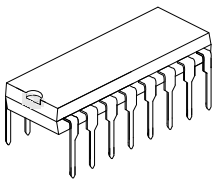
RBA5104 Preliminary ***LINEAR INTEGRATED CIRCUIT***

FAN REMOTE CONTROL ENCODER



DIP-16

■ DESCRIPTION

UTC RBA5104 is a remote control encoder mainly used for Fan remote control, air cleaner, humidifier, heater and other electrical home appliance remote control application. 2 bits custom code options and maximum 8 input channels offers great freedom in application. **UTC RBA5104** uses a special coding technique to increase noise immunity to a very great extent.

■ FEATURES

* Wide operation voltage: V_{CC}=2.2~4.0V
* Noise immunity technique
* 2 bits custom code
* 8 input channels maximum
* Uses 455kHz crystal oscillator
* Key-in oscillation, reduce static current dissipation.
* 38kHz carrier transmits output.
* LED indicates work state

■ ORDERING INFORMATION

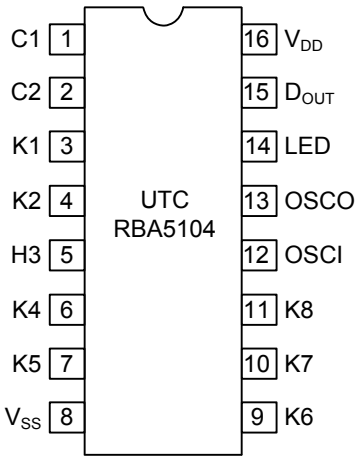
Ordering Number		Package	Packing
Lead Free	Halogen Free		
RBA5104L-D16-T	RBA5104G-D16-T	DIP-16	Tube

Note: xx: Output Voltage, refer to Marking Information.

RBA5104G-D16-T

(1)Packing Type	(1) T: Tube
(2)Package Type	(2) D16: DIP-16
(3)Halogen Free	(3) L: Lead Free, G: Halogen Free

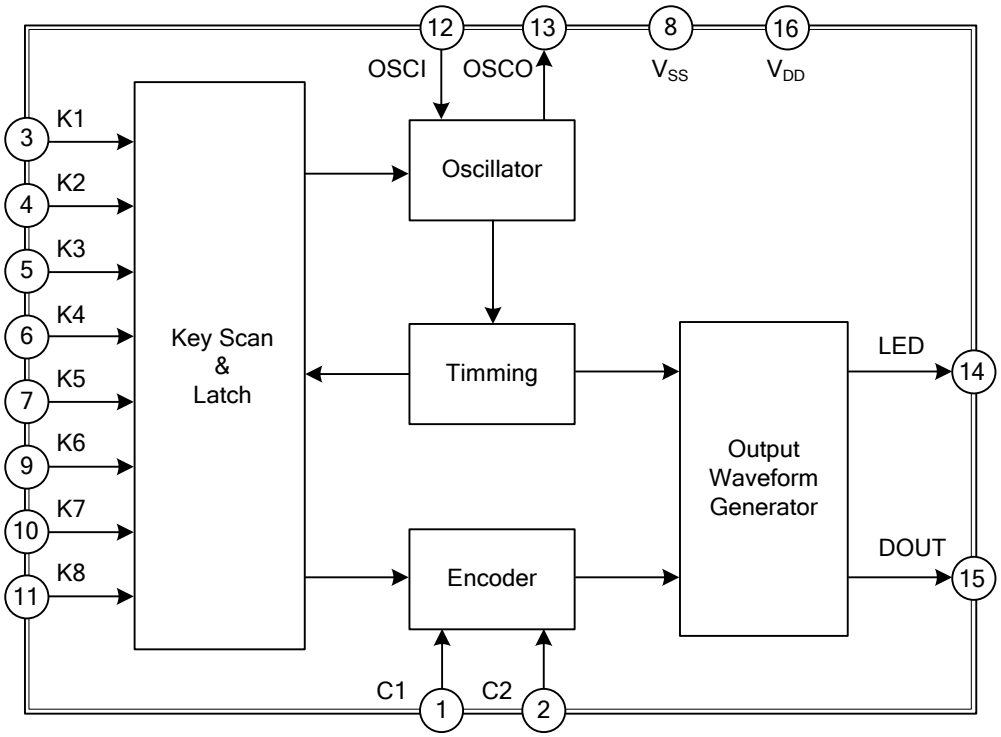
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1~2	C1, C2	Custom Code Option: Built In Pull-Up Resistor, Grounding Denote “0”, Floating Denote “1”.
3~7	K1~K5	Key Input Pins, Built In Pull-Up Resistor.
8	V_{SS}	Negative Power Supply.
9~11	K6~K8	Key Input Pins, Built In Pull-Up Resistor.
12	OSCI	455kHz Oscillator Input Pin.
13	OSCO	455kHz Oscillator Output Pin.
14	LED	LED Driver Output Indication
15	DOUT	Code Data Output (Contain 38kHz Carrier Signal)
16	V_{DD}	Positive Power Supply.

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING (T_A=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{DD}	-0.3~6.0	V
Input/Output Voltage	V_{IN}	V_{SS}-0.3V~V_{DD}+0.3V	V
Power Dissipation	P_D	500	mW
Operating Temperature	T_{OPR}	-10 ~ +70	°C
Storage Temperature	T_{STG}	-40~+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.

■ DC ELECTRICAL CHARACTERISTICS (T_A=25°C, V_{DD}=3V, unless other specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V_{DD}		2.0	3.0	4.0	V
Static Power Dissipation	I_{SB}	no load, oscillation is stopped, C1=C2=1		0.1		μA
		no load, oscillation is stopped, C1=C2=0		1.8		μA
DOUT Output High Current	I_{OH}	V_{OH}=2.7V		2.5		mA
DOUT Output Low Current	I_{OL}	V_{OL}=0.3V		-0.74		mA
High Input Voltage	V_{IH}		0.7V_{DD}		V_{DD}	V
Low Input Voltage	V_{IL}		0		0.3V_{DD}	V
LED High Output Current	I_{OH}	V_{OH}=2.7V		2.5	10	mA
LED Low Output Current	I_{OL}	V_{OL}=0.3V		-1.0		mA
Oscillation Frequency	f_{OSC}			455		kHz
Pull-up resistor at C1, C2	R_C	V_{IN}=0V		4		MΩ
Pull-up resistor at K1~K8	R_i	V_{IN}=0V		250		KΩ

■ TYPICAL APPLICATION CIRCUIT