MOTOROLA

MC14529B

DUAL 4-CHANNEL ANALOG DATA SELECTOR

The MC14529B analog data selector is a dual 4-channel or single 8-channel device depending on the input coding. The device is suitable for digital as well as analog application, including various one-of-four and one-of-eight data selector functions. Since the device has bidirectional analog characteristics it can also be used as a dual binary to 1-of-4 or a binary to 1-of-8 decoder.

- Data Paths Are Bidirectional
- 3-State Outputs
- Linear "On" Resistance
- Supply Voltage Range = 3.0 Vdc to 18 Vdc
- Capable of Driving Two Low-power TTL Loads or One Low-power Schottky TTL Load over the Rated Temperature Range.

L SUFFIX
CERAMIC
CASE 620

P SUFFIX
PLASTIC
CASE 648

D SUFFIX
SOIC
CASE 751B

ORDERING INFORMATION

MC14XXXBCP Plastic
MC14XXXBCL Ceramic
MC14XXXBD SOIC

T_A = -55° to 125°C for all packages.

MAXIMUM RATINGS* (Voltages Referenced to V_{SS})

Symbol	Parameter	Value	Unit
V_{DD}	DC Supply Voltage	-0.5 to +18.0	V
V_{in}, V_{out}	Input or Output Voltage (DC or Transient)	-0.5 to V_{DD} +0.5	V
I_{in}, I_{out}	Input or Output Current (DC or Transient), per Pin	±10	mA
P_D	Power Dissipation, per Package†	500	mW
T_{stg}	Storage Temperature	-65 to +150	°C
T_L	Lead Temperature (8-Second Soldering)	260	°C

*Maximum Ratings are those values beyond which damage to the device may occur.
†Temperature Derating: Plastic "P and D/DW" Packages: -7.0 mW/°C From 65°C To 125°C
Ceramic "L" Packages: -12 mW/°C From 100°C To 125°C

TRUTH TABLE

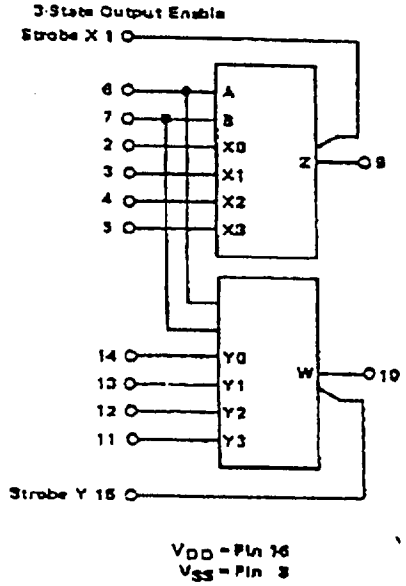
ST_X	ST_Y	B	A	Z	W	
1	1	0	0	X0	Y0	Dual 4-Channel Mode 2 Outputs
1	1	0	1	X1	Y1	
1	1	1	0	X2	Y2	
1	1	1	1	X3	Y3	
1	0	0	0	X0		Single 8-Channel Mode 1 Output (Z and W tied together)
1	0	0	1	X1		
1	0	1	0	X2		
1	0	1	1	X3		
0	1	0	0	Y0		
0	1	0	1	Y1		
0	1	1	0	Y2		
0	1	1	1	Y3		
0	0	X	X	High Impedance		

X = Don't Care

This device contains protection circuitry to guard against damage due to high static voltages or electric fields. However, precautions must be taken to avoid applications of any voltage higher than maximum rated voltages to this high-impedance circuit. For proper operation, V_{in} and V_{out} should be constrained to the range $V_{SS} \le (V_{in}$ or $V_{out}) \le V_{DD}$.

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either V_{SS} or V_{DD}). Unused outputs must be left open.

BLOCK DIAGRAM



V_{DD} = Pin 16
V_{SS} = Pin 8

National Semiconductor

February 1988

CD4538BM/CD4538BC Dual Precision Monostable

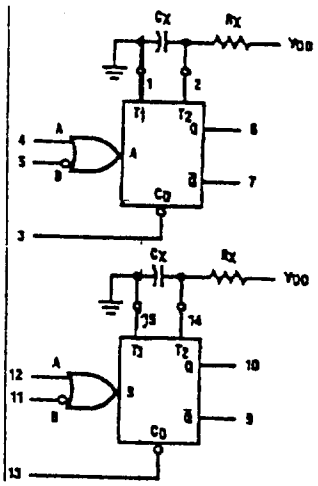
General Description

The CD4538B is a dual, precision monostable multivibrator with independent trigger and reset controls. The device is retriggerable and resettable, and the control inputs are internally latched. Two trigger inputs are provided to allow either rising or falling edge triggering. The reset inputs are active low and prevent triggering while active. Precise control of output pulse-width has been achieved using linear CMOS techniques. The pulse duration and accuracy are determined by external components R_X and C_X. The device does not allow the timing capacitor to discharge through the timing pin on power-down condition. For this reason, no external protection resistor is required in series with the timing pin. Input protection from static discharge is provided on all pins.

Features

- Wide supply voltage range — 3.0V to 15V
- High noise immunity — 0.45 V_{CC} (typ.)
- Low power TTL compatibility — Fan out of 2 driving 74L or 1 driving 74LS
- New formula: $PW_{OUT} = RC$ (PW in seconds, R in Ohms, C in Farads)
- ±1.0% pulse-width variation from part to part (typ.)
- Wide pulse-width range — 1 µs to ∞
- Separate latched reset inputs
- Symmetrical output sink and source capability
- Low standby current — 5 nA (typ.) @ 5 V_{DC}
- Pin compatible to CD4528B

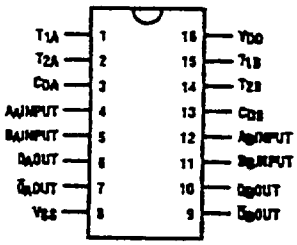
Block and Connection Diagrams



TL/F/6000–1

R_X and C_X are External Components
V_{CC} = Pin 16
V_{SS} = Pin 8

Dual-In-Line Package
CD4538BM
CD4538BC



Top View

TL/F/6000–2

Order Number CD4538B

Truth Table

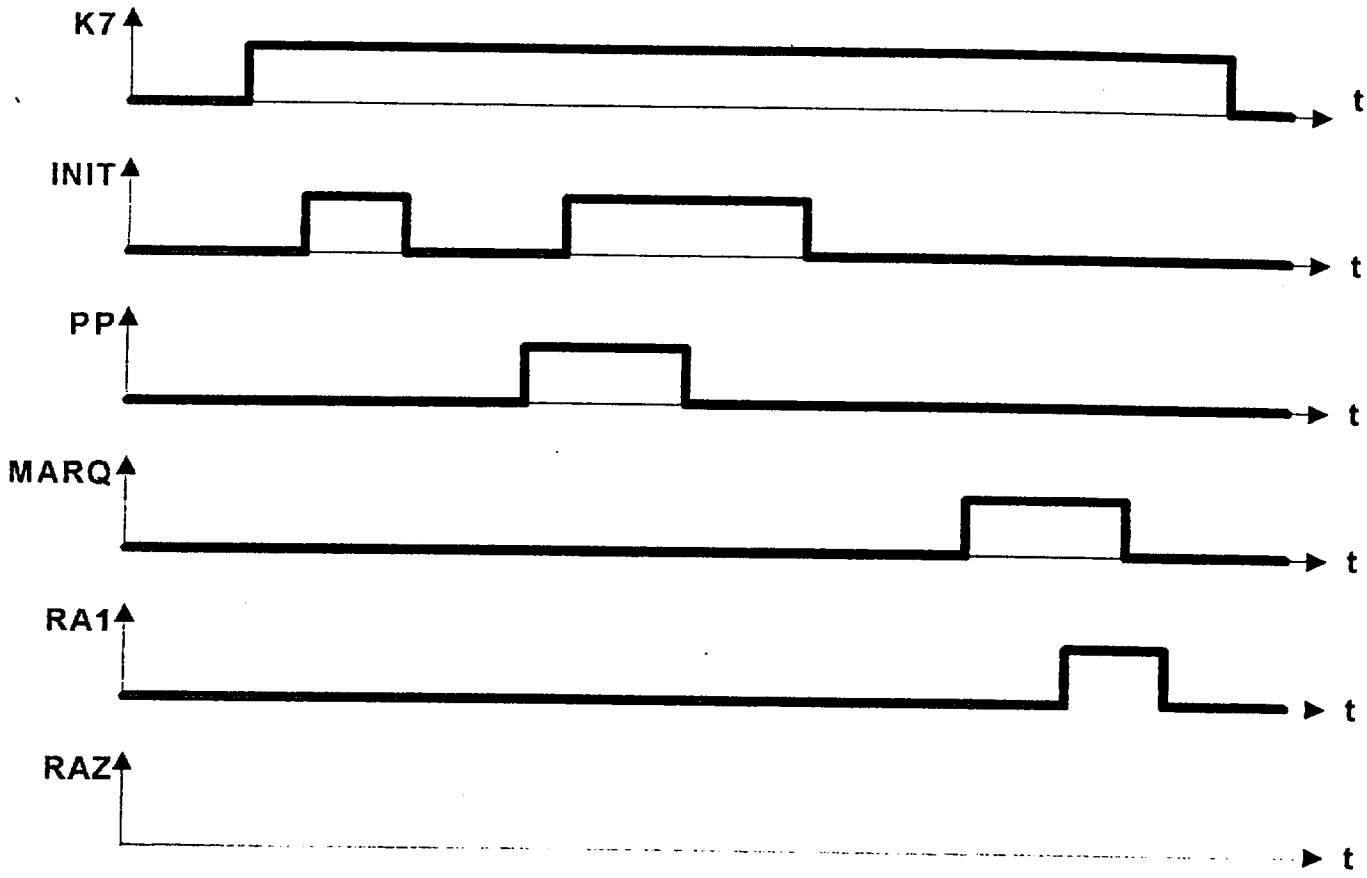
Inputs			Outputs	
Clear	A	B	Q	$\overline{Q}$
L	X	X	L	H
X	H	X	L	H
X	X	L	L	H
H	L	↓	⎍	⎎
H	↑	H	⎍	⎎

H = High Level
L = Low Level
↑ = Transition from Low to High
↓ = Transition from High to Low
⎍ = One High Level Pulse
⎎ = One Low Level Pulse
X = Irrelevant

RRD-B30M105/Printed in U. S. A.

DOCUMENT REPONSE 1 DU CANDIDAT N°

Partie1 / Q4) Chronogrammes de K7, INIT, PP, MARQ, RA1, RAZ

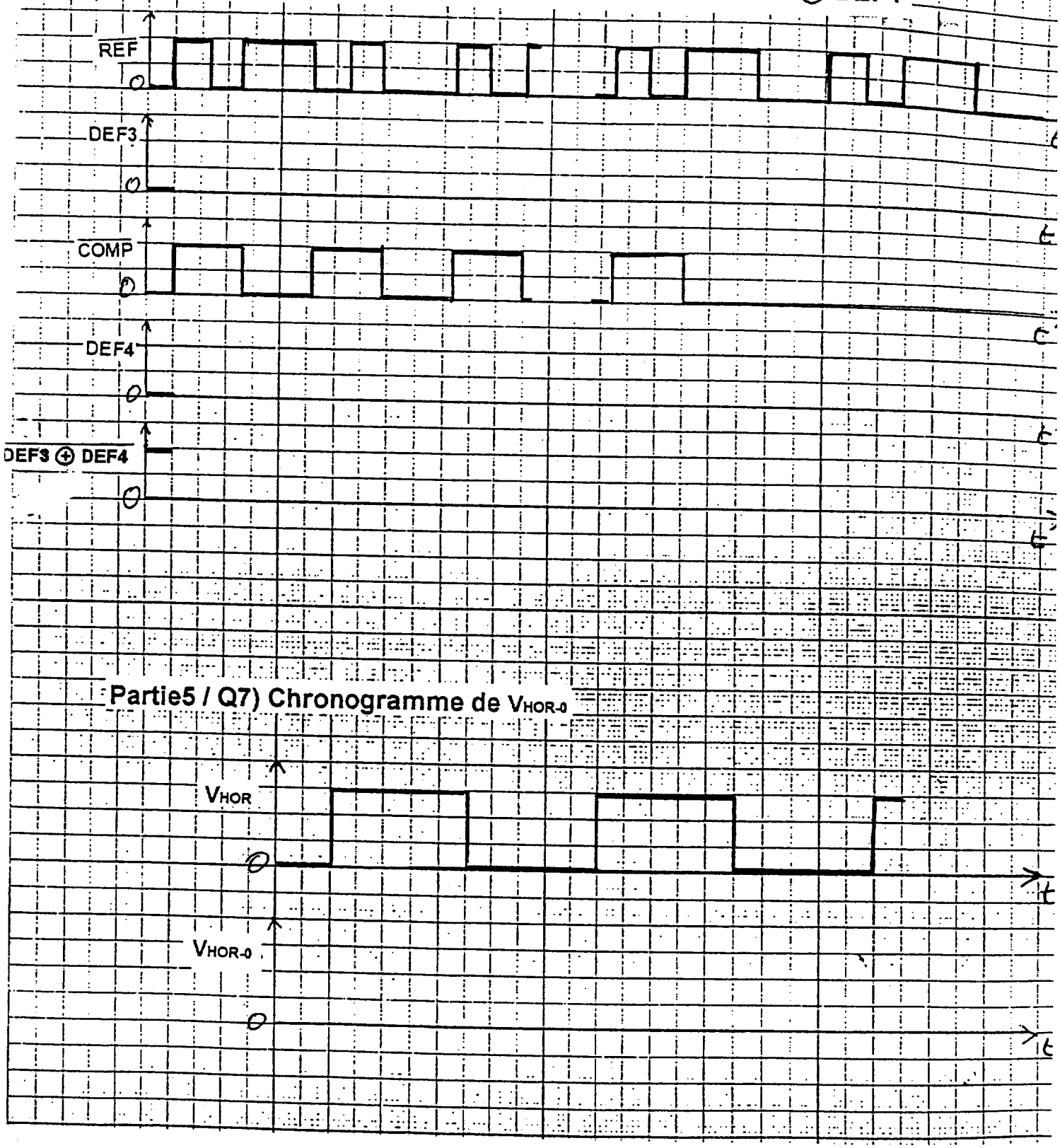


Partie4 / Q1) Tableau récapitulatif

REF	U_{AM}
1	
0	

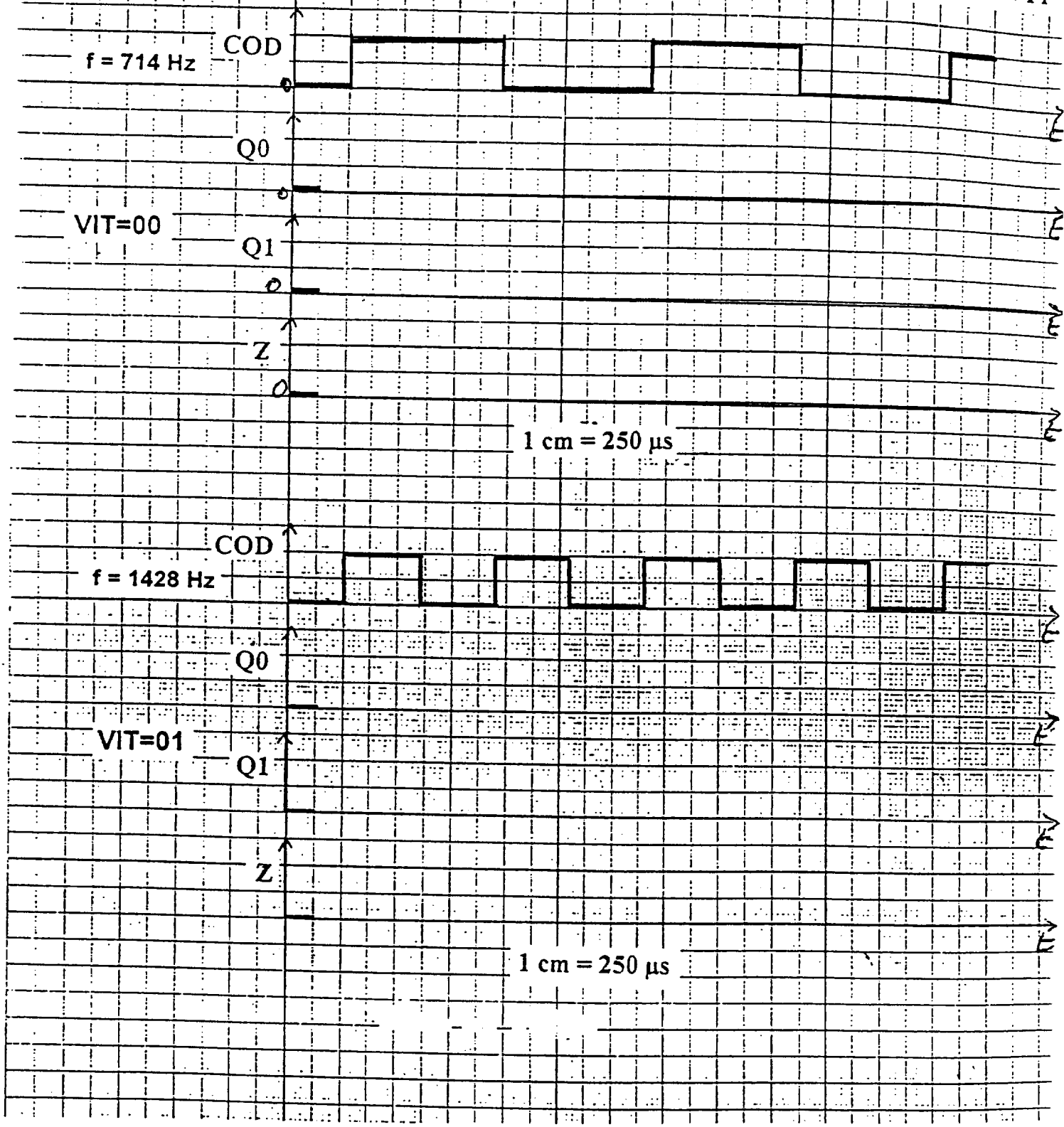
ORIGINAL

Partie 2 / Q4) Chronogrammes de DEF3, DEF4, et $\overline{DEF3 \oplus DEF4}$



Partie5 / Q7) Chronogramme de V_{HOR-0}

PARTIE 5 / Q3) Chronogrammes de Q0, Q1 et Z en fonction de COD et VIT



PARTIE 5 / Q3) Chronogrammes de Q0, Q1 et Z en fonction de COD et VIT