Dear Mr. Leimer,

You Wrote:

>To: Ken Addy, Alarm Device Manufacturing Company
>From: Andy Leimer
> aleimer@fcc.gov
> FCC Application Processing Branch
>
>Re: FCC ID CFS8DL5894PI-1
>Applicant: Alarm Device Manufacturing Company
>Correspondence
>Reference Number: 24998
>731 Confirmation
>Number: EA366975
>
>1) Submit analyzer or oscilloscope plots of the timing
> used to calculate the duty cycle correction factor.
> This is needed for verification.
>
>2) Is this device battery operated?
>

I Reply:

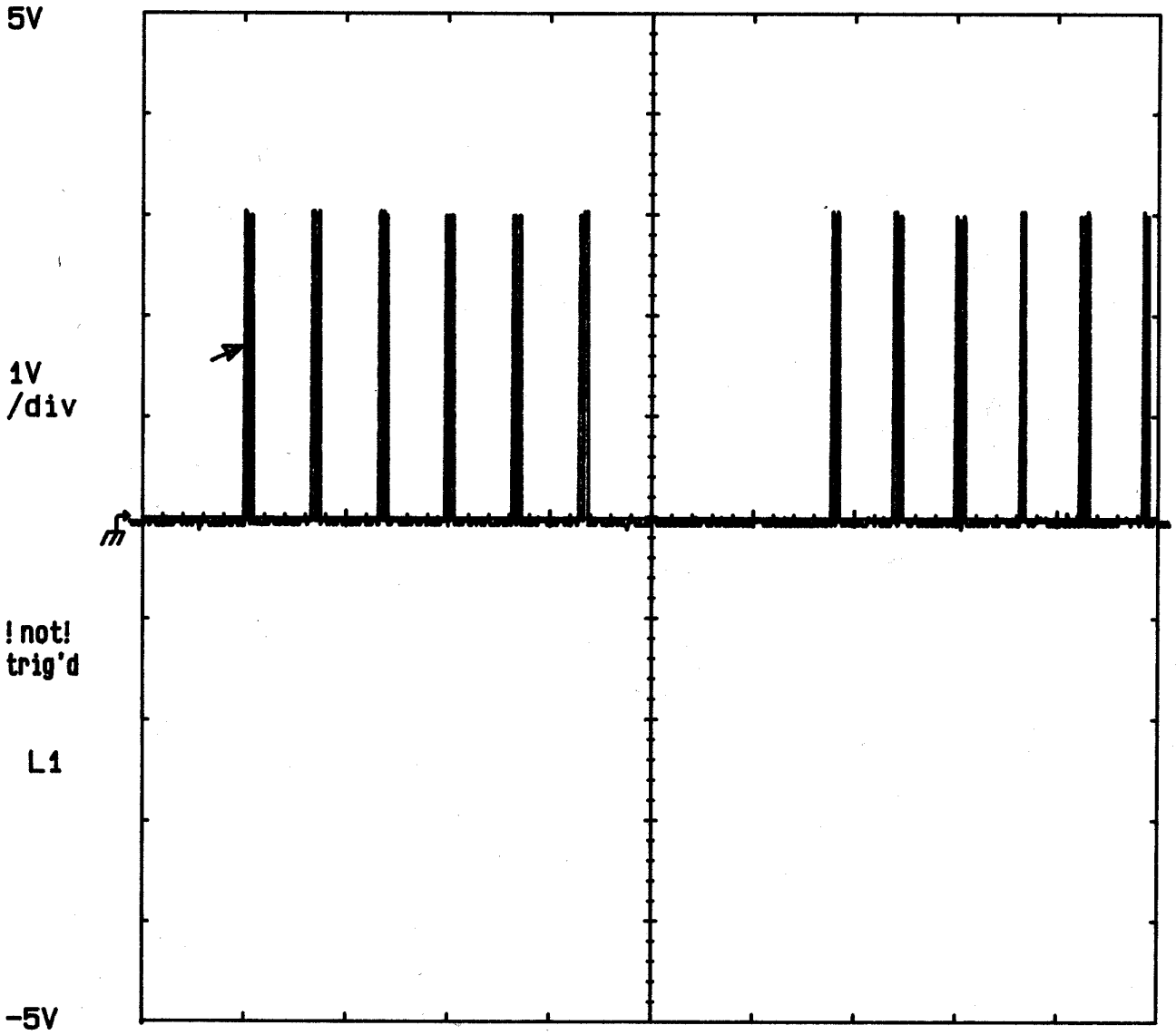
Item (1) Please see the next five pages, as they are actual plots of the messages, and an extra copy of exhibit 3-1 (page six) where we calculated the timing.

Item (2) Yes it is a battery operated device. Please see page seven (schematic) and page eight (picture of battery s in battery holders).

Best Regards,

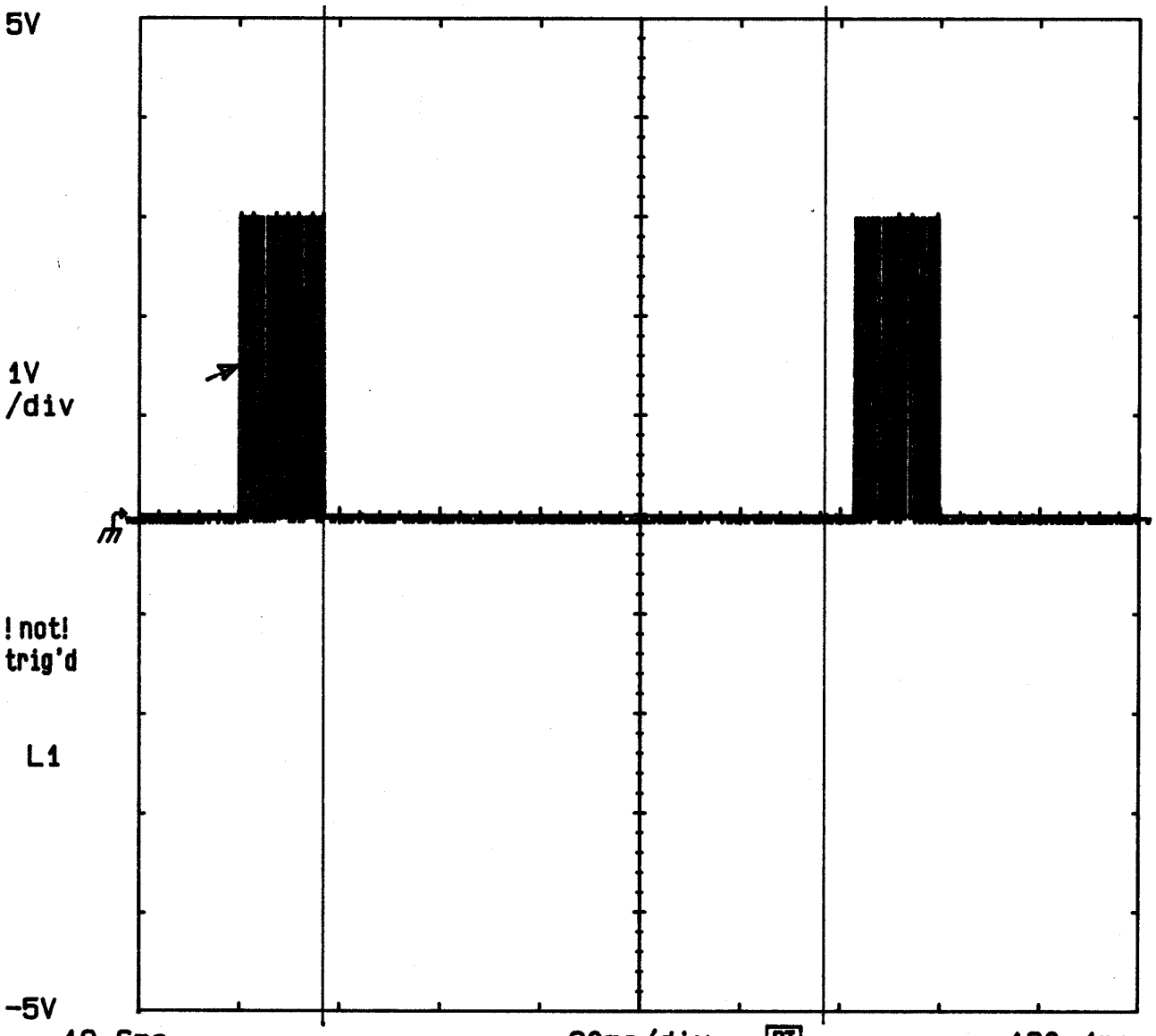
Greg Barbato
for
Ken Addy

DSA 602 DIGITIZING SIGNAL ANALYZER
date: 27-MAR-03 time: 11:48:22



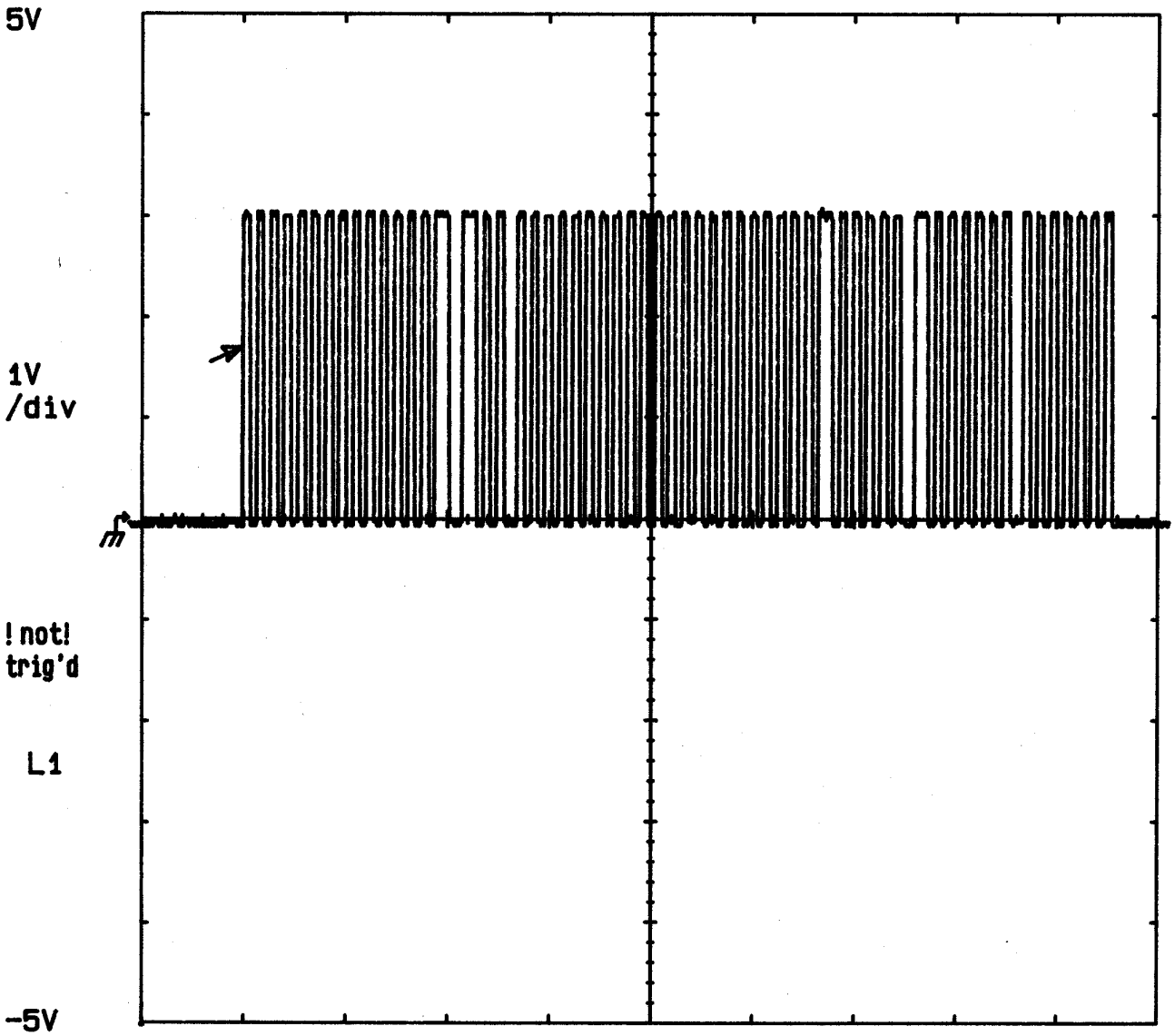
Vertical Desc L1 Fast	Horizontal Desc Main 500S/sec	Acquire Desc Stopped	Graticules	Page to All Wfms Status	Rem Wfm 1 L1 Main
Input Parameters DC 50Ω/100MHz	FFT Control dBm Rectang	Act on Delta None	Main Size 200m s/div	Pan/ Zoom Off	Main Position -220m s

DSA 602 DIGITIZING SIGNAL ANALYZER
date: 27-MAR-03 time: 12:24:58



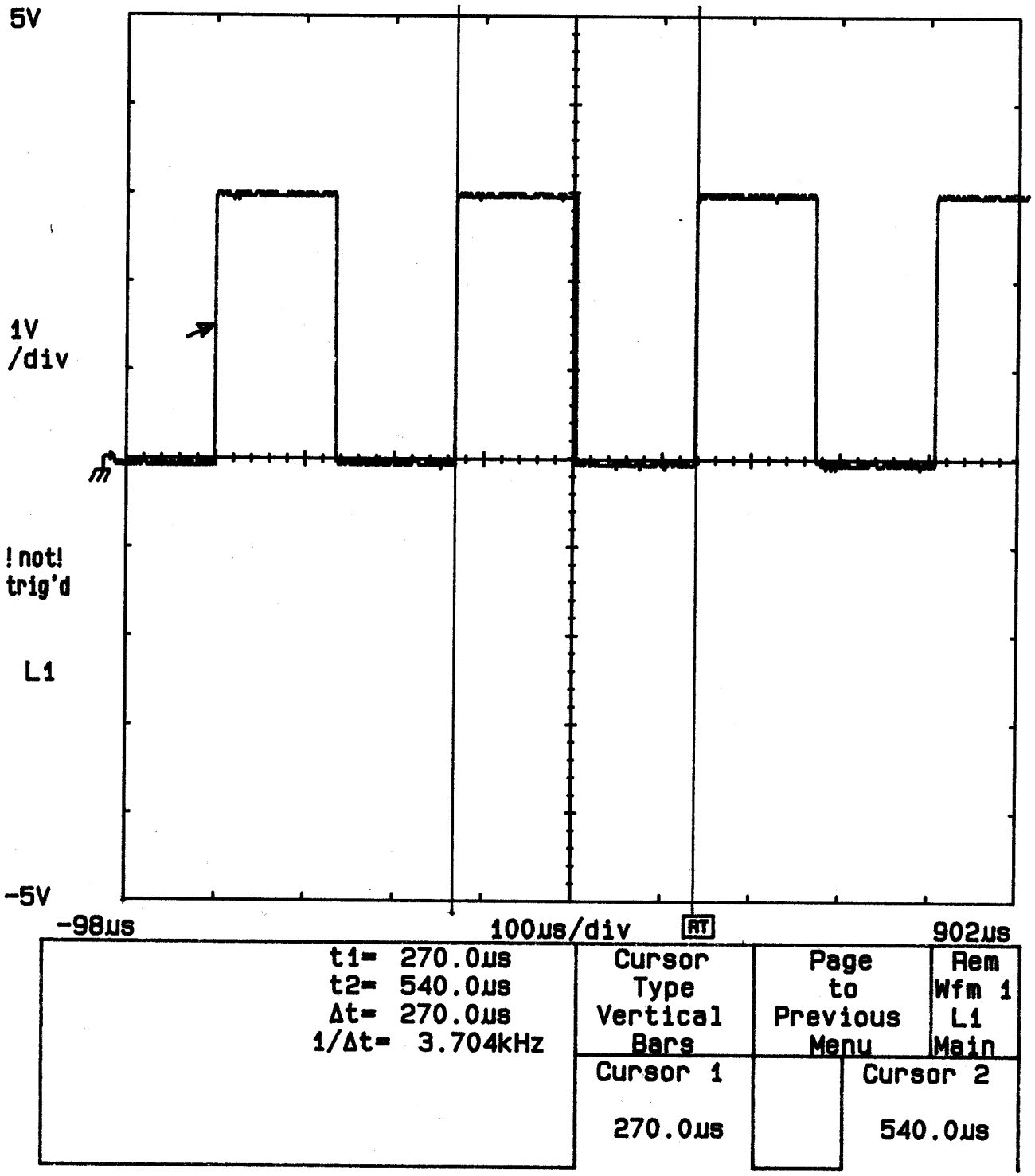
t1= 17.20ms t2= 117.2ms Δt= 100.0ms 1/Δt= 10.00Hz	Cursor Type Vertical Bars	Page to Previous Menu	Rem Wfm 1 L1 Main
	Cursor 1 17.20ms		Cursor 2 117.2ms

DSA 602 DIGITIZING SIGNAL ANALYZER
date: 27-MAR-03 time: 11:46:02



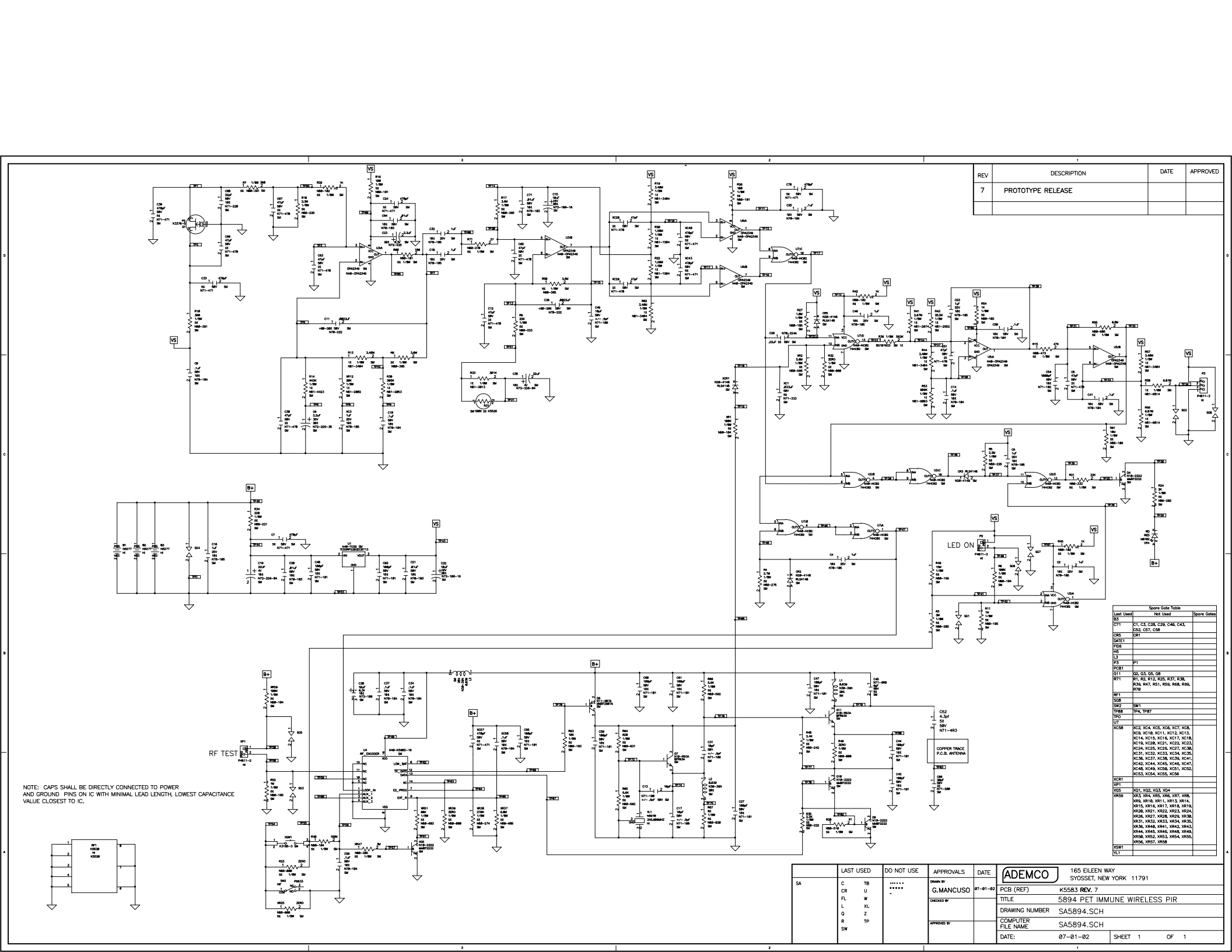
Vertical Desc L1 Fast	Horizontal Desc Main 50kS/sec	Acquire Desc Continuous	Graticules	Page to All Wfms Status	Rem Wfm 1 L1 Main
Input Parameters DC 50Ω/100MHz	FFT Control dBm Rectang	Act on Delta None	Main Size 2m s/div	Pan/ Zoom Off	Main Position -2.2m s

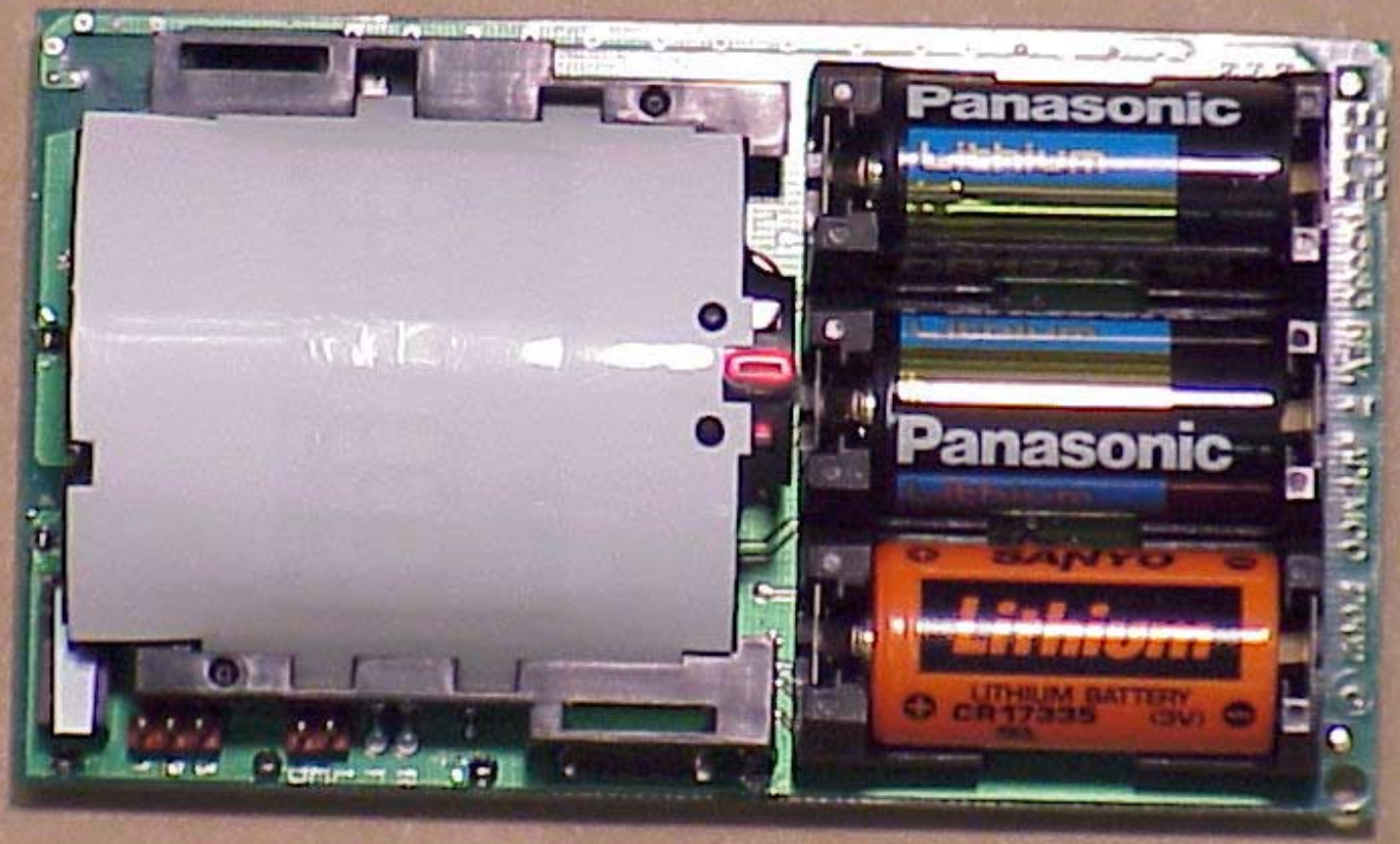
DSA 602 DIGITIZING SIGNAL ANALYZER
date: 27-MAR-03 time: 12:26:56



5894PI-1 Duty Cycle Calculation

Message protocol, timing and duty cycle calculation.
The data output is phase-encoded Manchester that has inherent 50% duty cycle
and consists of 64 bits per word
A supervision transmission is six identical words separated by (start to start) by nominal
125mSec (100 mSec min, 150 mSec max). Each message has a nominal data rate of 3.7 kb/s
(3.2kb/s min to 4.2kb/s max).
Therefore the duty cycle is calculation is as follows:
The word format consists of 64 bits,
The duration of each bit is 312.5 uSec max.
The duty cycle over a 100 mSec measuring period is calculated as follows:
Duty cycle = Actual RF transmission ON time / 100 mSec
Actual transmission ON time = 64 bits X 50% X 312.5 uSec = 10 mSec
Therefore duty cycle = 10 / 100 mSec = .10 = 10%, and peak to average field strength is 20 db.
Total on-air time for a supervision transmission is:
64 X 312.5 uSec + (5 X 150 mSec) = 0.77 seconds
In the case of an alarm transmission, the group of six transmissions is repeated twice,
with the second group delayed from the first by a max time of 2 seconds.
The worst case on-air time is 2 X (supervision time) + 2 = 3.54 seconds
Summary: - Duty cycle = 10%
On airtime = 3.54 seconds


REV | DESCRIPTION | DATE | APPROVED
7 | PROTOTYPE RELEASE
LED ON
RF TEST
NOTE: CAPS SHALL BE DIRECTLY CONNECTED TO POWER AND GROUND PINS ON IC WITH MINIMAL LEAD LENGTH, LOWEST CAPACITANCE VALUE CLOSEST TO IC.
COPPER TRACE P.C.B. ANTENNA
Spare Gate Table
Last Used | Not Used | Spare Gates
U3 | | |
C71 | C1, C3, C28, C29, C48, C43, C52, C57, C58 | |
CR5 | CR1 | |
DATE1 | | |
FID6 | | |
H5 | | |
L3 | | |
P3 | P1 | |
PCB1 | | |
Q11 | Q2, Q3, Q5, Q8 | |
R71 | R1, R2, R12, R25, R37, R38, R39, R47, R51, R59, R68, R69, R70 | |
RF1 | | |
SG8 | | |
SW2 | SW1 | |
TP88 | TP4, TP87 | |
TP0 | | |
U7 | | |
XC58 | XC2, XC4, XC5, XC6, XC7, XC8, XC9, XC18, XC11, XC12, XC13, XC14, XC15, XC16, XC17, XC18, XC19, XC20, XC21, XC22, XC23, XC24, XC25, XC26, XC27, XC30, XC31, XC32, XC33, XC34, XC35, XC36, XC37, XC38, XC39, XC41, XC42, XC44, XC45, XC46, XC47, XC48, XC49, XC50, XC51, XC52, XC53, XC54, XC55, XC56 | |
XCR1 | | |
XP1 | | |
XQ5 | XQ1, XQ2, XQ3, XQ4 | |
XR59 | XR3, XR4, XR5, XR6, XR7, XR8, XR9, XR10, XR11, XR13, XR14, XR15, XR16, XR17, XR18, XR19, XR20, XR21, XR22, XR23, XR24, XR26, XR27, XR28, XR29, XR30, XR31, XR32, XR33, XR34, XR35, XR36, XR40, XR41, XR42, XR43, XR44, XR45, XR46, XR48, XR49, XR50, XR52, XR53, XR54, XR55, XR56, XR57, XR58 | |
XSW1 | | |
YL1 | | |
SA
LAST USED: C TB, CR U, FL W, L XL, Q Z, R TP, SW
DO NOT USE
APPROVALS | DATE
DRAWN BY: G.MANCUSO 07-01-02
CHECKED BY
APPROVED BY
ADEMCO
165 EILEEN WAY
SYOSSET, NEW YORK 11791
PCB (REF) K5583 REV. 7
TITLE 5894 PET IMMUNE WIRELESS PIR
DRAWING NUMBER SA5894.SCH
COMPUTER FILE NAME SA5894.SCH
DATE: 07-01-02
SHEET 1 OF 1


Panasonic
Panasonic
SANYO
Lithium
LITHIUM BATTERY
CR17335
(3V)