



HES-3017 REMOTE CAR CONTROLLER RX

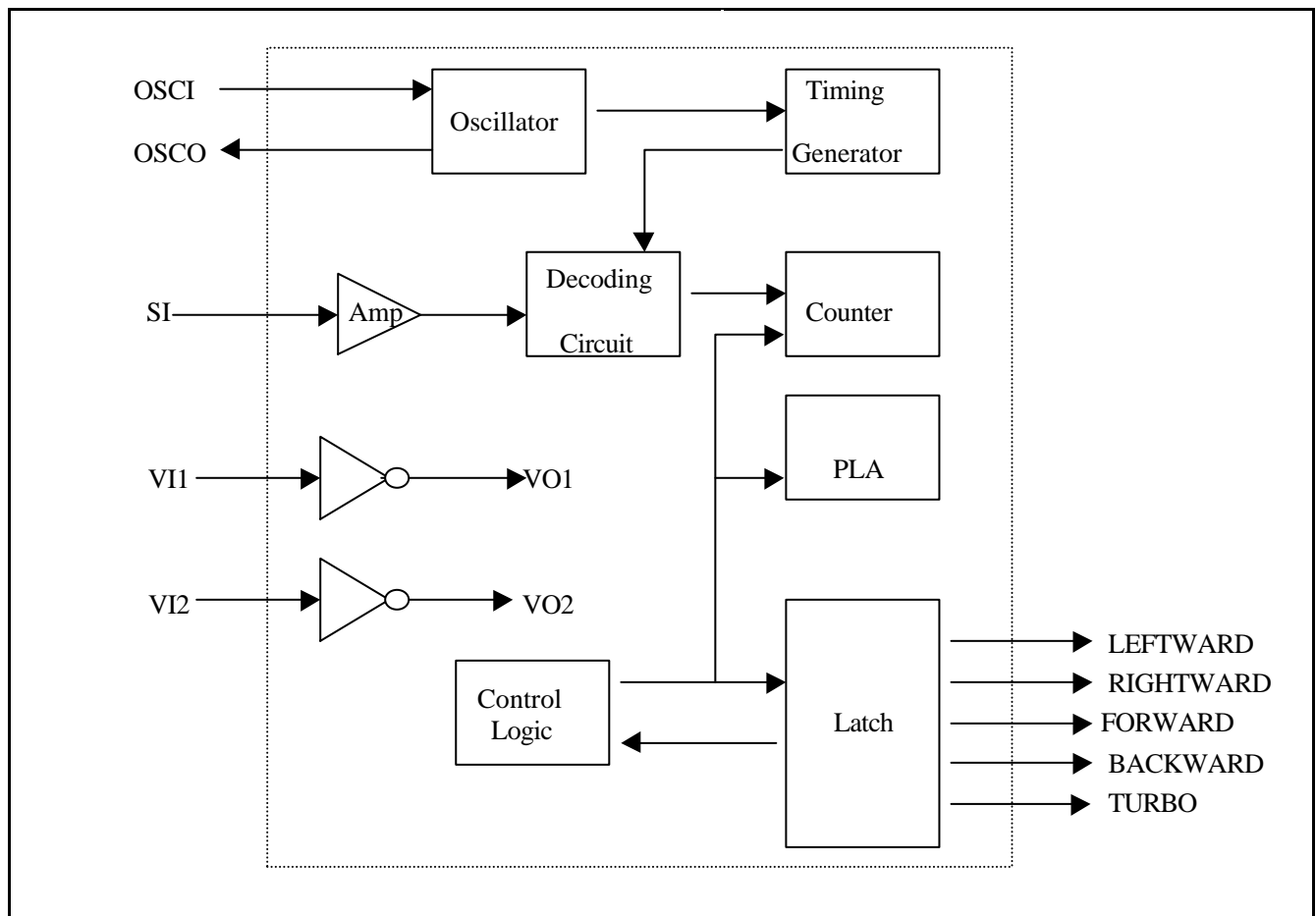
1. General Description

The HES-3017 is a CMOS LSI designed for remote controlled car RX applications. Combined with HES-3018, 5 function motions (i.e. forward, backward, rightward, leftward and turbo function) of the remote controlled car can be implemented.

2. Features

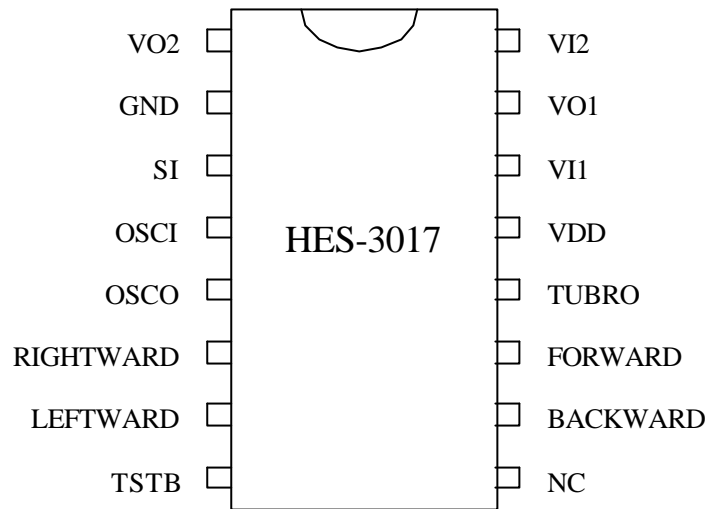
- ◆ Auto-centering steering.
- ◆ Few external components are needed.
- ◆ Low stand-by current.
- ◆ RC oscillator.
- ◆ Wide operating voltage range: 2.5V~5.5V.

3. Function Block Diagram





4. Pin Configuration



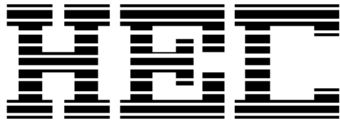
5. Pin Descriptions

Pin	Name	I/O	Function
1	VO2	O	Inverter 2 output
2	GND	I	Negative power supply
3	SI	I	Serial data input (encoding signal)
4	OSCI	I	Oscillator input
5	OSCO	O	Oscillator output
6	RIGHTWARD	O	Rightward function output, active high
7	LEFTWARD	O	Leftward function output, active high
8	TSTB	I	For testing, active low
9	NC		No internal connection
10	BACKWARD	O	Backward function output, active high
11	FORWARD	O	Forward function output, active high
12	TURBO	O	TURBO function output, active high
13	VDD	I	Positive power supply
14	VI1	I	Inverter 1 input
15	VO1	O	Inverter 1 output
16	VI2	I	Inverter 2 input

6. Absolute Maximum Ratings

(All voltage referenced to GND)

Item	Symbol	Rating	Unit
Supply Voltage	V_{DD}	0 ~ 6.5	V
Input/ Output Voltage	V_I/V_O	GND-0.3V ~ VDD+0.3V	V
Operating Temperature	T_{DD}	0~70	
Storage Temperature	T_{ST}	-20 ~ 125	



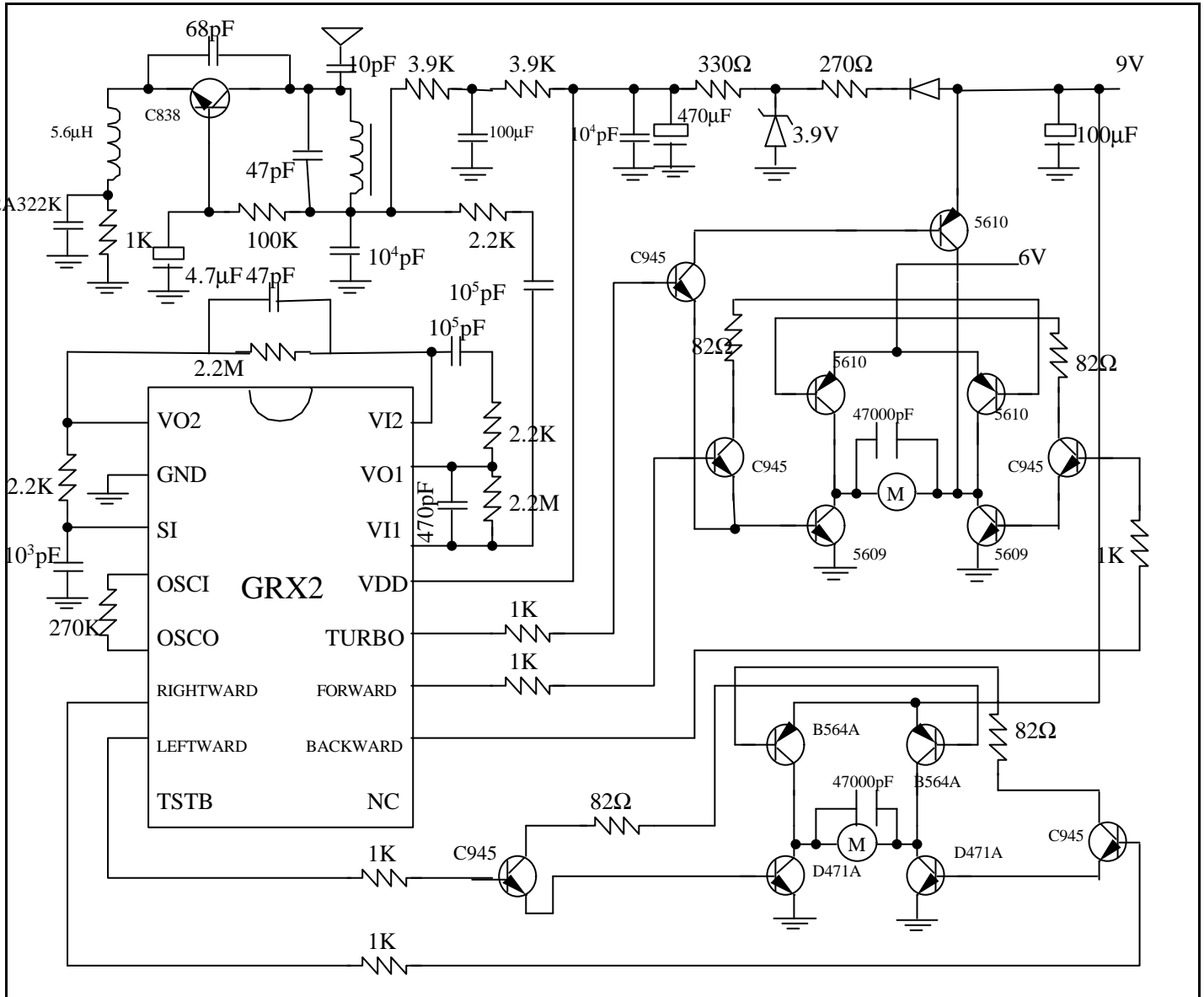
7. Electrical Characteristics

(All voltage referenced to GND, VDD = 4V, Ambient temperature=25)

Parameters	Symbol	Condition	Min.	Typ.	Max.	Unit
Operating Voltage	V _{DD}		2.5	4.0	5.5	V
Operating Current	I _{DD}	No Load		100	160	μA
FORWARD/ LEFTWARD Output Drive Current	I _{DI}	Output pull to GND	6	9	12	mA
FORWARD/ LEFTWARD Output Sink Current	I _{SI}	Output pull to VDD	5	7	10	mA
BACKWARD/RIGHTWARD/ TURBO Output Drive Current	I _{D2}	Output pull to GND	2	3.5	5	mA
BACKWARD/RIGHTWARD/ TURBO Output Sink Current	I _{S2}	Output pull to VDD	5	7	10	mA
VO1/VO2 Output Drive Current	I _{D3}	Output pull to GND	0.5	1	2	mA
VO1/VO2 Output Sink Current	I _{S3}	Output pull to VDD	0.3	0.8	1.2	mA
VII/VI2 Input Voltage	V _{VI}		0.4			V
SI Input Voltage	V _{SI}		2.5			V
RC Oscillator Frequency	F _{OS}	R _{OSC} =270KΩ	90	100	110	kHz
Effect Decoding Frequency Variation	F _T		-20%		20%	



8. Application Circuit



NOTICE:

1. The information contained herein could be changed without notice owing to product and /or technical improvements. Please make sure before using the product that the information you are referring to is up-to-date.
2. No responsibility is assumed by us for any consequence resulting from any wrong or improper operation, etc.of the product.