05	0.00390625	2.70E-05	-0.0253906
2.60E-06	0.00610352	1.08E-05	0.00463867	1.90E-05	0.00415039	2.72E-05	-0.0263672

2. 80E-06	0. 00634766	1. 10E-05	0. 00415039	1. 92E-05	0. 00366211	2. 74E-05	-0. 027832
3. 00E-06	0. 00683594	1. 12E-05	0. 00463867	1. 94E-05	0. 00317383	2. 76E-05	-0. 0300293
3. 20E-06	0. 00634766	1. 14E-05	0. 00463867	1. 96E-05	0. 00268555	2. 78E-05	-0. 03125
3. 40E-06	0. 0065918	1. 16E-05	0. 00463867	1. 98E-05	0. 00219727	2. 80E-05	-0. 0332031
3. 60E-06	0. 00683594	1. 18E-05	0. 00463867	2. 00E-05	0. 00170898	2. 82E-05	-0. 0349121
3. 80E-06	0. 00683594	1. 20E-05	0. 00390625	2. 02E-05	0. 00170898	2. 84E-05	-0. 036377
4. 00E-06	0. 0065918	1. 22E-05	0. 00415039	2. 04E-05	0. 0012207	2. 86E-05	-0. 0375977
4. 20E-06	0. 0065918	1. 24E-05	0. 00439453	2. 06E-05	0. 00097656	2. 88E-05	-0. 0385742
4. 40E-06	0. 0065918	1. 26E-05	0. 00415039	2. 08E-05	0. 00073242	2. 90E-05	-0. 0400391
4. 50E-06	0. 00683594	1. 28E-05	0. 00390625	2. 10E-05	0. 00048828	2. 92E-05	-0. 0395508
4. 70E-06	0. 0065918	1. 29E-05	0. 00439453	2. 11E-05	0. 00170898	2. 94E-05	-0. 0412598
4. 90E-06	0. 00610352	1. 31E-05	0. 00415039	2. 13E-05	0. 0012207	2. 95E-05	-0. 0437012
5. 10E-06	0. 00610352	1. 33E-05	0. 00463867	2. 15E-05	0. 00048828	2. 97E-05	-0. 0456543
5. 30E-06	0. 00561523	1. 35E-05	0. 00585938	2. 17E-05	0. 00048828	2. 99E-05	-0. 0473633
5. 50E-06	0. 00488281	1. 37E-05	0. 00634766	2. 19E-05	-0. 0002441	3. 01E-05	-0. 0493164
5. 70E-06	0. 00463867	1. 39E-05	0. 00756836	2. 21E-05	-0. 0009766	3. 03E-05	-0. 0507813
5. 90E_06	0. 00439453	1. 41E-05	0. 0078125	2. 23E-05	-0. 0009766	3. 05E-05	-0. 0522461
6. 10E-06	0. 00463867	1. 43E-05	0. 00830078	2. 25E-05	-0. 0009766	3. 07E-05	-0. 0537109
6. 30E-06	0. 00463867	1. 45E-05	0. 00732422	2. 27E-05	-0. 0019531	3. 09E-05	-0. 0554199
6. 50E-06	0. 00463867	1. 47E-05	0. 00805664	2. 29E-05	-0. 001709	3. 11E-05	-0. 0566406
6. 70E-06	0. 00512695	1. 49E-05	0. 00732422	2. 31E-05	-0. 0026855	3.13E-05	-0. 0568848
6. 90E-06	0. 00610352	1. 51E-05	0. 00830078	2. 33E-05	-0. 0026855	3. 15E-05	-0. 0568848
7. 10E-06	0. 00610352	1. 53E-05	0. 00854492	2. 35E-05	-0. 0031738	3. 17E-05	-0. 0585938
7. 30E-06	0. 00537109	1. 55E-05	0. 00854492	2. 37E-05	-0. 0036621	3.19E-05	-0. 0595703

7.50E-06	0.00561523	1.57E-05	0.00854492	2.39E-05	-0.0043945	3.21E-05	-0.0612793
7.70E-06	0.00561523	1.59E-05	0.00878906	2.41E-05	-0.0056152	3.23E-05	-0.0622559
7.90E-06	0.00585938	1.61E-05	0.00854492	2.43E-05	-0.0058594	3.25E-05	-0.0639648
8.10E-06	0.0065918	1.63E-05	0.00805664	2.45E-05	-0.0068359	3.27E-05	-0.0632324
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
3.29E-05	-0.0649414	4.13E-05	-0.0705566	4.9664E-05	-0.0356445	5.8063E-05	0.03686523
3.31E-05	-0.067627	4.15E-05	-0.0698242	4.9859E-05	-0.0339356	5.8258E-05	0.03686523
3.33E-05	-0.0693359	4.17E-05	-0.0693359	5.0055E-05	-0.0324707	5.8453E-05	0.03686523
3.35E-05	-0.0708008	4.19E-05	-0.0690918	0.00005025	-0.0307617	5.8648E-05	0.03710938
3.36E-05	-0.0720215	4.20E-05	-0.0678711	5.0445E-05	-0.0292969	5.8844E-05	0.03710938
3.38E-05	-0.0734863	4.22E-05	-0.0681152	5.0641E-05	-0.0280762	5.9039E-05	0.03637695
3.40E-05	-0.0744629	4.24E-05	-0.0671387	5.0836E-05	-0.0270996	5.9234E-05	0.03564453
3.42E-05	-0.074707	4.26E-05	-0.0668945	5.1031E-05	-0.0251465	0.00005943	0.03515625
3.44E-05	-0.0759277	4.28E-05	-0.0656738	5.1227E-05	-0.0231934	5.9625E-05	0.03466797
3.46E-05	-0.0769043	4.30E-05	-0.0656738	5.1422E-05	-0.020752	0.00005982	0.03344727
3.48E-05	-0.0778809	4.32E-05	-0.0654297	5.1617E-05	-0.0192871	6.0016E-05	0.0324707
3.50E-05	-0.078125	4.34E-05	-0.0646973	5.1813E-05	-0.017334	6.0211E-05	0.03149414
3.52E-05	-0.0788574	4.36E-05	-0.0639648	5.2008E-05	-0.015625	6.0406E-05	0.02978516

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3.54E-05	-0.0791016	4.38E-05	-0.0632324	5.2203E-05	0.0131836	6.0602E-05	0.02832031
3.56E-05	-0.079834	0.000044	-0.0622559	5.2398E-05	0.0114746	6.0797E-05	0.02709961
3.58E-05	-0.0795898	4.4195E-05	-0.0620117	5.2594E-05	0.0087891	6.0992E-05	0.02563477
3.60E-05	-0.079834	4.4391E-05	-0.0610352	5.2789E-05	0.0070801	6.1188E-05	0.02416992
3.62E-05	-0.0800781	4.4586E-05	-0.060791	5.2984E-05	0.0048828	6.1383E-05	0.0222168
3.64E-05	-0.0800781	4.4781E-05	-0.0600586	0.00005318	0.001709	6.1578E-05	0.02026367
3.66E-05	-0.0800781	4.4977E-05	-0.0598145	5.3375E-05	0.00024414	6.1773E-05	0.01831055
3.68E-05	-0.0800781	4.5172E-05	-0.059082	0.00005357	0.00244141	6.1969E-05	0.015625
3.70E-05	-0.0808106	4.5367E-05	-0.0588379	5.3766E-05	0.00512695	6.2164E-05	0.01367188
3.72E-05	-0.079834	4.5563E-05	-0.0563965	5.3961E-05	0.00732422	6.2359E-05	0.01171875
3.74E-05	-0.0793457	4.5758E-05	-0.0551758	5.4156E-05	0.00952148	6.2555E-05	0.00952148
3.76E-05	-0.0788574	4.5953E-05	-0.0541992	5.4352E-05	0.01196289	0.00006275	0.00732422
3.78E-05	-0.0771484	4.6148E-05	-0.0556641	5.4547E-05	0.0144043	6.2945E-05	0.00537109
3.79E-05	-0.076416	4.6344E-05	-0.0546875	5.4742E-05	0.01708984	6.3141E-05	0.00195313
3.81E-05	-0.0751953	4.6539E-05	-0.0522461	5.4938E-05	0.01953125	6.3336E-05	0.00024414

3. 83E-05	-0. 0749512	4. 6734E-05	-0. 0512695	5. 5133E-05	0. 02050781	6. 3531E-05	-0. 001709
3. 85E-05	-0. 0734863	0. 00004693	-0. 0505371	5. 5328E-05	0. 02246094	6. 3727E-05	-0. 0039063
3. 87E-05	-0. 0729981	4. 7125E-05	-0. 0493164	5. 5523E-05	0. 02416992	6. 3922E-05	-0. 0061035
3. 89E-05	-0. 0727539	0. 00004732	-0. 048584	5. 5719E-05	0. 02612305	6. 4117E-05	-0. 0083008
3. 91E-05	-0. 0732422	4. 7516E-05	-0. 0478516	5. 5914E-05	0. 02734375	6. 4313E-05	-0. 0104981
3. 93E-05	-0. 0722656	4. 7711E-05	-0. 0466309	5. 6109E-05	0. 02929688	6. 4508E-05	-0. 013916
3. 95E-05	-0. 0720215	4. 7906E-05	-0. 0456543	5. 6305E-05	0. 03051758	6. 4703E-05	-0. 0146484
3. 97E-05	-0. 0720215	4. 8102E-05	-0. 0439453	0. 0000565	0. 03149414	6. 4898E-05	-0. 0166016
3. 99E-05	-0. 0720215	4. 8297E-05	-0. 0432129	5. 6695E-05	0. 03198242	6. 5094E-05	-0. 0195313
4. 01E-05	-0. 0717773	4. 8492E-05	-0. 0422363	5. 6891E-05	0. 03344727	6. 5289E-05	-0. 0222168
4. 03E-05	-0. 0729981	4. 8688E-05	-0. 0410156	5. 7086E-05	0. 03369141	6. 5484E-05	-0. 0249023
4. 05E-05	-0. 0720215	4. 8883E-05	-0. 0400391	5. 7281E-05	0. 03442383	0. 00006568	-0. 0290527
4. 07E-05	-0. 0722656	4. 9078E-05	-0. 0383301	5. 7477E-05	0. 03540039	6. 5875E-05	-0. 0322266
4. 09E-05	-0. 0710449	4. 9273E-05	-0. 037841 8	5. 7672E-05	0. 03613281	0. 00006607	-0. 034668
4. 11E-05	-0. 0705566	4. 9469E-05	-0. 036377	5. 7867E-05	0. 03637695	6. 6266E-05	-0. 0368652

T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
6.6461E-05	-0.0400391	7.4859E-05	-0.0258789	8.3258E-05	0.0012207	9.1656E-05	0.08422852		
6.6656E-05	-0.0424805	7.5055E-05	-0.0239258	8.3453E-05	0.00073242	9.1852E-05	0.08813477		
6.6852E-05	-0.0449219	0.00007525	-0.020752	8.3648E-05	0	9.20471-05	0.09179688		
6.7047E-05	-0.0446777	7.5445E-05	-0.019043	8.3844E-05	-0.0004883	9.2242E-05	0.09643555		
6.7242E-05	-0.0473633	7.5641E-05	-0.0158691	8.4039E-05	-0.0007324	9.2438E-05	0.1010742		
6.7438E-05	-0.0490723	7.5836E-05	-0.013916	8.4234E-05	-0.0012207	9.2633E-05	0.1057129		
6.7633E-05	-0.0512695	7.6031E-05	-0.0112305	0.00008443	-0.0014648	9.2828E-05	0.1101074		
6.7828E-05	-0.0529785	7.6227E-05	-0.0090332	8.4625E-05	-0.0012207	9.3023E-05	0.1140137		
6.8023E-05	-0.0551758	7.6422E-05	-0.0073242	0.00008482	-0.0019531	9.3219E-05	0.1184082		
6.8219E-05	-0.0563965	7.6617E-05	-0.0061035	8.5016E-05	-0.001709	9.3414E-05	0.1220703		
6.8414E-05	-0.0581055	7.6813E-05	-0.003418	8.5211E-05	-0.0009766	9.3609E-05	0.1271973		
6.8609E-05	-0.0593262	7.7008E-05	-0.0014648	8.5406E-05	-0.0004883	9.3805E-05	0.1320801		
6.8805E-05	-0.0605469	7.7203E-05	0.00048828	8.5602E-05	0.00048828	0.000094	0.1367188		
0.000069	-0.0612793	7.7398E-05	0.00244141	8.5797E-05	0.00097656	9.4195E-05	0.140625		

6.9195E-05	-0.0622559	7.7594E-05	0.00439453	8.5992E-05	0.00195313	9.4391E-05	0.1455078
6.9391E-05	-0.0634766	7.7789E-05	0.00585938	8.6188E-05	0.00317383	9.4586E-05	0.1501465
6.9586E-05	-0.0632324	7.7984E-05	0.00756836	8.6383E-05	0.00463867	9.4781E-05	0.1547852
6.9781E-05	-0.0632324	0.00007818	0.0878906	8.6578E-05	0.0065918	9.4977E-05	0.1589355
6.9977E-05	-0.0629883	7.8375E-05	0.01025391	8.6773E-05	0.00927734	9.5172E-05	0.1640625
7.0172E-05	-0.0627441	0.00007857	0.01171875	8.6969E-05	0.01098633	9.5367E-05	0.168457

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7.0367E-05	-0.0622559	7.8766E-05	0.01269531	8.7164E-05	0.01269531	9.5563E-05	0.1738281
7.0563E-05	-0.0617676	7.8961E-05	0.01367188	8.7359E-05	0.01464844	9.5758E-05	0.1779785
7.0758E-05	-0.0617676	7.9156E-05	0.0144043	8.7555E-05	0.01660156	9.5953E-05	0.1826172
7.0953E-05	-0.0603027	7.9352E-05	0.01489258	0.00008775	0.01855469	9.6148E-05	0.1865234
7.1148E-05	-0.0593262	7.9547E-05	0.01538086	8.7945E-05	0.02050781	9.6344E-05	0.1916504
7.1344E-05	-0.0585938	7.9742E-05	0.01538086	8.8141E-05	0.02392578	9.6539E-05	0.1953125
7.1539E-05	-0.0576172	7.9938E-05	0.01538086	8.8336E-05	0.02587891	9.6734E-05	0.199707
7.1734E-05	-0.0563965	8.0133E-05	0.01513672	8.8531E-05	0.02880859	0.00009693	0.2045898
0.00007193	-0.0556641	8.0328E-05	0.01464844	8.8727E-05	0.03149414	9.7125E-05	0.2084961
7.2125E-05	-0.0539551	8.0523E-05	0.0144043	8.8922E-05	0.03466797	0.00009732	0.2124023
0.00007232	-0.0524902	8.0719E-05	0.01342773	8.9117E-05	0.03710938	9.7516E-05	0.2165527
7.2516E-05	-0.0510254	8.0914E-05	0.01342773	8.9313E-05	0.0402832	9.7711E-05	0.2194824
7.2711E-05	-0.0498047	8.1109E-05	0.01269531	8.9508E-05	0.04370117	9.7906E-05	0.2224121
7.2906E-05	-0.0480957	8.1305E-05	0.01147461	8.9703E-05	0.04711914	9.8102E-05	0.2253418
7.3102E-05	-0.0454102	0.0000815	0.01098633	8.9898E-05	0.05029297	9.8297E-05	0.2280273

7.3297E-05	-0.0432129	8.1695E-05	0.00976563	9.0094E-05	0.05371094	9.8492E-05	0.2302246
7.3492E-05	-0.0415039	8.1891E-05	0.0090332	9.0289E-05	0.05712891	9.8688E-05	0.232666
7.3688E-05	-0.0393066	8.2086E-05	0.00756836	9.0484E-05	0.0612793	9.8883E-05	0.2348633
7.3883E-05	-0.0371094	8.2281E-05	0.00683594	0.00009068	0.06469727	9.9078E-05	0.2380371
7.4078E-05	-0.03349121	8.2477E-05	0.00585938	9.0875E-05	0.06811523	9.9273E-05	0.2399902
7.4273E-05	-0.0332031	8.2672E-05	0.00439453	0.00009107	0.07202148	9.9469E-05	0.2421875
7.4469E-05	-0.0307617	8.2867E-05	0.00292969	9.1266E-05	0.07617188	9.9664E-05	0.2446289
7.4664E-05	-0.0283203	8.3063E-05	0.00244141	9.1461E-05	0.08056641	9.9859E-05	0.2463379
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00010006	0.2492676	0.00010845	0.1582031	0.00011685	-0.0969238	0.00012525	-0.0112305
0.00010025	0.2502441	0.00010865	0.1518555	0.00011705	-0.1005859	0.00012545	-0.0053711
0.00010045	0.2519531	0.00010884	0.1452637	0.00011724	-0.1040039	0.00012564	0.00073242
0.00010064	0.2541504	0.00010904	0.138916	0.00011744	-0.1074219	0.00012584	0.00683594
0.00010084	0.255127	0.00010923	0.1308594	0.00011763	-0.1120605	0.00012603	0.01293945
0.00010103	0.2570801	0.00010943	0.1242676	0.00011783	-0.1152344	0.00012623	0.01855469

0.00010123	0.2580566	0.00010963	0.1191406	0.00011802	-0.1174316	0.00012642	0.02441406
0.00010142	0.2592773	0.00010982	0.1132813	0.00011822	-0.1191406	0.00012662	0.02978516
0.00010162	0.2595215	0.00011002	0.1066895	0.00011841	-0.1213379	0.00012681	0.03540039
0.00010181	0.2609863	0.00011021	0.09985352	0.00011861	-0.1220703	0.00012701	0.04077148
0.00010201	0.2617188	0.00011041	0.09301758	0.00011881	-0.1242676	0.0001272	0.046875
0.0001022	0.2629395	0.0001106	0.08618164	0.000119	-0.1252441	0.0001274	0.05200195
0.0001024	0.2631836	0.0001108	0.07958984	0.0001192	-0.1259766	0.00012759	0.05664063
0.00010259	0.2636719	0.00011099	0.07250977	0.00011939	-0.1264648	0.00012779	0.06152344
0.00010279	0.2646484	0.00011119	0.06616211	0.00011959	-0.1269531	0.00012798	0.06713867
0.00010298	0.2644043	0.00011138	0.05908203	0.00011978	-0.1264648	0.00012818	0.0715332
0.00010318	0.2641602	0.00011158	0.05273438	0.00011998	-0.1254883	0.00012838	0.07592773
0.00010338	0.2636719	0.00011177	0.04663086	0.00012017	-0.1240234	0.00012857	0.08007813
0.00010357	0.2624512	0.00011197	0.04052734	0.00012037	-0.1230469	0.00012877	0.08422852
0.00010377	0.2612305	0.00011216	0.03369141	0.00012056	-0.1208496	0.00012896	0.08691406
0.00010396	0.2600098	0.00011236	0.02709961	0.00012076	-0.1191406	0.00012916	0.09082031

0.00010416	0.2587891	0.00011256	0.02124023	0.00012095	-0.1162109	0.00012935	0.09350586
0.00010435	0.2573242	0.00011275	0.01538086	0.00012115	-0.1135254	0.00012955	0.09594727
0.00010455	0.2558594	0.00011295	0.00927734	0.00012134	-0.1113281	0.00012974	0.09838867
0.00010474	0.2531738	0.00011314	0.00341797	0.00012154	-0.1088867	0.00012994	0.1003418
0.00010494	0.2504883	0.00011334	-0.0031738	0.00012173	-0.1057129	0.00013013	0.1022949
0.00010513	0.2470703	0.00011353	-0.0090332	0.00012193	-0.1022949	0.00013033	0.1037598

[0069]

0.00010533	0.2436523	0.00011373	-0.0153809	0.00012213	-0.0986328	0.00013052	0.1044922
0.00010552	0.2399902	0.00011392	-0.0214844	0.00012232	-0.0944824	0.00013072	0.1040039

0.00010572	0.236084	0.00011412	-0.0273438	0.00012252	-0.0900879	0.00013091	0.1035156
0.00010591	0.2319336	0.00011431	-0.0319824	0.00012271	-0.0849609	0.00013111	0.1052246
0.00010611	0.2275391	0.00011451	-0.0380859	0.00012291	-0.0803223	0.00013131	0.1049805
0.00010631	0.2226563	0.0001147	-0.0432129	0.0001231	-0.0751953	0.0001315	0.1044922
0.0001065	0.2177734	0.0001149	-0.0493164	0.0001233	-0.0700684	0.0001317	0.1040039
0.0001067	0.2124023	0.00011509	-0.0546875	0.00012349	-0.0644531	0.00013189	0.1030273
0.00010689	0.2072754	0.00011529	-0.0600586	0.00012369	-0.0583496	0.00013209	0.1020508
0.00010709	0.2016602	0.00011548	-0.0649414	0.00012388	-0.0527344	0.00013228	0.09985352
0.00010728	0.1958008	0.00011568	-0.0698242	0.00012408	-0.0476074	0.00013248	0.09765625
0.00010748	0.1899414	0.00011588	-0.0749512	0.00012427	-0.0419922	0.00013267	0.09594727
0.00010767	0.1838379	0.00011607	-0.079834	0.00012447	-0.0354004	0.00013287	0.09326172
0.00010787	0.1774902	0.00011627	-0.0839844	0.00012466	-0.0297852	0.00013306	0.09057617
0.00010806	0.1713867	0.00011646	-0.0888672	0.00012486	-0.0234375	0.00013326	0.08764648
0.00010826	0.1645508	0.00011666	-0.0925293	0.00012506	-0.0175781	0.00013345	0.0847168
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00013365	0.08129883	0.00014205	0.01611328	0.00015045	-0.1481934	0.00015884	0.01147461
0.00013384	0.07739258	0.00014224	0.01708984	0.00015064	-0.1516113	0.00015904	0.01831055
0.00013404	0.07397461	0.00014244	0.01708984	0.00015084	-0.1550293	0.00015923	0.02441406
0.00013423	0.07006836	0.00014263	0.01782227	0.00015103	-0.1574707	0.00015943	0.03149414
0.00013443	0.06591797	0.00014283	0.01904297	0.00015123	-0.1604004	0.00015963	0.03808594
0.00013463	0.06201172	0.00014302	0.01928711	0.00015142	-0.1625977	0.00015982	0.04418945
0.00013482	0.05810547	0.00014322	0.01904297	0.00015162	-0.1647949	0.00016002	0.05102539
0.00013502	0.05419922	0.00014341	0.01733398	0.00015181	-0.166748	0.00016021	0.05712891
0.00013521	0.05029297	0.00014361	0.01611328	0.00015201	-0.1677246	0.00016041	0.0637207

0.00013541	0.04638672	0.00014381	0.01367188	0.0001522	-0.168457	0.0001606	0.07128906
0.0001356	0.04223633	0.000144	0.01171875	0.0001524	-0.1689453	0.0001608	0.07714844
0.0001358	0.03833008	0.0001442	0.00952148	0.00015259	-0.1682129	0.00016099	0.08251953
0.00013599	0.03515625	0.00014439	0.00708008	0.00015279	-0.1669922	0.00016119	0.08911133
0.00013619	0.03173828	0.00014459	0.00463867	0.00015298	-0.1650391	0.00016138	0.09472656
0.00013638	0.02832031	0.00014478	0.0012207	0.00015318	-0.1633301	0.00016158	0.09936523
0.00013658	0.0246582	0.00014498	-0.0019531	0.00015338	-0.1608887	0.00016177	0.1044922
0.00013677	0.02172852	0.00014517	-0.0056152	0.00015357	-0.1574707	0.00016197	0.1083984
0.00013697	0.01953125	0.00014537	-0.0102539	0.00015377	-0.1547852	0.00016216	0.1130371
0.00013716	0.0168457	0.00014556	-0.0148926	0.00015396	-0.1508789	0.00016236	0.1174316
0.00013736	0.01464844	0.00014576	-0.0192871	0.00015416	-0.1469727	0.00016256	0.1210938
0.00013756	0.01269531	0.00014595	-0.0241699	0.00015435	-0.1420898	0.00016275	0.1245117
0.00013775	0.01196289	0.00014615	-0.0288086	0.00015455	-0.1369629	0.00016295	0.1276855
0.00013795	0.01049805	0.00014634	-0.0336914	0.00015474	-0.1318359	0.00016314	0.1315918
0.00013814	0.00854492	0.00014654	-0.0388184	0.00015494	-0.1259766	0.00016334	0.1340332
0.00013834	0.00927734	0.00014673	-0.0439453	0.00015513	-0.1201172	0.00016353	0.1364746
0.00013853	0.00854492	0.00014693	-0.0498047	0.00015533	-0.114502	0.00016373	0.138916
0.00013873	0.00732422	0.00014713	-0.0556641	0.00015552	-0.1079102	0.00016392	0.1413574
0.00013892	0.00708008	0.00014732	-0.060791	0.00015572	-0.1015625	0.00016412	0.1430664
0.00013912	0.0065918	0.00014752	-0.0664063	0.00015591	-0.0961914	0.00016431	0.1442871
0.00013931	0.00708008	0.00014771	-0.0727539	0.00015611	-0.0888672	0.00016451	0.1445313
0.00013951	0.00732422	0.00014791	-0.0786133	0.00015631	-0.0820313	0.0001647	0.1452637
0.0001397	0.00708008	0.0001481	-0.0854492	0.0001565	-0.074707	0.0001649	0.1455078
0.0001399	0.00756836	0.0001483	-0.0910645	0.0001567	-0.0671387	0.00016509	0.1455078

0.00014009	0.01025391	0.00014849	-0.0969238	0.00015689	-0.0598145	0.00016529	0.1455078
0.00014029	0.01123047	0.00014869	-0.1027832	0.00015709	-0.0527344	0.00016548	0.145752
0.00014048	0.01245117	0.00014888	-0.109375	0.00015728	-0.045166	0.00016568	0.144043
0.00014068	0.01318359	0.00014908	-0.114502	0.00015748	-0.0383301	0.00016588	0.1430664
0.00014088	0.01416016	0.00014927	-0.1196289	0.00015767	-0.0307617	0.00016607	0.1413574
0.00014107	0.01513672	0.00014947	-0.1252441	0.00015787	-0.0231934	0.00016627	0.1396484
0.00014127	0.01611328	0.00014966	-0.1303711	0.00015806	-0.0163574	0.00016646	0.137207
0.00014146	0.01708984	0.00014986	-0.135498	0.00015826	-0.0085449	0.00016666	0.1342773
0.00014166	0.01708984	0.00015006	-0.1398926	0.00015845	-0.0009766	0.00016685	0.1313477
0.00014185	0.01635742	0.00015025	-0.144043	0.00015865	0.00463867	0.00016705	0.1289063
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00016724	0.126709	0.00017564	-0.0141602	0.00018404	-0.0302734	0.00019244	0.04443359
0.00016744	0.1237793	0.00017584	-0.0151367	0.00018423	-0.0319824	0.00019263	0.04882813
0.00016763	0.1193848	0.00017603	-0.0170898	0.00018443	-0.0334473	0.00019283	0.05371094
0.00016783	0.1164551	0.00017623	-0.0187988	0.00018463	-0.0351563	0.00019302	0.05883789
0.00016802	0.1132813	0.00017642	-0.0195313	0.00018482	-0.0366211	0.00019322	0.06323242
0.00016822	0.1101074	0.00017662	-0.0205078	0.00018502	-0.0368652	0.00019341	0.06787109
0.00016841	0.105957	0.00017681	-0.020752	0.00018521	-0.0378418	0.00019361	0.07177734
0.00016861	0.1027832	0.00017701	-0.0212402	0.00018541	-0.0388184	0.00019381	0.07568359
0.00016881	0.09960938	0.0001772	-0.0214844	0.0001856	-0.0405273	0.000194	0.08007813
0.000169	0.09545898	0.0001774	-0.0214844	0.0001858	-0.0419922	0.0001942	0.08325195
0.0001692	0.09228516	0.00017759	-0.0214844	0.00018599	-0.0427246	0.00019439	0.08764648
0.00016939	0.08886719	0.00017779	-0.0212402	0.00018619	-0.0429688	0.00019459	0.09106445
0.00016959	0.08520508	0.00017798	-0.0202637	0.00018638	-0.0444336	0.00019478	0.09375

0.00016978	0.08227539	0.00017818	-0.0200195	0.00018658	-0.0439453	0.00019498	0.09643555
0.00016998	0.07910156	0.00017838	-0.0187988	0.00018677	-0.043457	0.00019517	0.09838867
0.00017017	0.07592773	0.00017857	-0.017334	0.00018697	-0.043457	0.00019537	0.1010742
0.00017037	0.07275391	0.00017877	-0.0163574	0.00018716	-0.043457	0.00019556	0.1018066
0.00017056	0.06884766	0.00017896	-0.015625	0.00018736	-0.0429688	0.00019576	0.1030273
0.00017076	0.06469727	0.00017916	-0.013916	0.00018756	-0.0427246	0.00019595	0.1027832
0.00017095	0.06152344	0.00017935	-0.0134277	0.00018775	-0.0405273	0.00019615	0.1025391
0.00017115	0.05810547	0.00017955	-0.0126953	0.00018795	-0.0400391	0.00019634	0.1020508
0.00017134	0.0546875	0.00017974	-0.012207	0.00018814	-0.0385742	0.00019654	0.1010742
0.00017154	0.05102539	0.00017994	-0.0109863	0.00018834	-0.0373535	0.00019673	0.1000977
0.00017173	0.04736328	0.00018013	-0.0100098	0.00018853	-0.0354004	0.00019693	0.09863281
0.00017193	0.04394531	0.00018033	-0.0100098	0.00018873	-0.0332031	0.00019713	0.09594727
0.00017213	0.04052734	0.00018052	-0.0097656	0.00018892	-0.0314941	0.00019732	0.09326172
0.00017232	0.03710938	0.00018072	-0.0095215	0.00018912	-0.0288086	0.00019752	0.09057617
0.00017252	0.03295898	0.00018091	-0.0095215	0.00018931	-0.0258789	0.00019771	0.08666992
0.00017271	0.02905273	0.00018111	-0.0097656	0.00018951	-0.0227051	0.00019791	0.08251953
0.00017291	0.02539063	0.00018131	-0.0090332	0.0001897	-0.0192871	0.0001981	0.078125
0.0001731	0.02172852	0.0001815	-0.0095215	0.0001899	-0.0153809	0.0001983	0.07348633
0.0001733	0.01806641	0.0001817	-0.0104981	0.00019009	-0.0109863	0.00019849	0.06835938
0.00017349	0.01464844	0.00018189	-0.0117188	0.00019029	-0.0070801	0.00019869	0.0625
0.00017369	0.01123047	0.00018209	-0.0126953	0.00019048	-0.0021973	0.00019888	0.05664063
0.00017388	0.00732422	0.00018228	-0.0141602	0.00019068	0.0012207	0.00019908	0.04858398
0.00017408	0.00415039	0.00018248	-0.0153809	0.00019088	0.00634766	0.00019927	0.04199219
0.00017427	0.0012207	0.00018267	-0.0166016	0.00019107	0.01123047	0.00019947	0.03515625

0.00017447	-0.0009766	0.00018287	-0.0185547	0.00019127	0.015625	0.00019966	0.02807617
0.00017466	-0.0036621	0.00018306	-0.0200195	0.00019146	0.02050781	0.00019986	0.02148438
0.00017486	-0.0063477	0.00018326	-0.0222168	0.00019166	0.02514648	0.00020006	0.01416016
0.00017506	-0.0087891	0.00018345	-0.0244141	0.00019185	0.02954102	0.00020025	0.00708008

[0070]

0.00017525	-0.0109863	0.00018365	-0.0263672	0.00019205	0.03491211	0.00020045	-0.001709
0.00017545	-0.0129395	0.00018384	-0.027832	0.00019224	0.0390625	0.00020064	-0.0100098
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00020084	-0.0170898	0.00020923	-0.1604004	0.00021763	0.05175781	0.00022603	0.08959961
0.00020103	-0.0234375	0.00020943	-0.1569824	0.00021783	0.05444336	0.00022623	0.08764648
0.00020123	-0.0307617	0.00020963	-0.1525879	0.00021802	0.05712891	0.00022642	0.0859375
0.00020142	-0.0383301	0.00020982	-0.1481934	0.00021822	0.06005859	0.00022662	0.0847168
0.00020162	-0.0456543	0.00021002	-0.1433105	0.00021841	0.06274414	0.00022681	0.08300781
0.00020181	-0.0512695	0.00021021	-0.1376953	0.00021861	0.06567383	0.00022701	0.08178711
0.00020201	-0.059082	0.00021041	-0.1320801	0.00021881	0.06787109	0.0002272	0.08056641
0.0002022	-0.0671387	0.0002106	-0.1262207	0.000219	0.07006836	0.0002274	0.07910156
0.0002024	-0.0744629	0.0002108	-0.119873	0.0002192	0.07226563	0.00022759	0.07739258
0.00020259	-0.0817871	0.00021099	-0.1140137	0.00021939	0.07470703	0.00022779	0.07543945
0.00020279	-0.0891113	0.00021119	-0.1079102	0.00021959	0.07739258	0.00022798	0.07397461
0.00020298	-0.0959473	0.00021138	-0.1015625	0.00021978	0.0793457	0.00022818	0.07250977
0.00020318	-0.1030273	0.00021158	-0.0947266	0.00021998	0.08154297	0.00022838	0.07080078
0.00020338	-0.109375	0.00021177	-0.0891113	0.00022017	0.08349609	0.00022857	0.06884766
0.00020357	-0.1162109	0.00021197	-0.0834961	0.00022037	0.08496094	0.00022877	0.06787109
0.00020377	-0.1213379	0.00021216	-0.0791016	0.00022056	0.08642578	0.00022896	0.06665039
0.00020396	-0.126709	0.00021236	-0.0734863	0.00022076	0.08789063	0.00022916	0.06567383
0.00020416	-0.1320801	0.00021256	-0.0678711	0.00022095	0.08935547	0.00022935	0.06274414

0.00020435	-0.1369629	0.00021275	-0.0615234	0.00022115	0.09057617	0.00022955	0.06103516
0.00020455	-0.1411133	0.00021295	-0.0566406	0.00022134	0.09179688	0.00022974	0.05932617
0.00020474	-0.145752	0.00021314	-0.0512695	0.00022154	0.0925293	0.00022994	0.05834961
0.00020494	-0.1499023	0.00021334	-0.045166	0.00022173	0.09277344	0.00023013	0.05688477
0.00020513	-0.1535645	0.00021353	-0.0397949	0.00022193	0.09375	0.00023033	0.05664063
0.00020533	-0.1560059	0.00021373	-0.0344238	0.00022213	0.0949707	0.00023052	0.05493164
0.00020552	-0.1601563	0.00021392	-0.0288086	0.00022232	0.09594727	0.00023072	0.05371094
0.00020572	-0.1635742	0.00021412	-0.0236816	0.00022252	0.09716797	0.00023091	0.05249023
0.00020591	-0.1669922	0.00021431	-0.0183106	0.00022271	0.09814453	0.00023111	0.05151367
0.00020611	-0.1696777	0.00021451	-0.0129395	0.00022291	0.09838867	0.00023131	0.05029297
0.00020631	-0.1713867	0.0002147	-0.0065918	0.0002231	0.09838867	0.0002315	0.04980469
0.0002065	-0.1738281	0.0002149	-0.0024414	0.0002233	0.09863281	0.0002317	0.04931641
0.0002067	-0.1760254	0.00021509	0.00146484	0.00022349	0.09838867	0.00023189	0.04833984
0.00020689	-0.1772461	0.00021529	0.00585938	0.00022369	0.09838867	0.00023209	0.046875
0.00020709	-0.1791992	0.00021548	0.01049805	0.00022388	0.09790039	0.00023228	0.0456543
0.00020728	-0.1794434	0.00021568	0.01538086	0.00022408	0.09741211	0.00023248	0.04394531
0.00020748	-0.1796875	0.00021588	0.01977539	0.00022427	0.09716797	0.00023267	0.04272461
0.00020767	-0.1794434	0.00021607	0.02392578	0.00022447	0.09692383	0.00023287	0.04174805
0.00020787	-0.1789551	0.00021627	0.02783203	0.00022466	0.09594727	0.00023306	0.04003906
0.00020806	-0.177002	0.00021646	0.03173828	0.00022486	0.09545898	0.00023326	0.03857422
0.00020826	-0.1757813	0.00021666	0.03491211	0.00022506	0.09423828	0.00023345	0.0378418
0.00020845	-0.1730957	0.00021685	0.03881836	0.00022525	0.09350586	0.00023365	0.03637695
0.00020865	-0.1706543	0.00021705	0.04296875	0.00022545	0.09301758	0.00023384	0.03491211
0.00020884	-0.1677246	0.00021724	0.0456543	0.00022564	0.09179688	0.00023404	0.03344727
0.00020904	-0.1647949	0.00021744	0.04907227	0.00022584	0.09082031	0.00023423	0.03198242
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)

0.00023443	0.03076172	0.00024283	-0.0588379	0.00025123	-0.0419922	0.00025963	-0.0495606
0.00023463	0.02954102	0.00024302	-0.0581055	0.00025142	-0.043457	0.00025982	-0.0463867
0.00023482	0.02783203	0.00024322	-0.0571289	0.00025162	-0.045166	0.00026002	-0.043457
0.00023502	0.0261 2305	0.00024341	-0.0563965	0.00025181	-0.046875	0.00026021	-0.0402832

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0.00023521	0.02392578	0.00024361	-0.0554199	0.00025201	-0.0483398	0.00026041	-0.0358887
0.00023541	0.02172852	0.00024381	-0.0544434	0.0002522	-0.0505371	0.0002606	-0.0322266
0.0002356	0.01928711	0.000244	-0.0534668	0.0002524	-0.052002	0.0002608	-0.0283203
0.0002358	0.0168457	0.0002442	-0.0527344	0.00025259	-0.0541992	0.00026099	-0.0241699
0.00023599	0.01464844	0.00024439	-0.0512695	0.00025279	-0.0539551	0.00026119	-0.0202637
0.00023619	0.01147461	0.00024459	-0.0500488	0.00025298	-0.0554199	0.00026138	-0.0163574
0.00023638	0.00878906	0.00024478	-0.0493164	0.00025318	-0.0576172	0.00026158	-0.012207
0.00023658	0.00610352	0.00024498	-0.0478516	0.00025338	-0.0598145	0.00026177	-0.0085449
0.00023677	0.00317383	0.00024517	-0.0466309	0.00025357	-0.0620117	0.00026197	0.0041504
0.00023697	-0.0002441	0.00024537	-0.0449219	0.00025377	-0.0632324	0.00026216	0
0.00023716	-0.0036621	0.00024556	-0.043457	0.00025396	-0.0656738	0.00026236	0.00390625
0.00023736	-0.0068359	0.00024576	-0.0422363	0.00025416	-0.0678711	0.00026256	0.00830078
0.00023756	-0.0100098	0.00024595	-0.0390625	0.00025435	-0.0690918	0.00026275	0.01293945
0.00023775	-0.0134277	0.00024615	-0.0375977	0.00025455	-0.0705566	0.00026295	0.01635742
0.00023795	-0.0170898	0.00024634	-0.0358887	0.00025474	-0.0722656	0.00026314	0.02050781
0.00023814	-0.0192871	0.00024654	-0.0351563	0.00025494	-0.0739746	0.00026334	0.02441406
0.00023834	-0.0217285	0.00024673	-0.0334473	0.00025513	-0.0754395	0.00026353	0.02661133
0.00023853	-0.0249023	0.00024693	-0.0327148	0.00025533	-0.0766602	0.00026373	0.03076172
0.00023873	-0.0283203	0.00024713	-0.0314941	0.00025552	-0.0771484	0.00026392	0.03417969

0.00023892	-0.0317383	0.00024732	-0.0310059	0.00025572	-0.0783691	0.00026412	0.03710938
0.00023912	-0.0366211	0.00024752	-0.0300293	0.00025591	-0.0788574	0.00026431	0.0402832
0.00023931	-0.0388184	0.00024771	-0.0300293	0.00025611	-0.0793457	0.00026451	0.04321289
0.00023951	-0.0417481	0.00024791	-0.0292969	0.00025631	-0.0793457	0.0002647	0.04614258
0.0002397	-0.0437012	0.0002481	-0.0290527	0.0002565	-0.079834	0.0002649	0.04907227
0.0002399	-0.0466309	0.0002483	-0.0288086	0.0002567	-0.0793457	0.00026509	0.05175781
0.00024009	-0.0483398	0.00024849	-0.0288086	0.00025689	-0.0793457	0.00026529	0.0546875
0.00024029	-0.050293	0.00024869	-0.0288086	0.00025709	-0.0786133	0.00026548	0.05688477
0.00024048	-0.0534668	0.00024888	-0.029541	0.00025728	-0.0776367	0.00026568	0.05932617
0.00024068	-0.0541992	0.00024908	-0.029541	0.00025748	-0.0769043	0.00026588	0.06030273
0.00024088	-0.0554199	0.00024927	-0.0300293	0.00025767	-0.0751953	0.00026607	0.06176758
0.00024107	-0.0563965	0.00024947	-0.0302734	0.00025787	-0.0739746	0.00026627	0.06347656
0.00024127	-0.0576172	0.00024966	-0.0310059	0.00025806	-0.0725098	0.00026646	0.06469727
0.00024146	-0.0588379	0.00024986	-0.0314941	0.00025826	-0.0710449	0.00026666	0.06591797
0.00024166	-0.0588379	0.00025006	-0.0327148	0.00025845	-0.0686035	0.00026685	0.06762695
0.00024185	-0.0585938	0.00025025	-0.0339356	0.00025865	-0.0661621	0.00026705	0.06835938
0.00024205	-0.0593262	0.00025045	-0.0358887	0.00025884	-0.0634766	0.00026724	0.06958008
0.00024224	-0.059082	0.00025064	-0.0371094	0.00025904	-0.0603027	0.00026744	0.07080078
0.00024244	-0.0593262	0.00025084	-0.0390625	0.00025923	-0.0571289	0.00026763	0.07128906
0.00024263	-0.0593262	0.00025103	-0.0405273	0.00025943	-0.0544434	0.00026783	0.0715332
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00026802	0.07177734	0.00027642	-0.0268555	0.00028482	-0.0627441	0.00029322	0.01879883
0.00026822	0.0715332	0.00027662	-0.0305176	0.00028502	-0.0625	0.00029341	0.02246094
0.00026841	0.07128906	0.00027681	-0.0319824	0.00028521	-0.0625	0.00029361	0.02612305

0.00026861	0.07104492	0.00027701	-0.034668	0.00028541	-0.0617676	0.00029381	0.0300293
0.00026881	0.07055664	0.0002772	-0.0368652	0.0002856	-0.0617676	0.000294	0.03369141
0.000269	0.07080078	0.0002774	-0.0393066	0.0002858	-0.0610352	0.0002942	0.03808594
0.0002692	0.0703125	0.00027759	-0.0410156	0.00028599	-0.0605469	0.00029439	0.04223633
0.00026939	0.06958008	0.00027779	-0.0427246	0.00028619	-0.0598145	0.00029459	0.04638672
0.00026959	0.06835938	0.00027798	-0.0446777	0.00028638	-0.0595703	0.00029478	0.05004883
0.00026978	0.06762695	0.00027818	-0.0463867	0.00028658	-0.0588379	0.00029498	0.05322266
0.00026998	0.06542969	0.00027838	-0.0478516	0.00028677	-0.0578613	0.00029517	0.05688477

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0.00027017	0.06445313	0.00027857	-0.0490723	0.00028697	-0.0561523	0.00029537	0.06030273
0.00027037	0.06274414	0.00027877	-0.050293	0.00028716	-0.0551758	0.00029556	0.06396484
0.00027056	0.06103516	0.00027896	-0.0515137	0.00028736	-0.0544434	0.00029576	0.06689453
0.00027076	0.05932617	0.00027916	-0.0541992	0.00028756	-0.0532227	0.00029595	0.07104492
0.00027095	0.05761719	0.00027935	-0.0551758	0.00028775	-0.0515137	0.00029615	0.07446289
0.00027115	0.05664063	0.00027955	-0.0561523	0.00028795	-0.0500488	0.00029634	0.07763672
0.00027134	0.05395508	0.00027974	-0.0566406	0.00028814	-0.0478516	0.00029654	0.08081055
0.00027154	0.05151367	0.00027994	-0.0568848	0.00028834	-0.0466309	0.00029673	0.08300781
0.00027173	0.04980469	0.00028013	-0.0573731	0.00028853	-0.0463867	0.00029693	0.08569336
0.00027193	0.04736328	0.00028033	-0.0578613	0.00028873	-0.0444336	0.00029713	0.08813477
0.00027213	0.04467773	0.00028052	-0.0585938	0.00028892	-0.0424805	0.00029732	0.08984375
0.00027232	0.04199219	0.00028072	-0.0588379	0.00028912	-0.0412598	0.00029752	0.0925293
0.00027252	0.0390625	0.00028091	-0.0593262	0.00028931	-0.0390625	0.00029771	0.09423828
0.00027271	0.03540039	0.00028111	-0.0583496	0.00028951	-0.0371094	0.00029791	0.09570313
0.00027291	0.03222656	0.00028131	-0.0581055	0.0002897	-0.0351563	0.0002981	0.09667969

0.0002731	0.02978516	0.0002815	-0.0583496	0.0002899	-0.0334473	0.0002983	0.09765625
0.0002733	0.02612305	0.0002817	-0.0588379	0.00029009	-0.03125	0.00029849	0.09887695
0.00027349	0.02246094	0.00028189	-0.0588379	0.00029029	-0.0288086	0.00029869	0.09985352
0.00027369	0.01879883	0.00028209	-0.059082	0.00029048	-0.0261231	0.00029888	0.1005859
0.00027388	0.01416016	0.00028228	-0.059082	0.00029068	-0.0234375	0.00029908	0.1005859
0.00027408	0.01098633	0.00028248	-0.0610352	0.00029088	-0.0209961	0.00029927	0.1010742
0.00027427	0.00756836	0.00028267	-0.0612793	0.00029107	-0.0183106	0.00029947	0.1010742
0.00027447	0.00292969	0.00028287	-0.0610352	0.00029127	-0.0151367	0.00029966	0.1000977
0.00027466	-0.0002441	0.00028306	-0.0622559	0.00029146	-0.0126953	0.00029986	0.09985352
0.00027486	-0.0041504	0.00028326	-0.0617676	0.00029166	-0.0095215	0.00030006	0.09912109
0.00027506	-0.0061035	0.00028345	-0.0617676	0.00029185	-0.0063477	0.00030025	0.09765625
0.00027525	-0.0087891	0.00028365	-0.0617676	0.00029205	-0.0024414	0.00030045	0.09545898
0.00027545	-0.012207	0.00028384	-0.0622559	0.00029224	0.00073242	0.00030064	0.09472656
0.00027564	-0.0148926	0.00028404	-0.0627441	0.00029244	0.00390625	0.00030084	0.09277344
0.00027584	-0.0185547	0.00028423	-0.0622559	0.00029263	0.0078125	0.00030103	0.09057617
0.00027603	-0.0214844	0.00028443	-0.0622559	0.00029283	0.01220703	0.00030123	0.08837891
0.00027623	-0.0244141	0.00028463	-0.0625	0.00029302	0.015625	0.00030142	0.0859375
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00030162	0.08349609	0.00031002	-0.114502	0.00031841	-0.0251465	0.00032681	0.0925293
0.00030181	0.08081055	0.00031021	-0.1159668	0.00031861	-0.0209961	0.00032701	0.09277344
0.00030201	0.07763672	0.00031041	-0.1176758	0.00031881	-0.0175781	0.0003272	0.09399414
0.0003022	0.07446289	0.0003106	-0.1186523	0.000319	-0.0134277	0.0003274	0.0949707
0.0003024	0.07080078	0.0003108	-0.1193848	0.0003192	-0.0102539	0.00032759	0.09545898
0.00030259	0.06665039	0.00031099	-0.1196289	0.00031939	-0.0070801	0.00032779	0.09619141

0.00030279	0.06298828	0.00031119	-0.1201172	0.00031959	-0.003418	0.00032798	0.09692383
0.00030298	0.05859375	0.00031138	-0.1206055	0.00031978	0	0.00032818	0.09692383
0.00030318	0.05419922	0.00031158	-0.1201172	0.00031998	0.00341797	0.00032838	0.09765625
0.00030338	0.04980469	0.00031177	-0.1210938	0.00032017	0.00610352	0.00032857	0.09716797
0.00030357	0.04467773	0.00031197	-0.1201172	0.00032037	0.00952148	0.00032877	0.09667969
0.00030377	0.04003906	0.00031216	-0.1201172	0.00032056	0.01269531	0.00032896	0.09692383
0.00030396	0.03417969	0.00031236	-0.1191406	0.00032076	0.015625	0.00032916	0.09619141
0.00030416	0.02954102	0.00031256	-0.1186523	0.00032095	0.01879883	0.00032935	0.09545898
0.00030435	0.02416992	0.00031275	-0.1169434	0.00032115	0.02172852	0.00032955	0.09423828
0.00030455	0.01855469	0.00031295	-0.1157227	0.00032134	0.0246582	0.00032974	0.09301758
0.00030474	0.01342773	0.00031314	-0.1137695	0.00032154	0.02807617	0.00032994	0.09228516
0.00030494	0.00805664	0.00031334	-0.1120605	0.00032173	0.03125	0.00033013	0.09057617

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0.00030513	0.00219727	0.00031353	-0.1098633	0.00032193	0.03417969	0.00033033	0.08911133
0.00030533	-0.0029297	0.00031373	-0.107666	0.00032213	0.03686523	0.00033052	0.08837891
0.00030552	-0.0092773	0.00031392	-0.1049805	0.00032232	0.03979492	0.00033072	0.08642578
0.00030572	-0.0141602	0.00031412	-0.1020508	0.00032252	0.04272461	0.00033091	0.08447266
0.00030591	-0.020752	0.00031431	-0.0996094	0.00032271	0.04541016	0.00033111	0.08251953
0.00030611	-0.0263672	0.00031451	-0.0974121	0.00032291	0.0480957	0.00033131	0.08007813
0.00030631	-0.0322266	0.0003147	-0.0939941	0.0003231	0.05078125	0.0003315	0.07788086
0.0003065	-0.0380859	0.0003149	-0.090332	0.0003233	0.05419922	0.0003317	0.07470703
0.0003067	-0.0439453	0.00031509	-0.0874023	0.00032349	0.05761719	0.00033189	0.07226563
0.00030689	-0.0490723	0.00031529	-0.0842285	0.00032369	0.06030273	0.00033209	0.06884766
0.00030709	-0.0551758	0.00031548	-0.081543	0.00032388	0.0625	0.00033228	0.06616211
0.00030728	-0.0605469	0.00031568	-0.0776367	0.00032408	0.06494141	0.00033248	0.06201172

0.00030748	-0.065918	0.00031588	-0.0742188	0.00032427	0.06762695	0.00033267	0.05834961
0.00030767	-0.0705566	0.00031607	-0.0703125	0.00032447	0.07055664	0.00033287	0.0546875
0.00030787	-0.0751953	0.00031627	-0.0666504	0.00032466	0.07250977	0.00033306	0.05078125
0.00030806	-0.0800781	0.00031646	-0.0634766	0.00032486	0.07495117	0.00033326	0.04736328
0.00030826	-0.0842285	0.00031666	-0.0595703	0.00032506	0.07739258	0.00033345	0.04272461
0.00030845	-0.0886231	0.00031685	-0.0559082	0.00032525	0.0793457	0.00033365	0.0390625
0.00030865	-0.0922852	0.00031705	-0.052002	0.00032545	0.08154297	0.00033384	0.03491211
0.00030884	-0.0964356	0.00031724	-0.0478516	0.00032564	0.08300781	0.00033404	0.0300293
0.00030904	-0.0996094	0.00031744	-0.0437012	0.00032584	0.08496094	0.00033423	0.02441406
0.00030923	-0.1030273	0.00031763	-0.0400391	0.00032603	0.08666992	0.00033443	0.02026367
0.00030943	-0.1069336	0.00031783	-0.036377	0.00032623	0.08837891	0.00033463	0.01538086
0.00030963	-0.1098633	0.00031802	-0.0324707	0.00032642	0.09008789	0.00033482	0.01074219
0.00030982	-0.1120605	0.00031822	-0.0288086	0.00032662	0.09106445	0.00033502	0.00561523
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00033521	0.00097656	0.00034361	-0.1276855	0.00035201	0.1123047	0.00036041	0.02709961
0.00033541	-0.0043945	0.00034381	-0.1254883	0.0003522	0.1159668	0.0003606	0.02294922
0.0003356	-0.0090332	0.000344	-0.1225586	0.0003524	0.1188965	0.0003608	0.01879883
0.0003358	-0.013916	0.0003442	-0.119873	0.00035259	0.1223145	0.00036099	0.01489258
0.00033599	-0.0197754	0.00034439	-0.1159668	0.00035279	0.1247559	0.00036119	0.01123047
0.00033619	-0.0253906	0.00034459	-0.1123047	0.00035298	0.1271973	0.00036138	0.00708008
0.00033638	-0.0305176	0.00034478	-0.1086426	0.00035318	0.1286621	0.00036158	0.00366211
0.00033658	-0.034668	0.00034498	-0.1040039	0.00035338	0.130127	0.00036177	0.00048828
0.00033677	-0.0402832	0.00034517	-0.1005859	0.00035357	0.1320801	0.00036197	-0.0031738
0.00033697	-0.0458984	0.00034537	-0.0959473	0.00035377	0.1325684	0.00036216	-0.0061035
0.00033716	-0.0515137	0.00034556	-0.0908203	0.00035396	0.1313477	0.00036236	-0.0087891
0.00033736	-0.0568848	0.00034576	-0.0859375	0.00035416	0.1313477	0.00036256	-0.0114746

0.00033756	-0.0627441	0.00034595	-0.0803223	0.00035435	0.1313477	0.00036275	-0.0146484
0.00033775	-0.0681152	0.00034615	-0.0742188	0.00035455	0.1311035	0.00036295	-0.0180664
0.00033795	-0.0732422	0.00034634	-0.0686035	0.00035474	0.1306152	0.00036314	-0.0209961
0.00033814	-0.0788574	0.00034654	-0.0625	0.00035494	0.1296387	0.00036334	-0.0234375
0.00033834	-0.0842285	0.00034673	-0.0568848	0.00035513	0.1281738	0.00036353	-0.0258789
0.00033853	-0.0895996	0.00034693	-0.0517578	0.00035533	0.1262207	0.00036373	-0.0280762
0.00033873	-0.0942383	0.00034713	-0.045166	0.00035552	0.1245117	0.00036392	-0.0302734
0.00033892	-0.0986328	0.00034732	-0.0393066	0.00035572	0.121582	0.00036412	-0.0324707
0.00033912	-0.1027832	0.00034752	-0.0322266	0.00035591	0.1196289	0.00036431	-0.0344238
0.00033931	-0.1066895	0.00034771	-0.0249023	0.00035611	0.1169434	0.00036451	-0.0366211
0.00033951	-0.1108398	0.00034791	-0.0178223	0.00035631	0.1135254	0.0003647	-0.0385742
0.0003397	-0.1142578	0.0003481	-0.0104981	0.0003565	0.111084	0.0003649	-0.0397949
0.0003399	-0.1179199	0.0003483	-0.003418	0.0003567	0.107666	0.00036509	-0.0419922

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0.00034009	-0.1201172	0.00034849	0.00366211	0.00035689	0.1047363	0.00036529	-0.0432129
0.00034029	-0.1235352	0.00034869	0.01147461	0.00035709	0.1008301	0.00036548	-0.0441895
0.00034048	-0.1259766	0.00034888	0.01879883	0.00035728	0.09692383	0.00036568	-0.0461426
0.00034068	-0.128418	0.00034908	0.02612305	0.00035748	0.09301758	0.00036588	-0.046875
0.00034088	-0.130127	0.00034927	0.03271484	0.00035767	0.08862305	0.000366007	-0.048584
0.00034107	-0.1325684	0.00034947	0.03979492	0.00035787	0.08447266	0.00036627	-0.0493164
0.00034127	-0.1350098	0.00034966	0.04638672	0.00035806	0.08056641	0.00036646	-0.0505371
0.00034146	-0.1369629	0.00034986	0.05322266	0.00035826	0.07617188	0.00036666	-0.0515137
0.00034166	-0.1374512	0.00035006	0.05981445	0.00035845	0.0715332	0.00036685	-0.0529785
0.00034185	-0.1384277	0.00035025	0.06591797	0.00035865	0.06738281	0.00036705	-0.0537109
0.00034205	-0.1386719	0.00035045	0.07226563	0.00035884	0.06298828	0.00036724	-0.0546875
0.00034224	-0.1379395	0.00035064	0.07788086	0.00035904	0.05786133	0.00036744	-0.0549316

0.00034244	-0.1376953	0.00035084	0.08349609	0.00035923	0.05395508	0.00036763	-0.0551758
0.00034263	-0.137207	0.00035103	0.08935547	0.00035943	0.04907227	0.00036783	-0.0556641
0.00034283	-0.1357422	0.00035123	0.09399414	0.00035963	0.04492188	0.00036802	-0.0563965
0.00034302	-0.1340332	0.00035142	0.09912109	0.00035982	0.0402832	0.00036822	-0.0563965
0.00034322	-0.1320801	0.00035162	0.1040039	0.00036002	0.03564453	0.00036841	-0.0563965
0.00034341	-0.1296387	0.00035181	0.1081543	0.00036021	0.03149414	0.00036861	-0.0568848
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00036881	-0.0573731	0.0003772	0.00048828	0.0003856	0.07226563	0.000394	-0.0427246
0.000369	-0.0568848	0.0003774	0.00341797	0.0003858	0.0703125	0.0003942	-0.0439453
0.0003692	-0.0571289	0.00037759	0.0065918	0.00038599	0.06860352	0.00039439	-0.0444336
0.00036939	-0.0568848	0.00037779	0.01000977	0.00038619	0.06689453	0.00039459	-0.0449219
0.00036959	-0.0568848	0.00037798	0.01391602	0.00038638	0.06494141	0.00039478	-0.0449219
0.00036978	-0.0568848	0.00037818	0.01733398	0.00038658	0.06201172	0.00039498	-0.0449219
0.00036998	-0.0561523	0.00037838	0.02026367	0.00038677	0.06005859	0.00039517	-0.0444336
0.00037017	-0.0559082	0.00037857	0.0234375	0.00038697	0.05737305	0.00039537	-0.0441895
0.00037037	-0.0556641	0.00037877	0.02685547	0.00038716	0.05493164	0.00039556	-0.0437012
0.00037056	-0.0544434	0.00037896	0.03027344	0.00038736	0.05249023	0.00039576	-0.0429688
0.00037076	-0.0539551	0.00037916	0.03393555	0.00038756	0.05004883	0.00039595	-0.0412598
0.00037095	-0.0529785	0.00037935	0.03759766	0.00038775	0.04663086	0.00039615	-0.0402832
0.00037115	-0.0522461	0.00037955	0.04125977	0.00038795	0.04345703	0.00039634	-0.0388184
0.000371 34	-0.0512695	0.00037974	0.04492188	0.00038814	0.04077148	0.00039654	-0.0368652
0.00037154	-0.0507813	0.00037994	0.04760742	0.00038834	0.03686523	0.00039673	-0.0356445
0.00037173	-0.050293	0.0003801 3	0.05126953	0.00038853	0.03320313	0.00039693	-0.0334473
0.00037193	-0.0498047	0.00038033	0.05444336	0.00038873	0.02954102	0.00039713	-0.0314941
0.00037213	-0.0488281	0.00038052	0.05712891	0.00038892	0.02612305	0.00039732	-0.0288086
0.00037232	-0.0478516	0.00038072	0.06005859	0.00038912	0.0222168	0.00039752	-0.0258789

0.00037252	-0.0466309	0.00038091	0.0625	0.00038931	0.01953125	0.00039771	-0.0227051
0.00037271	-0.0454102	0.00038111	0.06518555	0.00038951	0.01586914	0.00039791	-0.0200195
0.00037291	-0.0444336	0.00038131	0.06713867	0.0003897	0.01245117	0.0003981	-0.0168457
0.0003731	-0.0432129	0.0003815	0.0690918	0.0003899	0.00878906	0.0003983	-0.0126953
0.0003733	-0.0415039	0.0003817	0.07055664	0.00039009	0.00561523	0.00039849	-0.0092773
0.00037349	-0.0402832	0.00038189	0.07250977	0.00039029	0.00219727	0.00039869	-0.0053711
0.00037369	-0.0385742	0.00038209	0.07421875	0.00039048	-0.0009766	0.00039888	-0.0012207
0.00037388	-0.0371094	0.00038228	0.07592773	0.00039068	-0.0036621	0.00039908	0.00268555
0.00037408	-0.036377	0.00038248	0.0769043	0.00039088	-0.0070801	0.00039927	0.0065918
0.00037427	-0.0351563	0.00038267	0.078125	0.00039107	-0.0102539	0.00039947	0.01147461
0.00037447	-0.032959	0.00038287	0.07910156	0.00039127	-0.0134277	0.00039966	0.015625
0.00037466	-0.0310059	0.00038306	0.07983398	0.00039146	-0.0161133	0.00039986	0.02026367
0.00037486	-0.0290527	0.00038326	0.08154297	0.00039166	-0.0187988	0.00040006	0.02514648

[0075]

0.00037506	-0.0280762	0.00038345	0.08178711	0.00039185	-0.0212402	0.00040025	0.02929688
0.00037525	-0.0263672	0.00038365	0.08203125	0.00039205	-0.0241699	0.00040045	0.03344727
0.00037545	-0.0249023	0.00038384	0.08203125	0.00039224	-0.0258789	0.00040064	0.03833008
0.00037564	-0.0222168	0.00038404	0.08203125	0.00039244	-0.0288086	0.00040084	0.04345703
0.00037584	-0.0200195	0.00038423	0.08129883	0.00039263	-0.03125	0.00040103	0.04785156
0.00037603	-0.0178223	0.00038443	0.08056641	0.00039283	-0.0336914	0.00040123	0.05175781
0.00037623	-0.0151367	0.00038463	0.07958984	0.00039302	-0.0354004	0.00040142	0.05615234
0.00037642	-0.0124512	0.00038482	0.07836914	0.00039322	-0.0366211	0.00040162	0.06005859
0.00037662	-0.0090332	0.00038502	0.07714844	0.00039341	-0.0383301	0.00040181	0.06347656
0.00037681	-0.0061035	0.00038521	0.07592773	0.00039361	-0.0400391	0.00040201	0.06713867
0.00037701	-0.0029297	0.00038541	0.07421875	0.00039381	-0.0417481	0.0004022	0.07055664
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)

0.0004024	0.07373047	0.0004108	0.03222656	0.0004192	0.02978516	0.00042759	-0.0078125
0.00040259	0.0769043	0.00041099	0.02954102	0.00041939	0.03100586	0.00042779	-0.0097656
0.00040279	0.07958984	0.00041119	0.02685547	0.00041959	0.03149414	0.00042798	-0.0095215
0.00040298	0.08227539	0.00041138	0.02392578	0.00041978	0.03222656	0.00042818	-0.0102539
0.00040318	0.08447266	0.00041158	0.02197266	0.00041998	0.0324707	0.00042838	-0.0104981
0.00040338	0.08666992	0.00041177	0.01953125	0.00042017	0.03271484	0.00042857	-0.0109863
0.00040357	0.08911133	0.00041197	0.01782227	0.00042037	0.03295898	0.00042877	-0.0107422
0.00040377	0.09057617	0.00041216	0.01586914	0.00042056	0.03295898	0.00042896	-0.0100098
0.00040396	0.09155273	0.00041236	0.01416016	0.00042076	0.03320313	0.00042916	-0.0102539
0.00040416	0.09326172	0.00041256	0.01269531	0.00042095	0.03271484	0.00042935	-0.0102539
0.00040435	0.09423828	0.00041275	0.01171875	0.00042115	0.03198242	0.00042955	-0.0097656
0.00040455	0.09545898	0.00041295	0.01049805	0.00042134	0.0324707	0.00042974	-0.0102539
0.00040474	0.09594727	0.00041314	0.01000977	0.00042154	0.03173828	0.00042994	-0.0095215
0.00040494	0.09619141	0.00041334	0.00878906	0.00042173	0.03149414	0.00043013	-0.0100098
0.00040513	0.09667969	0.00041353	0.00756836	0.00042193	0.03100586	0.00043033	-0.0092773
0.00040533	0.09667969	0.00041373	0.0078125	0.00042213	0.03051758	0.00043052	-0.0087891
0.00040552	0.09643555	0.00041392	0.00805664	0.00042232	0.03027344	0.00043072	-0.0087891
0.00040572	0.09619141	0.00041412	0.0078125	0.00042252	0.0300293	0.00043091	-0.0078125
0.00040591	0.09521484	0.00041431	0.0078125	0.00042271	0.02880859	0.00043111	-0.0068359
0.00040611	0.09472656	0.00041451	0.00830078	0.00042291	0.02807617	0.00043131	-0.0058594
0.00040631	0.09399414	0.0004147	0.00854492	0.0004231	0.02709961	0.0004315	-0.0046387
0.0004065	0.09130859	0.0004149	0.00830078	0.0004233	0.02587891	0.0004317	-0.0039063
0.0004067	0.09008789	0.00041509	0.00854492	0.00042349	0.02490234	0.00043189	-0.0029297
0.00040689	0.08862305	0.00041529	0.00927734	0.00042369	0.0234375	0.00043209	-0.001709
0.00040709	0.08642578	0.00041548	0.00976563	0.00042388	0.02197266	0.00043228	-0.0002441
0.00040728	0.08447266	0.00041568	0.01074219	0.00042408	0.02050781	0.00043248	-0.00097656

0.00040748	0.08203125	0.00041588	0.01171875	0.00042427	0.01879883	0.00043267	-0.00195313
0.00040767	0.07958984	0.00041607	0.01196289	0.00042447	0.01757813	0.00043287	-0.00317383
0.00040787	0.07739258	0.00041627	0.01293945	0.00042466	0.015625	0.00043306	-0.00439453
0.00040806	0.07421875	0.00041646	0.01391602	0.00042486	0.0144043	0.00043326	0.00561523
0.00040826	0.07177734	0.00041666	0.01538086	0.00042506	0.01269531	0.00043345	0.00732422
0.00040845	0.06884766	0.00041685	0.01611328	0.00042525	0.01098633	0.00043365	0.00854492
0.00040865	0.06640625	0.00041705	0.01733398	0.00042545	0.00805664	0.00043384	0.01074219
0.00040884	0.06347656	0.00041724	0.01831055	0.00042564	0.00634766	0.00043404	0.01220703
0.00040904	0.06030273	0.00041744	0.01977539	0.00042584	0.00439453	0.00043423	0.0144043
0.00040923	0.05712891	0.00041763	0.02124023	0.00042603	0.00317383	0.00043443	0.01611328
0.00040943	0.05322266	0.00041783	0.02246094	0.00042623	0.00146484	0.00043463	0.01831055
0.00040963	0.05053711	0.00041802	0.0234375	0.00042642	0.00048828	0.00043482	0.02026367
0.00040982	0.04736328	0.00041822	0.02514648	0.00042662	-0.0007324	0.00043502	0.0222168
0.00041002	0.04418945	0.00041841	0.02661133	0.00042681	-0.001709	0.00043521	0.02368164
0.00041021	0.04101563	0.00041861	0.02783203	0.00042701	-0.0031738	0.00043541	0.02612305
0.00041041	0.03833008	0.00041881	0.02905273	0.0004272	-0.0046387	0.0004356	0.02783203
0.0004106	0.03540039	0.000419	0.03027344	0.0004274	-0.0058594	0.0004358	0.0300293
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00043599	0.03198242	0.00044439	0.02709961	0.00045279	-0.0219727	0.00046119	0.04467773
0.00043619	0.03393555	0.00044459	0.02441406	0.00045298	-0.0202637	0.00046138	0.04516602
0.00043638	0.03564453	0.00044478	0.02197266	0.00045318	-0.0183106	0.00046158	0.0456543
0.00043658	0.03735352	0.00044498	0.01977539	0.00045338	-0.0168457	0.00046177	0.04736328
0.00043677	0.03955078	0.00044517	0.0168457	0.00045357	-0.015625	0.00046197	0.04760742
0.00043697	0.04077148	0.00044537	0.01391602	0.00045377	-0.013916	0.00046216	0.04785156
0.00043716	0.04223633	0.00044556	0.01171875	0.00045396	-0.0119629	0.00046236	0.0480957

0.00043736	0.04394531	0.00044576	0.00878906	0.00045416	-0.0097656	0.00046256	0.0480957
0.00043756	0.04467773	0.00044595	0.00610352	0.00045435	-0.0083008	0.00046275	0.04833984
0.00043775	0.04614258	0.00044615	0.00341797	0.00045455	-0.0063477	0.00046295	0.04833984
0.00043795	0.04711914	0.00044634	0.00073242	0.00045474	-0.0039063	0.00046314	0.04858398
0.00043814	0.04858398	0.00044654	-0.0021973	0.00045494	-0.0019531	0.00046334	0.04833984
0.00043834	0.05029297	0.00044673	-0.0043945	0.00045513	0.00024414	0.00046353	0.04833984
0.00043853	0.05126953	0.00044693	-0.0070801	0.00045533	0.00195313	0.00046373	0.0480957
0.00043873	0.05249023	0.00044713	-0.0095215	0.00045552	0.00366211	0.00046392	0.0480957
0.00043892	0.05322266	0.00044732	-0.0107422	0.00045572	0.00634766	0.00046412	0.04785156
0.00043912	0.0534668	0.00044752	-0.0129395	0.00045591	0.00805664	0.00046431	0.04785156
0.00043931	0.05395508	0.00044771	-0.0158691	0.00045611	0.01025391	0.00046451	0.046875
0.00043951	0.05371094	0.00044791	-0.0178223	0.00045631	0.01196289	0.0004647	0.04663086
0.0004397	0.0534668	0.0004481	-0.0202637	0.0004565	0.01416016	0.0004649	0.0456543
0.0004399	0.05444336	0.0004483	-0.0214844	0.0004567	0.015625	0.00046509	0.04516602
0.00044009	0.05419922	0.00044849	-0.0231934	0.00045689	0.01806641	0.00046529	0.04467773
0.00044029	0.05419922	0.00044869	-0.0253906	0.00045709	0.01977539	0.00046548	0.04345703
0.00044048	0.05371094	0.00044888	-0.0266113	0.00045728	0.02197266	0.00046568	0.04248047
0.00044068	0.0534668	0.00044908	-0.027832	0.00045748	0.0234375	0.00046588	0.04199219
0.00044088	0.05371094	0.00044927	-0.029541	0.00045767	0.02539063	0.00046607	0.04174805
0.00044107	0.0534668	0.00044947	-0.0302734	0.00045787	0.02758789	0.00046627	0.04150391
0.00044127	0.05200195	0.00044966	-0.0310059	0.00045806	0.02954102	0.00046646	0.04077148
0.00044146	0.05151367	0.00044986	-0.0317383	0.00045826	0.03100586	0.00046666	0.04150391
0.00044166	0.05102539	0.00045006	-0.0322266	0.00045845	0.03271484	0.00046685	0.04101563
0.00044185	0.05004883	0.00045025	-0.0324707	0.00045865	0.03442383	0.00046705	0.04125977

0.00044205	0.04907227	0.00045045	-0.0317383	0.00045884	0.03540039	0.00046724	0.04125977
0.00044224	0.04760742	0.00045064	-0.03125	0.00045904	0.03686523	0.00046744	0.04125977
0.00044244	0.04638672	0.00045084	-0.03125	0.00045923	0.0378418	0.00046763	0.04125977
0.00044263	0.04443359	0.00045103	-0.0310059	0.00045943	0.03833008	0.00046783	0.04125977
0.00044283	0.04321289	0.00045123	-0.0305176	0.00045963	0.03955078	0.00046802	0.04052734
0.00044302	0.04101563	0.00045142	-0.0290527	0.00045982	0.0402832	0.00046822	0.04101563
0.00044322	0.03881836	0.00045162	-0.027832	0.00046002	0.04125977	0.00046841	0.04052734
0.00044341	0.03710938	0.00045181	-0.027832	0.00046021	0.04174805	0.00046861	0.03955078
0.00044361	0.03515625	0.00045201	-0.0266113	0.00046041	0.04272461	0.00046881	0.03881836
0.00044381	0.03295898	0.0004522	-0.0249023	0.0004606	0.04345703	0.000469	0.03857422
0.000444	0.03125	0.0004524	-0.0246582	0.0004608	0.04418945	0.0004692	0.0378418
0.0004442	0.02954102	0.00045259	-0.0229492	0.00046099	0.04467773	0.00046939	0.03735352
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00046959	0.03613281	0.00047798	-0.0219727	0.00048638	0.03979492	0.00049478	0.04638672
0.00046978	0.03613281	0.00047818	-0.0212402	0.00048658	0.04150391	0.00049498	0.04492188

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0.00046998	0.03491211	0.00047838	-0.0212402	0.00048677	0.04248047	0.00049517	0.04345703
0.00047017	0.03417969	0.00047857	-0.0214844	0.00048697	0.04443359	0.00049537	0.04125977
0.00047037	0.03393555	0.00047877	-0.0217285	0.00048716	0.04614258	0.00049556	0.04077148
0.00047056	0.03198242	0.00047896	-0.0214844	0.00048736	0.04785156	0.00049576	0.03857422
0.00047076	0.03100586	0.00047916	-0.0214844	0.00048756	0.04907227	0.00049595	0.03662109
0.00047095	0.02929688	0.00047935	-0.020752	0.00048775	0.05029297	0.00049615	0.03540039
0.00047115	0.02832031	0.00047955	-0.0212402	0.00048795	0.05151367	0.00049634	0.03393555
0.00047134	0.02685547	0.00047974	-0.020752	0.00048814	0.05297852	0.00049654	0.03125
0.00047154	0.02563477	0.00047994	-0.0192871	0.00048834	0.05395508	0.00049673	0.02929688

0.00047173	0.02441406	0.00048013	-0.0187988	0.00048853	0.05493164	0.00049693	0.02709961
0.00047193	0.0234375	0.00048033	-0.0185547	0.00048873	0.05615234	0.00049713	0.02514648
0.00047213	0.02172852	0.00048052	-0.0170898	0.00048892	0.05664063	0.00049732	0.02319336
0.00047232	0.02075195	0.00048072	-0.0158691	0.00048912	0.05761719	0.00049752	0.02124023
0.00047252	0.01928711	0.00048091	-0.0146484	0.00048931	0.05834961	0.00049771	0.01879883
0.00047271	0.01806641	0.00048111	-0.0131836	0.00048951	0.05908203	0.00049791	0.01660156
0.00047291	0.01611328	0.00048131	-0.0119629	0.0004897	0.05957031	0.0004981	0.01416016
0.0004731	0.01489258	0.0004815	-0.0102539	0.0004899	0.06054688	0.0004983	0.01196289
0.0004733	0.01293945	0.0004817	-0.0083008	0.00049009	0.06152344	0.00049849	0.01074219
0.00047349	0.01123047	0.00048189	-0.0063477	0.00049029	0.06225586	0.00049869	0.00830078
0.00047369	0.00927734	0.00048209	-0.0041504	0.00049048	0.0625	0.00049888	0.00610352
0.00047388	0.00732422	0.00048228	-0.0019531	0.00049068	0.06298828	0.00049908	0.00439453
0.00047408	0.00561523	0.00048248	-0.0002441	0.00049088	0.0625	0.00049927	0.00268555
0.00047427	0.00366211	0.00048267	0.00195313	0.00049107	0.06274414	0.00049947	0.00097656
0.00047447	0.00170898	0.00048287	0.00390625	0.00049127	0.06298828	0.00049966	-0.0012207
0.00047466	0	0.00048306	0.00634766	0.00049146	0.06225586	0.00049986	-0.0031738
0.00047486	-0.0019531	0.00048326	0.00805664	0.00049166	0.06176758	0.00050006	-0.0043945
0.00047506	-0.0039063	0.00048345	0.01025391	0.00049185	0.06079102	0.00050025	-0.0063477
0.00047525	-0.005127	0.00048365	0.01293945	0.00049205	0.06054688	0.00050045	-0.0078125
0.00047545	-0.0078125	0.00048384	0.01538086	0.00049224	0.05957031	0.00050064	-0.0097656
0.00047564	-0.0095215	0.00048404	0.01757813	0.00049244	0.05932617	0.00050084	-0.0114746
0.00047584	-0.0114746	0.00048423	0.01953125	0.00049263	0.05859375	0.00050103	-0.0126953
0.00047603	-0.0124512	0.00048443	0.02172852	0.00049283	0.05737305	0.00050123	-0.0144043
0.00047623	-0.0136719	0.00048463	0.02392578	0.00049302	0.05664063	0.00050142	-0.0161133
0.00047642	-0.0146484	0.00048482	0.02563477	0.00049322	0.05615234	0.00050162	-0.017334
0.00047662	-0.0166016	0.00048502	0.02807617	0.00049341	0.05493164	0.00050181	-0.0187988

0.00047681	-0.0175781	0.00048521	0.02978516	0.00049361	0.05395508	0.00050201	-0.0200195
0.00047701	-0.0183106	0.00048541	0.03125	0.00049381	0.05273438	0.0005022	-0.0214844
0.0004772	-0.019043	0.0004856	0.03320313	0.000494	0.05273438	0.0005024	-0.0234375
0.0004774	-0.0200195	0.0004858	0.03515625	0.0004942	0.05078125	0.00050259	-0.0246582
0.00047759	-0.0205078	0.00048599	0.03637695	0.00049439	0.04931641	0.00050279	-0.0268555
0.00047779	-0.0217285	0.00048619	0.03833008	0.00049459	0.04785156	0.00050298	-0.0283203
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00050318	-0.0290527	0.00051158	0.00634766	0.00051998	0.015625	0.00052838	-0.0336914
0.00050338	-0.0300293	0.00051177	0.00708008	0.00052017	0.01464844	0.00052857	-0.034668
0.00050357	-0.0314941	0.00051197	0.00854492	0.00052037	0.01367188	0.00052877	-0.0354004
0.00050377	-0.0322266	0.00051216	0.00952148	0.00052056	0.01318359	0.00052896	-0.0371094
0.00050396	-0.0334473	0.00051236	0.01098633	0.00052076	0.01318359	0.00052916	-0.0380859
0.00050416	-0.0341797	0.00051256	0.01196289	0.00052095	0.01245117	0.00052935	-0.0390625
0.00050435	-0.0344238	0.00051275	0.01367188	0.00052115	0.01147461	0.00052955	-0.0402832
0.00050455	-0.034668	0.00051295	0.01416016	0.00052134	0.01025391	0.00052974	-0.0417481
0.00050474	-0.034668	0.00051314	0.01464844	0.00052154	0.00952148	0.00052994	-0.0415039

[0077]

0.00050494	-0.0344238	0.00051334	0.01538086	0.00052173	0.0090332	0.00053013	-0.0427246
0.00050513	-0.0344238	0.00051353	0.01635742	0.00052193	0.00805664	0.00053033	-0.043457
0.00050533	-0.034668	0.00051373	0.01757813	0.00052213	0.0078125	0.00053052	-0.0446777
0.00050552	-0.0341797	0.00051392	0.01782227	0.00052232	0.0065918	0.00053072	-0.045166
0.00050572	-0.0336914	0.00051412	0.01831055	0.00052252	0.00610352	0.00053091	-0.0456543
0.00050591	-0.0334473	0.00051431	0.01879883	0.00052271	0.00439453	0.00053111	-0.0461426
0.00050611	-0.032959	0.00051451	0.01904297	0.00052291	0.00341797	0.00053131	-0.0466309
0.00050631	-0.0322266	0.0005147	0.01953125	0.0005231	0.00244141	0.0005315	-0.046875

0.0005065	-0.0305176	0.0005149	0.02026367	0.0005233	0.00146484	0.0005317	-0.0473633
0.0005067	-0.0283203	0.00051509	0.02001953	0.00052349	0.00024414	0.00053189	-0.0476074
0.00050689	-0.0273438	0.00051529	0.01977539	0.00052369	-0.0009766	0.00053209	-0.0478516
0.00050709	-0.0268555	0.00051548	0.01928711	0.00052388	-0.0021973	0.00053228	-0.0471191
0.00050728	-0.0253906	0.00051568	0.01953125	0.00052408	-0.0036621	0.00053248	-0.0466309
0.00050748	-0.0244141	0.00051588	0.02026367	0.00052427	-0.0053711	0.00053267	-0.0466309
0.00050767	-0.0234375	0.00051607	0.02026367	0.00052447	-0.0068359	0.00053287	-0.0466309
0.00050787	-0.0227051	0.00051627	0.02099609	0.00052466	-0.0083008	0.00053306	-0.0466309
0.00050806	-0.0222168	0.00051646	0.02075195	0.00052486	-0.0092773	0.00053326	-0.0466309
0.00050826	-0.0209961	0.00051666	0.02050781	0.00052506	-0.0104981	0.00053345	-0.0466309
0.00050845	-0.0195313	0.00051685	0.02124023	0.00052525	-0.0124512	0.00053365	-0.0458984
0.00050865	-0.0178223	0.00051705	0.0222168	0.00052545	-0.0131836	0.00053384	-0.0454102
0.00050884	-0.0166016	0.00051724	0.02148438	0.00052564	-0.0134277	0.00053404	-0.0449219
0.00050904	-0.0151367	0.00051744	0.02172852	0.00052584	-0.0148926	0.00053423	-0.0444336
0.00050923	-0.013916	0.00051763	0.02148438	0.00052603	-0.0166016	0.00053443	-0.0437012
0.00050943	-0.012207	0.00051783	0.02075195	0.00052623	-0.0183106	0.00053463	-0.0437012
0.00050963	-0.0092773	0.00051802	0.02050781	0.00052642	-0.0202637	0.00053482	-0.0429688
0.00050982	-0.0083008	0.00051822	0.02050781	0.00052662	-0.0219727	0.00053502	-0.0422363
0.00051002	-0.0061035	0.00051841	0.02001953	0.00052681	-0.0241699	0.00053521	-0.0417481
0.00051021	-0.0043945	0.00051861	0.01977539	0.00052701	-0.0256348	0.00053541	-0.0410156
0.00051041	-0.0021973	0.00051881	0.01953125	0.0005272	-0.0263672	0.0005356	-0.0405273
0.0005106	-0.0004883	0.000519	0.01904297	0.0005274	-0.027832	0.0005358	-0.0393066
0.0005108	0.0012207	0.0005192	0.01855469	0.00052759	-0.0290527	0.00053599	-0.0388184
0.00051099	0.00244141	0.00051939	0.01855469	0.00052779	-0.0307617	0.00053619	-0.0378418

0.00051119	0.00390625	0.00051959	0.01782227	0.00052798	-0.0314941	0.00053638	-0.0371094
0.00051138	0.00488281	0.00051978	0.01708984	0.00052818	-0.0324707	0.00053658	-0.0361328
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00053677	-0.0358887	0.00054517	-0.020752	0.00055357	-0.0014648	0.00056197	-0.064209
0.00053697	-0.034668	0.00054537	-0.0205078	0.00055377	-0.001709	0.00056216	-0.0649414
0.00053716	-0.0336914	0.00054556	-0.0200195	0.00055396	-0.0021973	0.00056236	-0.0646973
0.00053736	-0.0322266	0.00054576	-0.020752	0.00055416	-0.0036621	0.00056256	-0.0639648
0.00053756	-0.03125	0.00054595	-0.0197754	0.00055435	-0.0041504	0.00056275	-0.0646973
0.00053775	-0.0305176	0.00054615	-0.0202637	0.00055455	-0.0048828	0.00056295	-0.0646973
0.00053795	-0.0292969	0.00054634	-0.019043	0.00055474	-0.0061035	0.00056314	-0.0649414
0.00053814	-0.0280762	0.00054654	-0.0185547	0.00055494	-0.0073242	0.00056334	-0.0639648
0.00053834	-0.0280762	0.00054673	-0.0180664	0.00055513	-0.0090332	0.00056353	-0.0639648
0.00053853	-0.0273438	0.00054693	-0.0163574	0.00055533	-0.0107422	0.00056373	-0.0632324
0.00053873	-0.0266113	0.00054713	-0.0153809	0.00055552	-0.0119629	0.00056392	-0.0622559
0.00053892	-0.0261231	0.00054732	-0.0151367	0.00055572	-0.0134277	0.00056412	-0.0612793
0.00053912	-0.0261231	0.00054752	-0.0146484	0.00055591	-0.0151367	0.00056431	-0.0603027
0.00053931	-0.0253906	0.00054771	-0.0136719	0.00055611	-0.0175781	0.00056451	-0.0593262
0.00053951	-0.0249023	0.00054791	-0.0131836	0.00055631	-0.0200195	0.0005647	-0.0581055
0.0005397	-0.0241699	0.0005481	-0.0119629	0.0005565	-0.0224609	0.0005649	-0.0563965

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0.0005399	-0.0236816	0.0005483	-0.0114746	0.0005567	-0.0239258	0.00056509	-0.0546875
0.00054009	-0.0231934	0.00054849	-0.0109863	0.00055689	-0.0258789	0.00056529	-0.0527344
0.00054029	-0.0229492	0.00054869	-0.0102539	0.00055709	-0.027832	0.00056548	-0.0510254
0.00054048	-0.0231934	0.00054888	-0.0095215	0.00055728	-0.0297852	0.00056568	-0.0490723

0.00054068	-0.0231934	0.00054908	-0.0080566	0.00055748	-0.0327148	0.00056588	-0.0471191
0.00054088	-0.0229492	0.00054927	-0.0075684	0.00055767	-0.0349121	0.00056607	-0.0449219
0.00054107	-0.0229492	0.00054947	-0.0068359	0.00055787	-0.0368652	0.00056627	-0.0427246
0.00054127	-0.0231934	0.00054966	-0.0058594	0.00055806	-0.0388184	0.00056646	-0.0402832
0.00054146	-0.0229492	0.00054986	-0.0053711	0.00055826	-0.0407715	0.00056666	-0.0390625
0.00054166	-0.0231934	0.00055006	-0.0046387	0.00055845	-0.0427246	0.00056685	-0.0368652
0.00054185	-0.0229492	0.00055025	-0.0039063	0.00055865	-0.0449219	0.00056705	-0.034668
0.00054205	-0.0224609	0.00055045	-0.0029297	0.00055884	-0.046875	0.00056724	-0.0319824
0.00054224	-0.0224609	0.00055064	-0.0029297	0.00055904	-0.0483398	0.00056744	-0.0292969
0.00054244	-0.0224609	0.00055084	-0.0021973	0.00055923	-0.0505371	0.00056763	-0.0268555
0.00054263	-0.0224609	0.00055103	-0.0019531	0.00055943	-0.052002	0.00056783	-0.0244141
0.00054283	-0.0224609	0.00055123	-0.0021973	0.00055963	-0.0537109	0.00056802	-0.0217285
0.00054302	-0.0219727	0.00055142	-0.0014648	0.00055982	-0.0554199	0.00056822	-0.0197754
0.00054322	-0.0219727	0.00055162	-0.0012207	0.00056002	-0.0568848	0.00056841	-0.0178223
0.00054341	-0.0219727	0.00055181	-0.0009766	0.00056021	-0.0581055	0.00056861	-0.0148926
0.00054361	-0.0214844	0.00055201	-0.0012207	0.00056041	-0.059082	0.00056881	-0.0129395
0.00054381	-0.0217285	0.0005522	-0.0012207	0.0005606	-0.0593262	0.000569	-0.0104981
0.000544	-0.020752	0.0005524	-0.0014648	0.0005608	-0.0603027	0.0005692	-0.0090332
0.0005442	-0.020752	0.00055259	-0.0014648	0.00056099	-0.0617676	0.00056939	-0.0065918
0.00054439	-0.0217285	0.00055279	-0.001709	0.00056119	-0.0627441	0.00056959	-0.0048828
0.00054459	-0.0212402	0.00055298	-0.001709	0.00056138	-0.0637207	0.00056978	-0.0031738
0.00054478	-0.0209961	0.00055318	-0.0012207	0.00056158	-0.0637207	0.00056998	-0.0012207
0.00054498	-0.0214844	0.00055338	-0.0009766	0.00056177	-0.0646973	0.00057017	0.00097656
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)

0.00057037	0.00292969	0.00057877	0.02685547	0.00058716	-0.0180664	0.00059556	-0.0241699
0.00057056	0.00537109	0.00057896	0.02661133	0.00058736	-0.0187988	0.00059576	-0.0234375
0.00057076	0.00805664	0.00057916	0.02539063	0.00058756	-0.019043	0.00059595	-0.0231934
0.00057095	0.01025391	0.00057935	0.02416992	0.00058775	-0.0185547	0.00059615	-0.0224609
0.00057115	0.01220703	0.00057955	0.02319336	0.00058795	-0.0195313	0.00059634	-0.0222168
0.00057134	0.01416016	0.00057974	0.02148438	0.00058814	-0.0202637	0.00059654	-0.0222168
0.00057154	0.015625	0.00057994	0.02026367	0.00058834	-0.0212402	0.00059673	-0.0212402
0.00057173	0.01757813	0.00058013	0.01904297	0.00058853	-0.0217285	0.00059693	-0.020752
0.00057193	0.01977539	0.00058033	0.01782227	0.00058873	-0.0212402	0.00059713	-0.0200195
0.00057213	0.02099609	0.00058052	0.0168457	0.00058892	-0.0219727	0.00059732	-0.0195313
0.00057232	0.02246094	0.00058072	0.01538086	0.00058912	-0.0229492	0.00059752	-0.017334
0.00057252	0.02392578	0.00058091	0.01513672	0.00058931	-0.0231934	0.00059771	-0.015625
0.00057271	0.02514648	0.00058111	0.01489258	0.00058951	-0.0234375	0.00059791	-0.0141602
0.00057291	0.02661133	0.00058131	0.01318359	0.0005897	-0.0241699	0.0005981	-0.0131836
0.0005731	0.02734375	0.0005815	0.01196289	0.0005899	-0.0246582	0.0005983	-0.012207
0.0005733	0.02832031	0.0005817	0.01074219	0.00059009	-0.0251465	0.00059849	-0.0109863
0.00057349	0.02905273	0.00058189	0.00976563	0.00059029	-0.0253906	0.00059869	-0.0097656
0.00057369	0.02978516	0.00058209	0.0090332	0.00059048	-0.0249023	0.00059888	-0.0083008
0.00057388	0.03051758	0.00058228	0.00756836	0.00059068	-0.0253906	0.00059908	-0.0068359
0.00057408	0.03100586	0.00058248	0.00683594	0.00059088	-0.0268555	0.00059927	-0.0053711
0.00057427	0.03125	0.00058267	0.00610352	0.00059107	-0.0263672	0.00059947	-0.0039063
0.00057447	0.0324707	0.00058287	0.00537109	0.00059127	-0.0270996	0.0005996	-0.0029297
0.00057466	0.03198242	0.00058306	0.00439453	0.00059146	-0.0270996	0.00059986	-0.0012207

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0.00057486	0.03271484	0.00058326	0.00317383	0.00059166	0.0275879	0.00060006	0.00048828
0.00057506	0.03271484	0.00058345	0.0244141	0.00059185	0.0280762	0.000600025	0.00170898
0.00057525	0.03295898	0.00058365	0.00146484	0.00059205	0.0283203	0.00060045	0.00366211
0.00057545	0.03271484	0.00058384	0.00048828	0.00059224	0.027832	0.00060064	0.00488281
0.00057564	0.03393555	0.00058404	-0.0004883	0.00059244	0.0273438	0.000600084	0.0065918
0.00057584	0.03344727	0.00058423	-0.001709	0.00059263	0.0268555	0.00060103	0.0078125
0.00057603	0.03344727	0.00058443	-0.0031738	0.00059283	0.0266113	0.00060123	0.00952148
0.00057623	0.03344727	0.00058463	-0.0036621	0.00059302	0.0258789	0.00060142	0.01123047
0.00057642	0.03271484	0.00058482	-0.0053711	0.00059322	0.0258789	0.00060162	0.01220703
0.00057662	0.03198242	0.00058502	-0.0063477	0.00059341	0.0258789	0.00060181	0.01391602
0.00057681	0.03198242	0.00058521	-0.0078125	0.00059361	0.0263672	0.00060201	0.01513672
0.00057701	0.03173828	0.00058541	-0.0085449	0.00059381	0.0263672	0.0006022	0.01635742
0.0005772	0.03198242	0.0005856	-0.0097656	0.000594	0.0258789	0.0006024	0.01757813
0.0005774	0.03051758	0.0005858	-0.0107422	0.0005942	0.0256348	0.00060259	0.01733398
0.00057759	0.03100586	0.00058599	-0.0117188	0.00059439	0.0258789	0.00060279	0.01855469
0.00057779	0.0300293	0.00058619	-0.0131836	0.00059459	0.0256348	0.00060298	0.01977539
0.00057798	0.02954102	0.00058638	-0.0146484	0.00059478	0.0256348	0.00060318	0.02099609
0.00057818	0.02929688	0.00058658	-0.0153809	0.00059498	-0.0253906	0.00060338	0.02246094
0.00057838	0.02832031	0.00058677	-0.0166016	0.00059517	-0.0253906	0.00060357	0.02392578
0.00057857	0.02758789	0.00058697	-0.0170898	0.00059537	-0.0249023	0.00060377	0.02539063
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00060396	0.02636719	0.00061236	0.01049805	0.00062076	-0.0175781	0.00062916	0.02880859
0.00060416	0.02685547	0.00061256	0.00854492	0.00062095	-0.0158691	0.00062935	0.02929688
0.00060435	0.02856445	0.00061275	0.00708008	0.00062115	-0.0146484	0.00062955	0.02929688
0.00060455	0.03027344	0.00061295	0.00439453	0.00062134	-0.0131836	0.00062974	0.02978516
0.00060474	0.03125	0.00061314	0.00268555	0.00062154	-0.0124512	0.00062994	0.03027344

0.00060494	0.03198242	0.00061334	0.00024414	0.00062173	-0.0104981	0.00063013	0.03051758
0.00060513	0.03369141	0.00061353	-0.0009766	0.00062193	-0.0095215	0.00063033	0.02978516
0.00060533	0.03540039	0.00061373	-0.0026855	0.00062213	-0.0080566	0.00063052	0.0300293
0.00060552	0.03564453	0.00061392	-0.0046387	0.00062232	-0.0063477	0.00063072	0.02929688
0.00060572	0.03588867	0.00061412	-0.0063477	0.00062252	-0.005127	0.00063091	0.02929688
0.00060591	0.03662109	0.00061431	-0.0083008	0.00062271	-0.0039063	0.00063111	0.02905273
0.00060611	0.03735352	0.00061451	-0.0102539	0.00062291	-0.0024414	0.00063131	0.02880859
0.00060631	0.03808594	0.0006147	-0.0109863	0.0006231	-0.0012207	0.0006315	0.02905273
0.0006065	0.03881836	0.0006149	-0.0124512	0.0006233	0	0.0006317	0.02880859
0.0006067	0.0390625	0.00061509	-0.013916	0.00062349	0.00146484	0.00063189	0.02905273
0.00060689	0.03881836	0.00061529	-0.0153809	0.00062369	0.00317383	0.00063209	0.02856445
0.00060709	0.03930664	0.00061548	-0.0163574	0.00062388	0.00439453	0.00063228	0.02832031
0.00060728	0.03930664	0.00061568	-0.0175781	0.00062408	0.00585938	0.00063248	0.02832031
0.00060748	0.03833008	0.00061588	-0.019043	0.00062427	0.0078125	0.00063267	0.02807617
0.00060767	0.03808594	0.00061607	-0.0200195	0.00062447	0.00927734	0.00063287	0.02807617
0.00060787	0.03759766	0.00061627	-0.0209961	0.00062466	0.01025391	0.00063306	0.02734375
0.00060806	0.03735352	0.00061646	-0.0217285	0.00062486	0.01196289	0.00063326	0.02734375
0.00060826	0.03686523	0.00061666	-0.0222168	0.00062506	0.01269531	0.00063345	0.02685547
0.00060845	0.03637695	0.00061685	-0.0222168	0.00062525	0.0144043	0.00063365	0.02563477
0.00060865	0.03613281	0.00061705	-0.0234375	0.00062545	0.01513672	0.00063384	0.02490234
0.00060884	0.03515625	0.00061724	-0.0241699	0.00062564	0.01635742	0.00063404	0.02441406
0.00060904	0.03417969	0.00061744	-0.0244141	0.00062584	0.01708984	0.00063423	0.02416992
0.00060923	0.03369141	0.00061763	-0.0246582	0.00062603	0.01855469	0.00063443	0.0234375
0.00060943	0.0324707	0.00061783	-0.0246582	0.00062623	0.01977539	0.00063463	0.02319336
0.00060963	0.03100586	0.00061802	-0.0251465	0.00062642	0.02075195	0.00063482	0.02246094

[0080]

0.00060982	0.0300293	0.00061822	-0.0244141	0.00062662	0.02124023	0.00063502	0.0222168
0.00061002	0.02880859	0.00061841	-0.0246582	0.00062681	0.0222168	0.00063521	0.02075195
0.00061021	0.02685547	0.00061861	-0.0241699	0.00062701	0.02197266	0.00063541	0.02050781
0.00061041	0.02636719	0.00061881	-0.0246582	0.0006272	0.02294922	0.0006356	0.01977539
0.0006106	0.02490234	0.000619	-0.0241699	0.0006274	0.02392578	0.0006358	0.01855469
0.0006108	0.02368164	0.0006192	-0.0239258	0.00062759	0.02416992	0.00063599	0.01782227
0.00061099	0.02172852	0.00061939	-0.0229492	0.00062779	0.02514648	0.00063619	0.01733398
0.00061119	0.02099609	0.00061959	-0.0239258	0.00062798	0.02612305	0.00063638	0.01733398
0.00061138	0.01953125	0.00061978	-0.0231934	0.00062818	0.02661133	0.00063658	0.0168457
0.00061158	0.01757813	0.00061998	-0.0224609	0.00062838	0.02685547	0.00063677	0.01611328
0.00061177	0.015625	0.00062017	-0.0212402	0.00062857	0.02880859	0.00063697	0.01611328
0.00061197	0.01464844	0.00062037	-0.0197754	0.00062877	0.02905273	0.00063716	0.015625
0.00061216	0.01269531	0.00062056	-0.0185547	0.00062896	0.02905273	0.00063736	0.01538086
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00063756	0.01538086	0.00064595	-0.0114746	0.00065435	-0.0185547	0.00066275	0.02392578
0.00063775	0.01635742	0.00064615	-0.0124512	0.00065455	-0.0175781	0.00066295	0.02416992
0.00063795	0.01489258	0.00064634	-0.013916	0.00065474	-0.0161133	0.00066314	0.02416992
0.00063814	0.01416016	0.00064654	-0.0144043	0.00065494	-0.015625	0.00066334	0.02392578
0.00063834	0.01416016	0.00064673	-0.0151367	0.00065513	-0.0151367	0.00066353	0.02319336
0.00063853	0.01367188	0.00064693	-0.0158691	0.00065533	-0.013916	0.00066373	0.0222168
0.00063873	0.01269531	0.00064713	-0.0168457	0.00065552	-0.0124512	0.00066392	0.02124023
0.00063892	0.01269531	0.00064732	-0.0175781	0.00065572	-0.0109863	0.00066412	0.01928711
0.00063912	0.01196289	0.00064752	-0.0187988	0.00065591	-0.0092773	0.00066431	0.01928711
0.00063931	0.01196289	0.00064771	-0.0197754	0.00065611	-0.0075684	0.00066451	0.01879883

0.00063951	0.01123047	0.00064791	-0.020752	0.00065631	-0.0056152	0.0006647	0.01806641
0.0006397	0.01098633	0.0006481	-0.0214844	0.0006565	-0.0041504	0.0006649	0.01660156
0.0006399	0.01049805	0.0006483	-0.0217285	0.0006567	-0.0026855	0.00066509	0.01586914
0.00064009	0.01025391	0.00064849	-0.0222168	0.00065689	-0.0014648	0.00066529	0.01513672
0.00064029	0.00952148	0.00064869	-0.0231934	0.00065709	-0.0002441	0.00066548	0.0144043
0.00064048	0.0090332	0.00064888	-0.0236816	0.00065728	0.0012207	0.00066568	0.01342773
0.00064068	0.00878906	0.00064908	-0.0249023	0.00065748	0.00292969	0.00066588	0.01220703
0.00064088	0.0078125	0.00064927	-0.0251465	0.00065767	0.00366211	0.00066607	0.01147461
0.00064107	0.00732422	0.00064947	-0.0256348	0.00065787	0.00512695	0.00066627	0.01049805
0.00064127	0.0065918	0.00064966	-0.0266113	0.00065806	0.00708008	0.00066646	0.00878906
0.00064146	0.00610352	0.00064986	-0.0266113	0.00065826	0.00756836	0.00066666	0.0078125
0.00064166	0.00585938	0.00065006	-0.0270996	0.00065845	0.00878906	0.00066685	0.00756836
0.00064185	0.00585938	0.00065025	-0.0275879	0.00065865	0.00976563	0.00066705	0.00610352
0.00064205	0.00512695	0.00065045	-0.027832	0.00065884	0.01123047	0.00066724	0.00488281
0.00064224	0.00463867	0.00065064	-0.027832	0.00065904	0.01220703	0.00066744	0.00341797
0.00064244	0.00366211	0.00065084	-0.0273438	0.00065923	0.01342773	0.00066763	0.00244141
0.00064263	0.00292969	0.00065103	-0.0273438	0.00065943	0.01464844	0.00066783	0.00097656
0.00064283	0.00170898	0.00065123	-0.0280762	0.00065963	0.01586914	0.00066802	0
0.00064302	0.00097656	0.00065142	-0.0283203	0.00065982	0.01660156	0.00066822	-0.0012207
0.00064322	0.00048828	0.00065162	-0.0283203	0.00066002	0.01806641	0.00066841	-0.0021973
0.00064341	-0.0004883	0.00065181	-0.0283203	0.00066021	0.01831055	0.00066861	-0.0026855
0.00064361	-0.0014648	0.00065201	-0.0285645	0.00066041	0.01928711	0.00066881	-0.0036621
0.00064381	-0.0029297	0.0006522	-0.0275879	0.0006606	0.02001953	0.000669	-0.0048828
0.000644	-0.0036621	0.0006524	-0.0270996	0.0006608	0.02026367	0.0006692	-0.0061035

0.0006442	-0.0043945	0.00065259	-0.0263672	0.00066099	0.02099609	0.00066939	-0.0070801
0.00064439	-0.005127	0.00065279	-0.0263672	0.00066119	0.02197266	0.00066959	-0.0078125
0.00064459	-0.0061035	0.00065298	-0.0253906	0.00066138	0.0222168	0.00066978	-0.0083008

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0.00064478	-0.0070801	0.00065318	-0.0244141	0.00066158	0.02319336	0.00066998	-0.0090332
0.00064498	-0.0083008	0.00065338	-0.0239258	0.00066177	0.0234375	0.00067017	-0.0097656
0.00064517	-0.0090332	0.00065357	-0.0229492	0.00066197	0.02368164	0.00067037	-0.0104981
0.00064537	-0.0095215	0.00065377	-0.0214844	0.00066216	0.02441406	0.00067056	-0.0107422
0.00064556	-0.0102539	0.00065396	-0.0205078	0.00066236	0.02416992	0.00067076	-0.0109863
0.00064576	-0.0107422	0.00065416	-0.0195313	0.00066256	0.02416992	0.00067095	-0.0109863
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00067115	-0.0112305	0.00067955	0.01025391	0.00068795	0.0078125	0.00069634	0.02246094
0.00067134	-0.0109863	0.00067974	0.01000977	0.00068814	0.00805664	0.00069654	0.02197266
0.00067154	-0.0109863	0.00067994	0.01049805	0.00068834	0.00854492	0.00069673	0.02148438
0.00067173	-0.0112305	0.00068013	0.01025391	0.00068853	0.00976563	0.00069693	0.02050781
0.00067193	-0.0109863	0.00068033	0.01074219	0.00068873	0.00976563	0.00069713	0.02050781
0.00067213	-0.0107422	0.00068052	0.01049805	0.00068892	0.01074219	0.00069732	0.01928711
0.00067232	-0.0102539	0.00068072	0.01123047	0.00068912	0.01025391	0.00069752	0.01879883
0.00067252	-0.0097656	0.00068091	0.01123047	0.00068931	0.01098633	0.00069771	0.01806641
0.00067271	-0.0092773	0.00068111	0.01074219	0.00068951	0.01196289	0.00069791	0.01782227
0.00067291	-0.0085449	0.00068131	0.01074219	0.0006897	0.01245117	0.0006981	0.01733398
0.0006731	-0.0085449	0.0006815	0.01098633	0.0006899	0.01293945	0.0006983	0.0168457
0.0006733	-0.0078125	0.0006817	0.01098633	0.00069009	0.01342773	0.00069849	0.01611328
0.00067349	-0.0078125	0.00068189	0.01049805	0.00069029	0.01367188	0.00069869	0.015625

0.00067369	-0.0073242	0.00068209	0.01147461	0.00069048	0.0144043	0.00069888	0.01489258
0.00067388	-0.0070801	0.00068228	0.01123047	0.00069068	0.01416016	0.00069908	0.01391602
0.00067408	-0.0063477	0.00068248	0.01098633	0.00069088	0.0144043	0.00069927	0.01269531
0.00067427	-0.0061035	0.00068267	0.01074219	0.00069107	0.01489258	0.00069947	0.01123047
0.00067447	-0.0053711	0.00068287	0.01098633	0.00069127	0.01538086	0.00069966	0.01049805
0.00067466	-0.005127	0.00068306	0.01147461	0.00069146	0.01586914	0.00069986	0.00976563
0.00067486	-0.0043945	0.00068326	0.01171875	0.00069166	0.0168457	0.00070006	0.0090332
0.00067506	-0.003418	0.00068345	0.01123047	0.00069185	0.01757813	0.00070025	0.0078125
0.00067525	-0.0024414	0.00068365	0.01098633	0.00069205	0.01782227	0.00070045	0.0065918
0.00067545	-0.0019531	0.00068384	0.01123047	0.00069224	0.01855469	0.00070064	0.00634766
0.00067564	-0.0012207	0.00068404	0.01074219	0.00069244	0.01977539	0.00070084	0.00512695
0.00067584	-0.0004883	0.00068423	0.01049805	0.00069263	0.02026367	0.00070103	0.00439453
0.00067603	0.00073242	0.00068443	0.01049805	0.00069283	0.01977539	0.00070123	0.00341797
0.00067623	0.00073242	0.00068463	0.01025391	0.00069302	0.02148438	0.00070142	0.00244141
0.00067642	0.00097656	0.00068482	0.00952148	0.00069322	0.02148438	0.00070162	0.00146484
0.00067662	0.00195313	0.00068502	0.00878906	0.00069341	0.0222168	0.00070181	0.0012207
0.00067681	0.00219727	0.00068521	0.0078125	0.00069361	0.02246094	0.00070201	0
0.00067701	0.00244141	0.00068541	0.00732422	0.00069381	0.0234375	0.0007022	-0.0002441
0.0006772	0.00292969	0.0006856	0.00683594	0.000694	0.02368164	0.0007024	-0.0009766
0.0006774	0.00366211	0.0006858	0.00708008	0.0006942	0.0234375	0.00070259	-0.0026855
0.00067759	0.00488281	0.00068599	0.00683594	0.00069439	0.02368164	0.00070279	-0.0029297
0.00067779	0.00537109	0.00068619	0.0065918	0.00069459	0.0234375	0.00070298	-0.0036621
0.00067798	0.0065918	0.00068638	0.00634766	0.00069478	0.02368164	0.00070318	-0.0041504
0.00067818	0.00878906	0.00068658	0.0065918	0.00069498	0.0234375	0.00070338	-0.0041504

0.00067838	0.0090332	0.00068677	0.00683594	0.00069517	0.02368164	0.00070357	-0.0048828
0.00067857	0.0090332	0.00068697	0.00683594	0.00069537	0.02294922	0.00070377	-0.0048828
0.00067877	0.00976563	0.00068716	0.00683594	0.00069556	0.02294922	0.00070396	-0.005127
0.00067896	0.00952148	0.00068736	0.00732422	0.00069576	0.02294922	0.00070416	-0.0043945
0.00067916	0.0090332	0.00068756	0.00756836	0.00069595	0.02319336	0.00070435	-0.0046387
0.00067935	0.01000977	0.00068775	0.00756836	0.00069615	0.02270508	0.00070455	-0.0048828
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)

[0082]

0.00070474	-0.005127	0.00071314	0.03417969	0.00072154	0.02612305	0.00072994	0.01220703
0.00070494	-0.0043945	0.00071334	0.03491211	0.00072173	0.02563477	0.00073013	0.01220703
0.00070513	-0.0048828	0.00071353	0.03588867	0.00072193	0.0246582	0.00073033	0.01171875
0.00070533	-0.0041504	0.00071373	0.03662109	0.00072213	0.02392578	0.00073052	0.01171875
0.00070552	-0.0043945	0.00071392	0.03759766	0.00072232	0.02294922	0.00073072	0.01196289
0.00070572	-0.0041504	0.00071412	0.03808594	0.00072252	0.0222168	0.00073091	0.01245117
0.00070591	-0.0041504	0.00071431	0.03833008	0.00072271	0.02124023	0.00073111	0.01220703
0.00070611	-0.0031738	0.00071451	0.03881836	0.00072291	0.02050781	0.00073131	0.01220703
0.00070631	-0.0021973	0.0007147	0.03955078	0.0007231	0.01953125	0.0007315	0.01269531
0.0007065	-0.001709	0.0007149	0.03979492	0.0007233	0.01879883	0.0007317	0.01318359
0.0007067	-0.0004883	0.00071509	0.0402832	0.00072349	0.01782227	0.00073189	0.01342773
0.00070689	0	0.00071529	0.04052734	0.00072369	0.01782227	0.00073209	0.01342773
0.00070709	0.00048828	0.00071548	0.04052734	0.00072388	0.01733398	0.00073228	0.01391602
0.00070728	0.00170898	0.00071568	0.04052734	0.00072408	0.01635742	0.00073248	0.01391602
0.00070748	0.00268555	0.00071588	0.04052734	0.00072427	0.01513672	0.00073267	0.0144043
0.00070767	0.00317383	0.00071607	0.04052734	0.00072447	0.01367188	0.00073287	0.01464844

0.00070787	0.00390625	0.00071627	0.0402832	0.00072466	0.01318359	0.00073306	0.0144043
0.00070806	0.00439453	0.00071646	0.0402832	0.00072486	0.01293945	0.00073326	0.01489258
0.00070826	0.00561523	0.00071666	0.04003906	0.00072506	0.01293945	0.00073345	0.01538086
0.00070845	0.00683594	0.00071685	0.03979492	0.00072525	0.01342773	0.00073365	0.01538086
0.00070865	0.00756836	0.00071705	0.0390625	0.00072545	0.01293945	0.00073384	0.01538086
0.00070884	0.00878906	0.00071724	0.03833008	0.00072564	0.01318359	0.00073404	0.01513672
0.00070904	0.01025391	0.00071744	0.0378418	0.00072584	0.01245117	0.00073423	0.015625
0.00070923	0.01123047	0.00071763	0.03662109	0.00072603	0.01245117	0.00073443	0.01586914
0.00070943	0.01269531	0.00071783	0.03613281	0.00072623	0.01245117	0.00073463	0.01513672
0.00070963	0.0144043	0.00071802	0.03515625	0.00072642	0.01196289	0.00073482	0.01513672
0.00070982	0.01513672	0.00071822	0.03515625	0.00072662	0.01196289	0.00073502	0.015625
0.00071002	0.01708984	0.00071841	0.03417969	0.00072681	0.01196289	0.00073521	0.01586914
0.00071021	0.01806641	0.00071861	0.03369141	0.00072701	0.01196289	0.00073541	0.01586914
0.00071041	0.01879883	0.00071881	0.03344727	0.0007272	0.01171875	0.0007356	0.015625
0.0007106	0.02099609	0.000719	0.03320313	0.0007274	0.01220703	0.0007358	0.01611328
0.0007108	0.02172852	0.0007192	0.0324707	0.00072759	0.01220703	0.00073599	0.01586914
0.00071099	0.02270508	0.00071939	0.03222656	0.00072779	0.01220703	0.00073619	0.01489258
0.00071119	0.02319336	0.00071959	0.03149414	0.00072798	0.01269531	0.00073638	0.01464844
0.00071138	0.02416992	0.00071978	0.03149414	0.00072818	0.01245117	0.00073658	0.01391602
0.00071158	0.02514648	0.00071998	0.03100586	0.00072838	0.01293945	0.00073677	0.0144043
0.00071177	0.02563477	0.00072017	0.03076172	0.00072857	0.01293945	0.00073697	0.0144043
0.00071197	0.02734375	0.00072037	0.03076172	0.00072877	0.01342773	0.00073716	0.01416016
0.00071216	0.02832031	0.00072056	0.0300293	0.00072896	0.01293945	0.00073736	0.0144043
0.00071236	0.02954102	0.00072076	0.02856445	0.00072916	0.01196289	0.00073756	0.01513672

0.00071256	0.03076172	0.00072095	0.02758789	0.00072935	0.01171875	0.00073775	0.01513672
0.00071275	0.03198242	0.00072115	0.02709961	0.00072955	0.01196289	0.00073795	0.01489258
0.00071295	0.03344727	0.00072134	0.02734375	0.00072974	0.01196289	0.00073814	0.01513672
T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)	T 时间 (S)	振幅 (mV)
0.00073834	0.01513672						
0.00073853	0.01635742						
0.00073873	0.01660156						
0.00073892	0.0168457						
0.00073912	0.01708984						
0.00073931	0.01782227						
0.00073951	0.01831055						

[0083]

0.0007397	0.01855469						
0.0007399	0.01855469						
0.00074009	0.01855469						
0.00074029	0.01831055						
0.00074048	0.01879883						
0.00074068	0.01904297						
0.00074088	0.01904297						
0.00074107	0.01879883						
0.00074127	0.01855469						
0.00074146	0.01831055						
0.00074166	0.01879883						
0.00074185	0.01904297						

0.00074205	0.01928711						
0.00074224	0.01977539						
0.00074244	0.02001953						
0.00074263	0.02001953						
0.00074283	0.02026367						
0.00074302	0.02050781						
0.00074322	0.02124023						
0.00074341	0.02172852						
0.00074361	0.02270508						
0.00074381	0.02246094						

[0084] 表 1

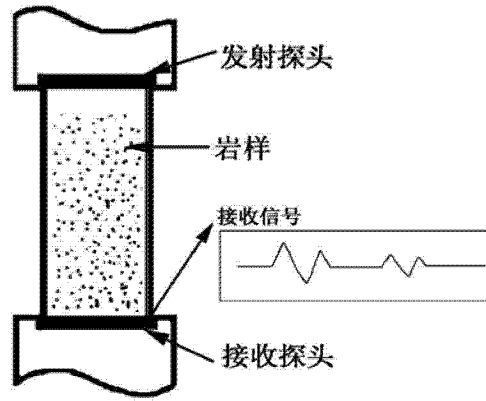


图 1

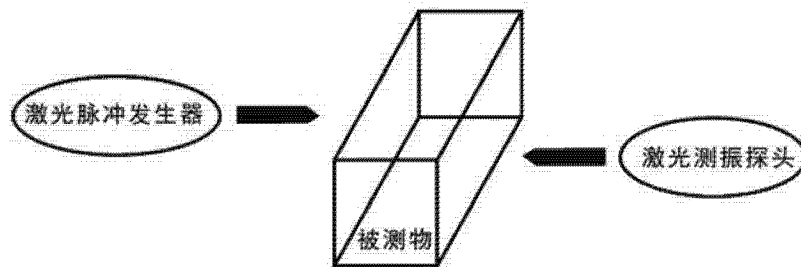


图 2

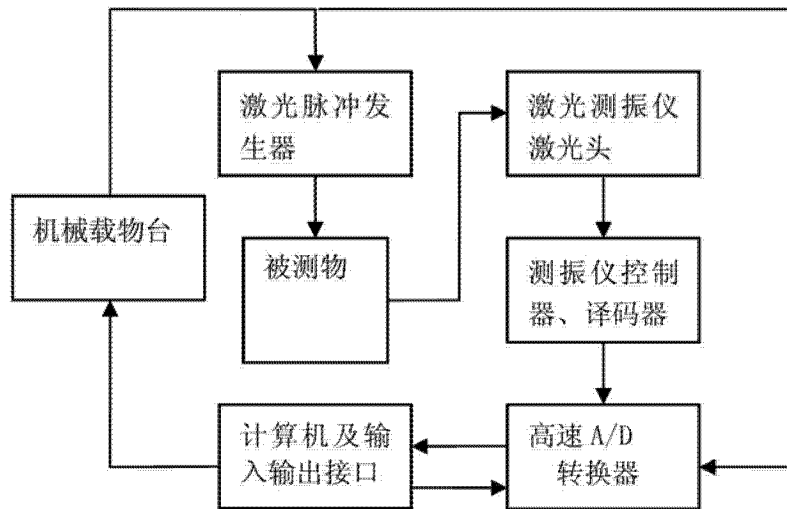


图 3

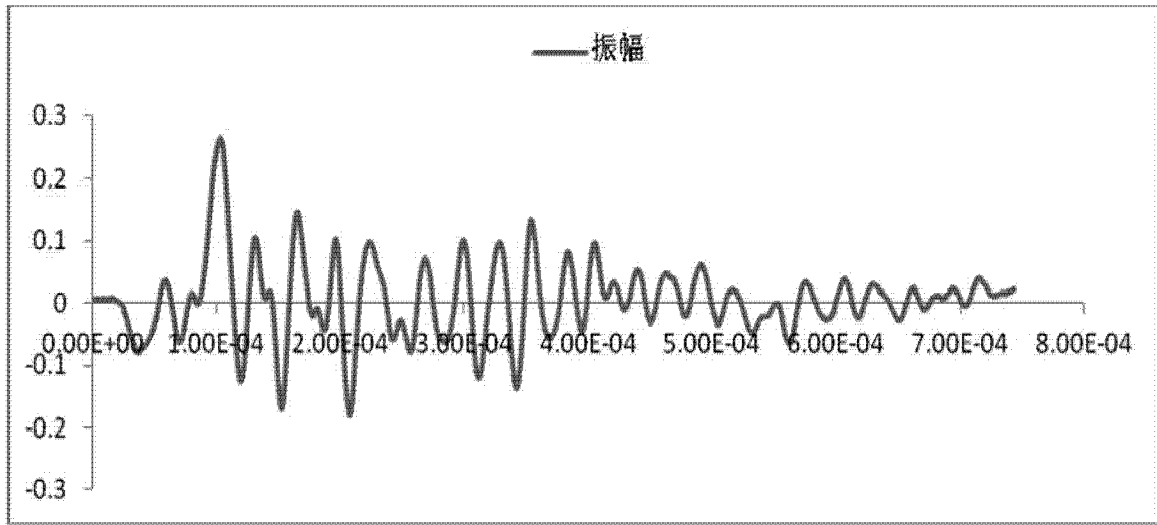


图 4