深圳市富满电子有限公司
SHENZHEN FUMAN ELECTRONICS CO., LTD.

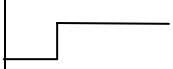
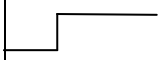
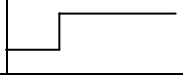
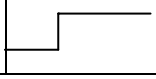
SCTX6ARX6A(文件编号：S&CIC0538)
REMOTE CONTROLLER WITH SECEN FUNCTIONS

Features

- Wide operating SCTX6A voltage range: 3.6V to 12V; SCRX6A voltage range:3.0V to 12V
- SCTX6A very low stand-by current
- Auto power-OFF function for SCTX6A
- Few external components needed
- SCR6XA built-in 3.6v zener
- 7-function remote controller controlling Forward/ Backward/ Turbo/ Rignt-turn/ Left turn/ two function keys

General Description

The SCTX6A/RX6A are a pair of CMOS LSIs designed for remote controlled carapplications. The SCRX6A/RX6A have seven control keys controlling the motions (i.e. forward, backward, rightward, leftward, two function keys, and the turbo function) of the remote controlled car. SCTX6A/RX6A have Forward (Backward) combined with the turbo application. During normal operation without Turbo, Forward (Backward) output from SCRX6A sends a 60 Hz signal. When Forward (Backward) and Turbo are both in effect, the output signal becomes completely high. This function is depicted as below.

Input condition	**O/P Condition**		
	Forward	Backward	Turbo
Forward	 =60Hz	Low	Low
Backward	Low	 =60Hz	Low
Forward +turbo	 =high	Low	 = high
Backward +turbo	Low	 = high	 = high

An Auto Shut-Off mechanism is built-in accoding to Toy Safety Requirement and effective during over-current situation in motor driver. The active high input applying to this Auto Shut-Off pin will turn off the motor. (VT pin, when unused, has to be connected to ground. The transfer point = 1.4V)

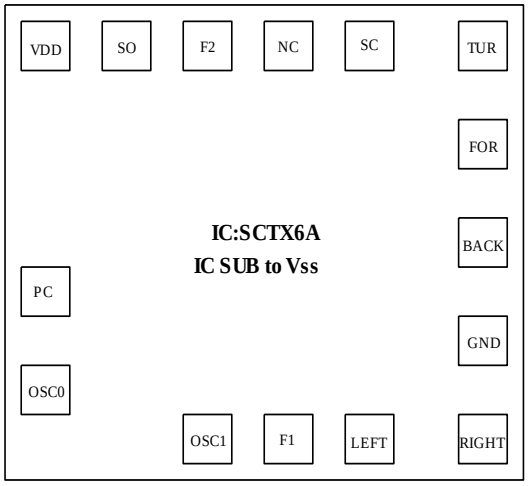
Absolute Maximum Ratings

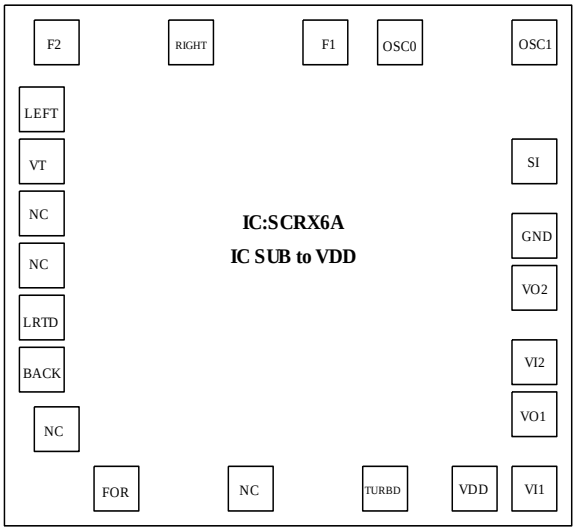
DC Supply Voltage----------0.3V to 5.0V
Input/Output Voltage----------GND –0.2V to VDD+0.2V
Operating temperature---------- -10℃ to 60℃
Storage Temperature---------- -25℃ to 125℃
*Comment**

Never allow a stress the values listed under "Absolute Maximum Ratings", otherwise the device would suffer from a permanent damage. Nor is a stressat the listed value be allowed persist over a period, since an extended exposure to the absolute maximumrating condition may also affect the reliability of thedevice, if not causing a damage thereof.

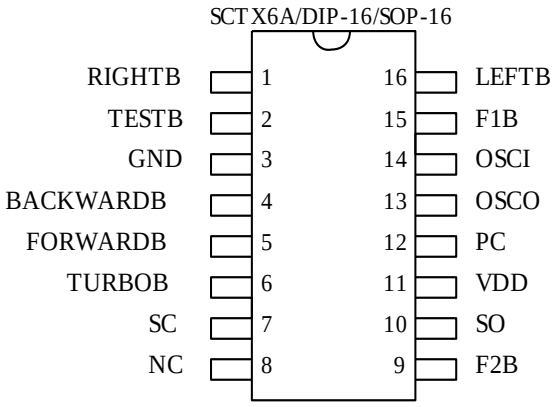
SCTX6ARX6A(文件编号：S&CIC0538)
REMOTE CONTROLLER WITH SECEN FUNCTIONS

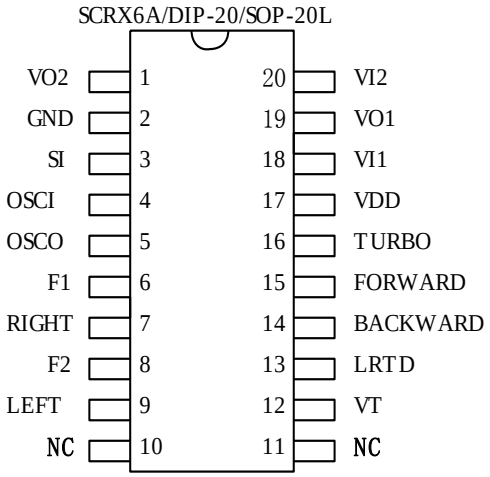
Pad Assignment

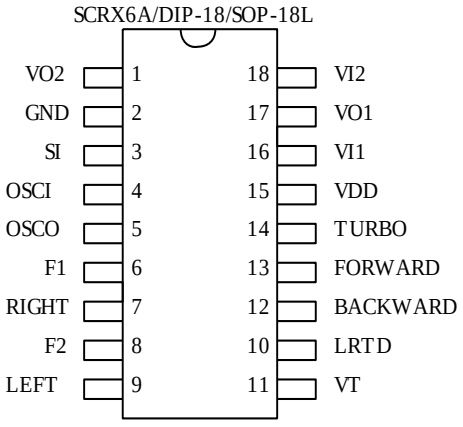




PIN ASSIGNMENTS







SCTX6ARX6A(文件编号：S&CIC0538)
REMOTE CONTROLLER WITH SECEN FUNCTIONS

Electrical Characteristics

SCTX6A

（VDD=9V，Fosc=128KHz，TA=25℃，unless otherwise specified）

Parameter	Symbol	Min.	Typ.	Max.
Operating Voltage	VDD	3.6V	9V	12V
Operating Current	IDD	-	-	1.5mA
Stand-by Current	ISTB	-	-	5uA
DC O/P Driving Current (RF)	Idrive	-	10mA	-
AC O/P Driving Current (IR)	Idrive	-	6mA	-
AC O/P Frequency	Faudio	-	500Hz	-

SCRX6A

（VDD=9V，Fosc=128KHz，TA=25℃，unless otherwise specified）

Parameter	Symbol	Min.	Typ.	Max.
Operating Voltage	VDD	3.0V	9V	12V
Operating Current	IDD	-	30mA	-
O/P Driving Current	Idrive	5mA	-	-
O/P Driving Current（F1-F2）	Idf	5mA	-	-
Effect Decoding Frequency Variation	Itolerance	-50%	-	50%

Pin Description

SCTX6A

Pin No.	Designation	Desctiption
1	RIGHTB	The rightward function will be selected when this pin is connected to GND
2	TESTB	This pin is used for testing mode
3	GND	Negative power supply
4	BACKWARDB	The backward function will be selected when this pin is connected to GND
5	FORWARDB	The forward function will be selected when this pin is connected to GND
6	TURBOB	The turbo function will be selected when this pin is connected of GND
7	SC	Output pin of the encoding signal with carrier frequency
8	NC	
9	F2B	F2 function select
10	SO	Output pin of the encoding signal without carrier frequency
11	VDD	Positive power supply
12	PC	Power control output pin
13	OSCO	Oscillator output pin
14	OSCI	Oscillator input pin
15	F1B	F1 function select
16	LEFTB	The leftward function will be selected when this pin is connected t GND

SCTX6ARX6A(文件编号：S&CIC0538)
REMOTE CONTROLLER WITH SECEN FUNCTIONS

SCRX6A(PIN20)

Pin No.	Designation	Desctiption
1	VO2	Inverter 2 output pin for power amplify
2	GND	Negative power supply
3	SI	Input pin of the encoding signal
4	OSCI	Oscillator input pin
5	OSCO	Oscillator output pin
6	F1	F1 function output pin
7	RIGHT	Rightward output pin
8	F2	F2 function output pin
9	LEFT	Leftward output pin
10	NC	
11	NC	
12	VT	Auto shut-OFF input pin If VT voltage exceeds 1.4V, all outputs shut off automatically
13	LRTD	Left/right turbo disable pin
14	BACKWARD	Backward output pin
15	FORWARD	Forward output pin
16	TURBO	TURBO output pin
17	VDD	Positive power supply
18	VI1	Inverter 1 input pin for signal amplify
19	VO1	Inverter 1 output pin for signal amplify
20	VI2	Inverter 2 input pin for signal amplify

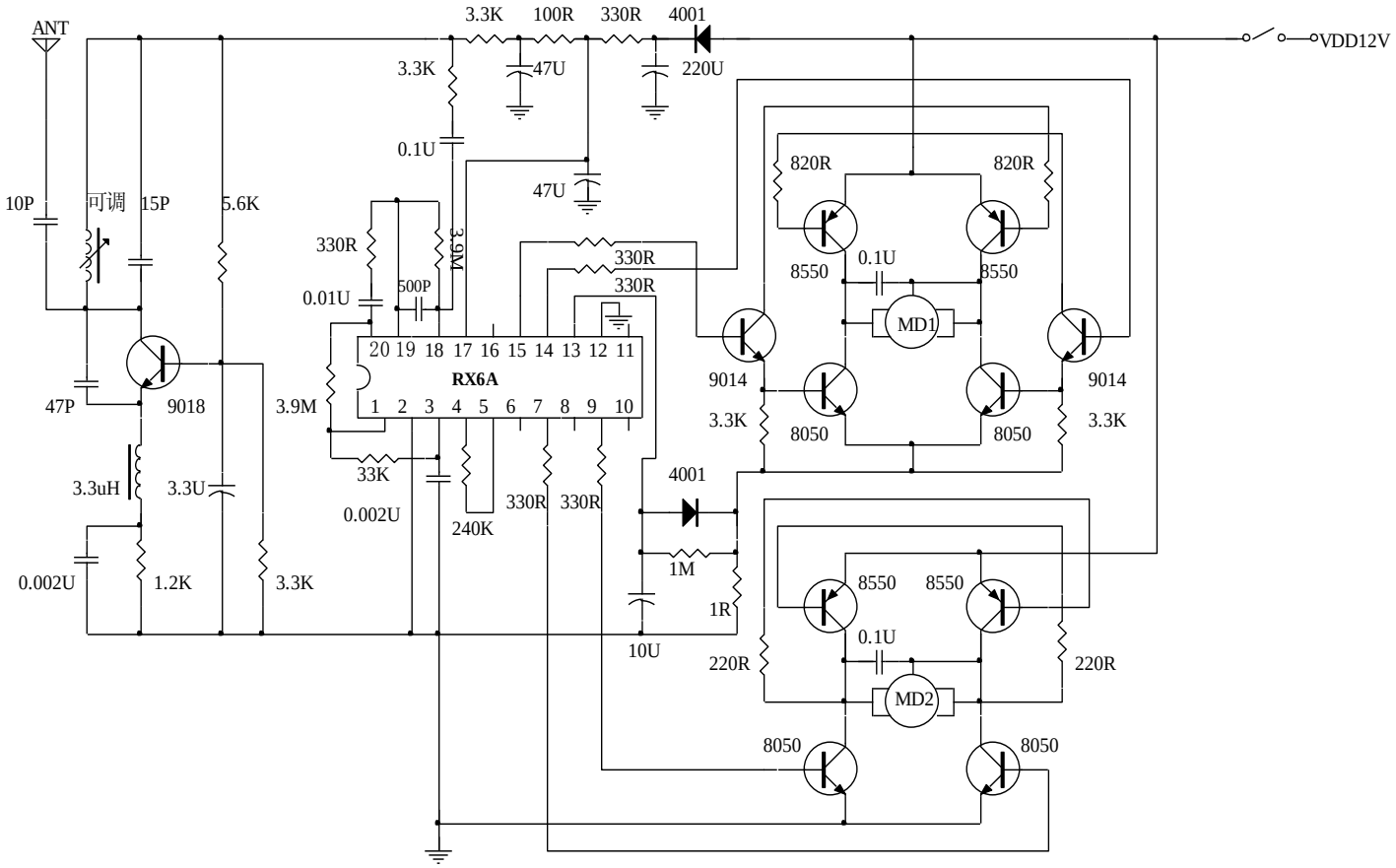
SCRX6A(PIN18)

Pin No.	Designation	Desctiption
1	VO2	Inverter 2 output pin for power amplify
2	GND	Negative power supply
3	SI	Input pin of the encoding signal
4	OSCI	Oscillator input pin
5	OSCO	Oscillator output pin
6	F1	F1 function output pin
7	RIGHT	Rightward output pin
8	F2	F2 function output pin
9	LEFT	Leftward output pin
10	VT	Auto shut-OFF input pin If VT voltage exceeds 1.4V, all outputs shut off automatically
11	LRTD	Left/right turbo disable pin
12	BACKWARD	Backward output pin
13	FORWARD	Forward output pin
14	TURBO	TURBO output pin

15	VDD	Positive power supply
16	VI1	Inverter 1 input pin for signal amplify
17	VO1	Inverter 1 output pin for signal amplify
18	VI2	Inverter 2 input pin for signal amplify

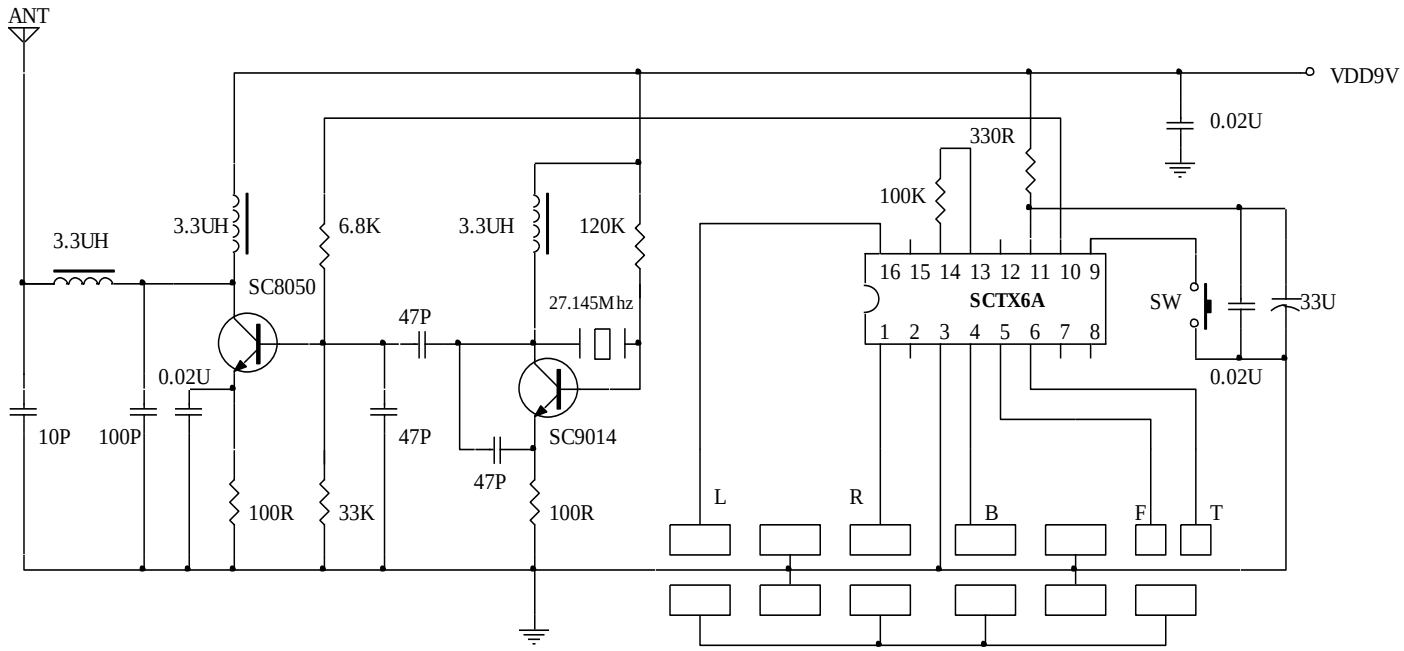
APPLICATION CIRCUIT

1、 SCRX6A



SCTX6ARX6A(文件编号：S&CIC0538)
REMOTE CONTROLLER WITH SECEN FUNCTIONS

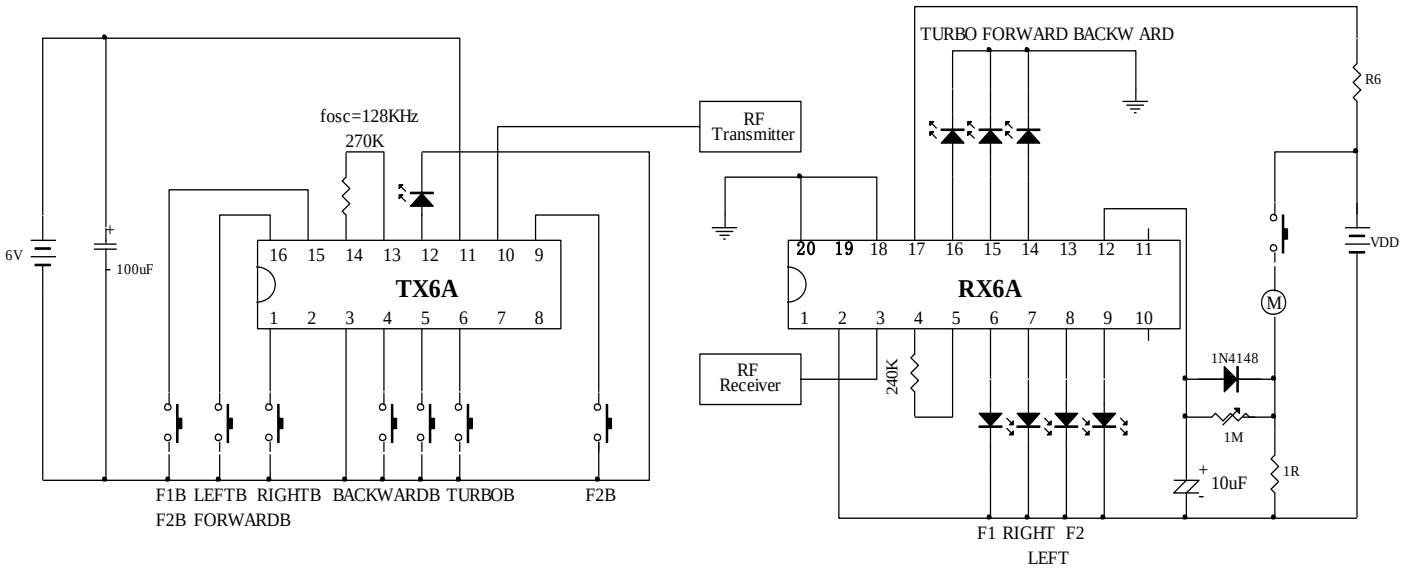
2、 SCTX6A



Testing Circuit

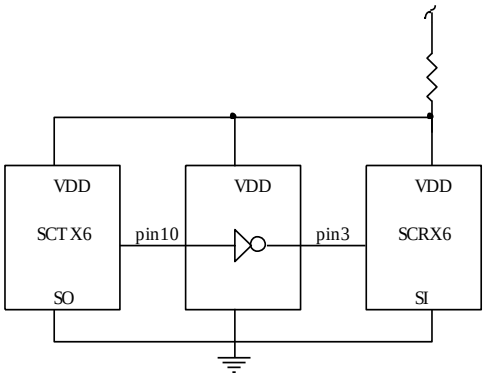
Fosc for（SCRX6A）≦100KHz

Fosc for（SCTX6A）≦100KHz



SCTX6A output pin (so) has an inverted phase with SCRX6A input (SI). If SCTX6A&SCRX6A are connected without using a RF module. An inverter has to be inserted between this 2 pins.

SCTX6ARX6A(文件编号：S&CIC0538)
REMOTE CONTROLLER WITH SECEN FUNCTIONS



RX6A R6 INDEX

VDD	(V)R6
12V	270 Ω
9V	180 Ω
6V	330 Ω