



LB8102

Preliminary

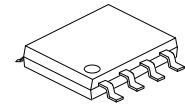
CMOS IC

DiSEqC SWITCH IC

DESCRIPTION

The integrated circuit UTC **LB8102** DiSEqC switch IC is specially designed for satellite multi-switch. It receives and decodes DiSEqC command, Tone Burst and output control for signal switch.

The UTC **LB8102** DiSEqC switch IC provides four-switch control. A 22KHz DiSEqC control signal input to UTC **LB8102** DiSEqC IC can select one of four switches. This feature is used as Satellite Position/Option Switch Control usually in LNB application. The built in decode process is fully compatible with DiSEqC protocol about committed switch.



SOP-8

FEATURES

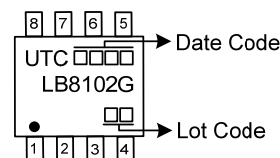
- * Single supply voltage 3.9V~5V.
- * Support DiSEqC 1.0/ 1.1 and Tone Burst command
- * Selectable 4x1 and 2x1 application.
- * Drives up to four switches.
- * Position and option switch command.
- * SOP8 surface mount package

ORDERING INFORMATION

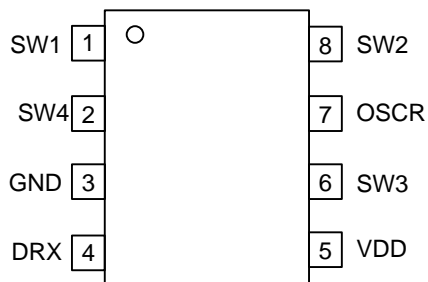
Ordering Number	Package	Packing
LB8102G-S08-R	SOP-8	Tape Reel

<p>LB8102G-S08-R</p> <ul style="list-style-type: none">(1) Packing Type(2) Package Type(3) Green Package	<ul style="list-style-type: none">(1) R: Tape Reel(2) S08: SOP-8(3) G: Halogen Free and Lead Free
--	---

MARKING



■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	SW1	PORT 1/SA output (active high)
2	SW4	PORT 4 output (active high)
3	GND	Ground
4	DRX	DiSEqC data input
5	V _{DD}	V _{DD}
6	SW3	PORT 3 output (active high)
7	OSCR	OSC pin
8	SW2	PORT 2/SB output (active high)

■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	-0.6~7	V
Supply Current	I_{CC}	100	mA
Driving Current	I_{omax}	5	mA
Power Dissipation ($T_{AMB}=25^{\circ}C$)	P_D	300	mW
Operating Temperature	T_{OPR}	-40 ~ +70	$^{\circ}C$
Storage Temperature	T_{STG}	-50 ~ +125	$^{\circ}C$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

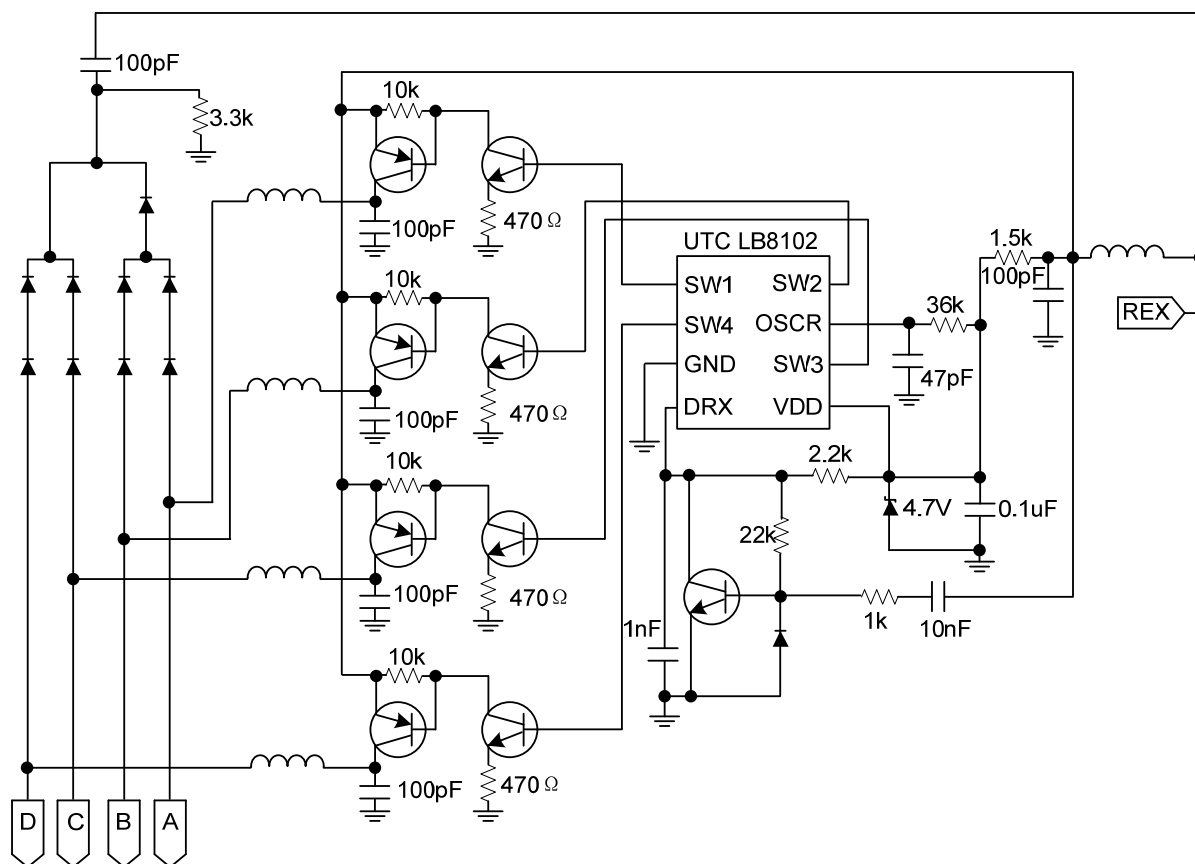
■ ELECTRICAL CHARACTERISTICS ($V_{DD}=5V$, $T_{AMB}=25^{\circ}C$, unless otherwise stated)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Voltage	V_{DD}		3.9	5	5.5	V
Operating Current	I_{DD}	$V_{DD}=5V\pm10\%$, $V_{SS}=0V$, $T=0 \sim 70^{\circ}C$ No Load	100	150	300	μA
Output Leakage Current	$I_{LEAKAGE}$	$V_{DD}=5V\pm10\%$, $V_{SS}=0V$, $T=0 \sim 70^{\circ}C$			10	μA
Port 1/2/3/4 Output Voltage High	V_{SW_HIGH}	Port 1/2/3/4= -50 μA	$V_{DD}-1.0$	$V_{DD}-0.7$	V_{DD}	V
Port 1/2/3/4 Output Voltage Low	V_{SW_LOW}	Port 1/2/3/4=5mA	0	0.3	0.5	V
Osc Frequency	f_o	With $R_{osc}=36K$, $C_{osc}=47p$		350		KHz

■ DISEQC CONTROL SIGNAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
22 KHz Tone	f_{TONE}		17.6	22	26.4	KHz
22 KHz Duty Cycle	D_{TONE}	Over 0.7Vpp	40	50	60	%
PWK Baseband Timing	T_{PWK}	One-third bit timing for PWK (pulse width keying)	400	500	600	μs
DRX Signal Input Threshold	V_{DRXTH}	$V_{DD}=5V\pm10\%$, $V_{SS}=0V$, $T=-40 \sim 70^{\circ}C$	0.35	0.45	0.55	V_{DD}
Noise Immunity	V_N	DC-1MHz noise present at DRX pin			0.5	V_{PP}
Switch Time	T_{SW}	Switch from end of DiSEqC satellite message (including parity) to when output is stable.			5	ms

■ TYPICAL APPLICATION CIRCUIT



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.