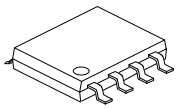
DISEqC SWITCH IC



SOP-8

■ 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.

■ FEATURES

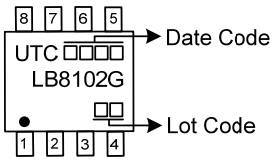
* Single supply voltage 3.9V~5V.
* Support DiSEqC 1.0/ 1.1 and Tone Burst commend
* Selectable 4x1 and 2x1 application.
* Drives up to four switches.
* Position and option witch commend.
* SOP8 surface mount package

■ ORDERING INFORMATION

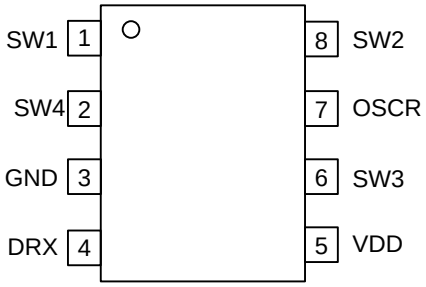
Ordering Number	Package	Packing
LB8102G-S08-R	SOP-8	Tape Reel

LB8102G-S08-R (1)Packing Type (2)Package Type (3)Green Package	(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	Iomax	5	mA
Power Dissipation (T_{AMB}=25°C)	P_D	300	mW
Operating Temperature	T_{OPR}	-40 ~ +70	°C
Storage Temperature	T_{STG}	-50 ~ +125	°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°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±10%, V_{SS}=0V,T=0 ~ 70°C No Load	100	150	300	uA
Output Leakage Current	$I_{LEAKAGE}$	V_{DD}=5V±10%, V_{SS}=0V,T=0 ~ 70°C			10	uA
Port 1/2/3/4 Output Voltage High	V_{SW_HIGH}	Port 1/2/3/4= -50uA	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 Rosc=36K, Cosc=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	us
DRX Signal Input Threshold	V_{DRXTH}	V_{DD}=5V±10%, V_{SS}=0V,T=-40 ~ 70°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