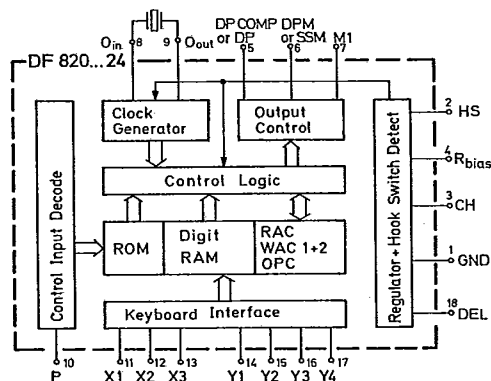# INTEGRATED CIRCUITS FOR TELEPHONE APPLICATIONS

DF820, DF821, DF822, DF823, DF824   Loop-Disconnect Dialler Circuits (18-Pin Plastic package)

CMOS circuits intended for pushbutton telephones, repertory diallers, telex, mobile telephone, security and fire alert systems, emergency single number call makers.
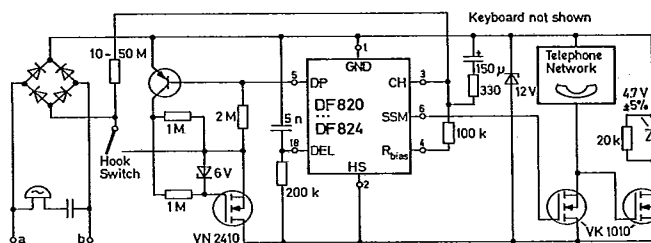
The **DF820** series of monolithic CMOS Loop-Disconnect Diallers each contain all the logic necessary to interface a standard single or double contact keyboard to a telephone system requiring loop-disconnect signalling. External component count is smaller compared with the predecessor types, DF320 series.

Features

— On-chip regulator
— Low standby dissipation – 0.75 μW
— Low dynamic dissipation – max. 450 μW
— On-chip oscillator uses low-cost 3.579545 MHz crystal
— On-chip terminations to inputs
— High input noise immunity
— Single and double contact keyboard interface
— Last number redial up to 24 digits
— Number entry without impulsing
— Dial and redial of internal PABX calls whilst maintaining last external call for redial later
— Indefinite digit storage
— Reset delay allows line breaks to be ignored
— Selectable impulsing mark/space ratios
— Selectable impulsing speed (DF823)
— Selectable interdigit pause (DF822 and DF823)
— Selectable post-impulsing pause (DF820, DF823, DF824)

DF820, DF821, DF822, DF823, DF824 Block Diagram

DF820, DF821, DF822, DF823, DF824 Application Circuit

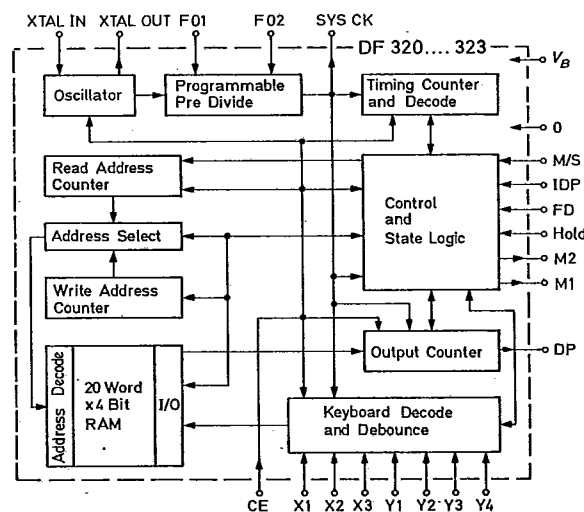**DF320, DF322, DF323   Loop-Disconnect Dialler Circuits** (18-Pin Plastic Package)

CMOS circuits intended for pushbutton telephones, repertory diallers, telex, mobile telephone, security and fire alert systems, emergency single number call makers.

Features

— Operation from 2.5 V to 5.5 V V_{DD} supply (may be unregulated)
— Low standby dissipation – 3 μW typ at 3 V supply
— Low dynamic dissipation – 540 μW typ at 3 V supply
— On-chip oscillator uses low-cost 3.579545 MHz crystal
— Power-on reset
— On-chip pull-up and pull-down terminations to inputs
— High input noise immunity: typ 45% of supply voltage
— Key input debounce circuitry
— Fully static storage up to 20 decimal digits
— Repeat of last number
— Selectable impulsing mark/space ratios of 2:1 or 3:2
— Selectable impulsing speeds of 10, 16, 20 and 932 Hz
— Selectable interdigital pause: 8 or 4 times impulsing period
— Hold facility to delay impulsing
— Fast data input to inhibit debounce circuitry

DF320, DF322, DF323 Block Diagram

Description

The **DF320** series of monolithic CMOS Loop Disconnect Diallers each contain all the logic necessary to interface a standard double-contact keyboard to a telephone system requiring loop-disconnect signalling. External component count is minimized by the inclusion of an on-chip clock oscillator, high-impedance pull-down terminations to programming inputs as well as pull-up terminations to the keyboard giving direct interfacing.

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