



ML231B

MOS TOUCH TUNER

The ML231B is a six-channel sense circuit designed specifically for touch tuning in colour and monochrome television receivers. Using low threshold P-MOS technology, the circuit can be driven directly from two-terminal touch plates — replacing conventional mechanical push-buttons for channel selection. Neons may be used to indicate the selected channel, while the latched output of the ML231B drives the varicap tuner via a bias selection network.

ABSOLUTE MAXIMUM RATINGS

Ambient operating temperature	-10°C to +65°C
Storage temperature	-10°C to +85°C
Supply, V _{SS} -V _{DD}	36V
Varicap voltage V _{SV} w.r.t. V _{SS}	+0.3V

FEATURES

- Six-channel Capability
- Direct Neon or LED Drive
- Low Impedance Drive to Varicap
- Uses 33V Varicap Supply
- Low Current Drain
- Reset O/P Prevents Null State

An additional output is provided which goes high with no channel selected and may be used externally to select channel 3 so as to prevent the existence of a null state.

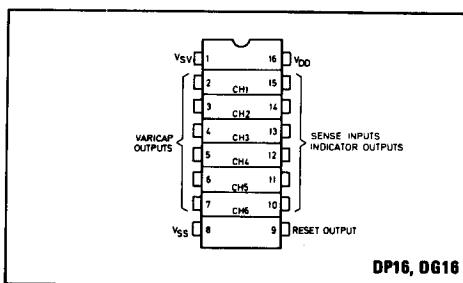


Fig. 1 Pin connections

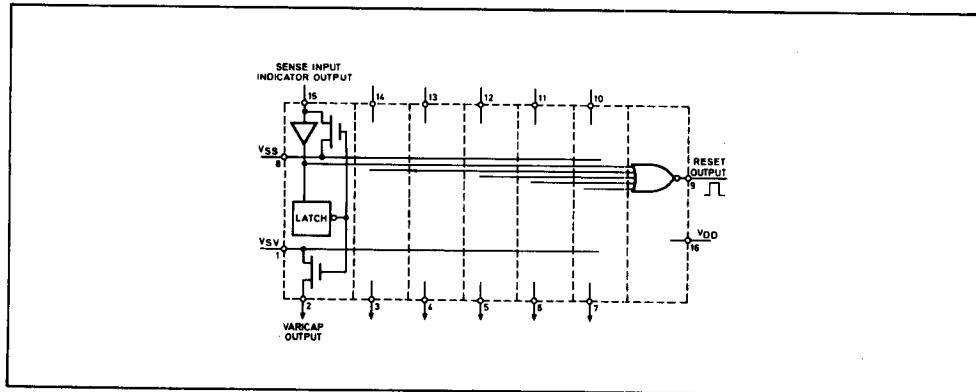


Fig. 2 Functional diagram
(positive logic)

ELECTRICAL CHARACTERISTICS

Test conditions (unless otherwise stated):

 $T_{amb} = +25^\circ\text{C}$, $V_{DD} = 0$, $V_{SS} = V_{SV} = 30\text{V}$ to 36V

Characteristic	Value			Units	Condition
	Min.	Typ.	Max.		
Input current	2	4	1	μA	$V_{in} = 0\text{V}$
Supply current			5.5	mA	
R_{ON} of varicap switch	50	100	250	Ω	
R_{ON} indicator switch	125	250	500	Ω	
Sense input threshold	$0.4V_{SS}$	$0.5V_{SS}$	$0.6V_{SS}$	V	$I_{out} = 10\text{mA}$
Reset O/P voltage high	$V_{SS}-10$			V	$I_{out} = 4\text{mA}$
					$I_{out} = 0.5\text{mA}$

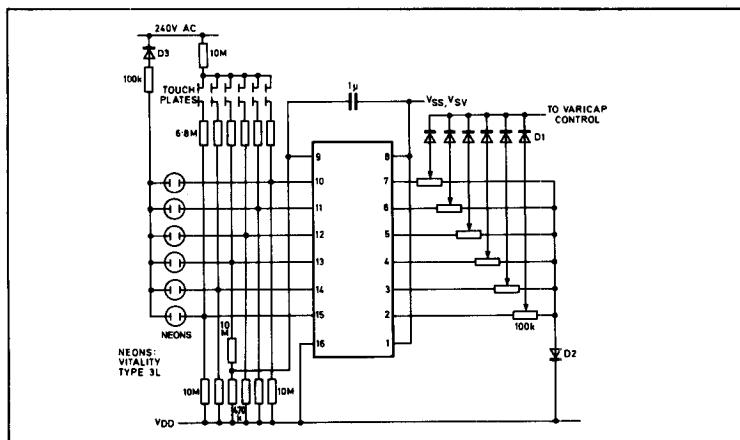


Fig. 3 Typical application circuit

$$\begin{aligned}\text{Reset output} &= \overline{\text{CH1}} \cdot \overline{\text{CH2}} \cdot \overline{\text{CH4}} \cdot \overline{\text{CH5}} \cdot \overline{\text{CH6}} \\ &= \overline{1+2+3+4+5+6+3}\end{aligned}$$