

IRDC369 are infrared remote control decoding IC. That decode NEC 6121/2 infrared format and output data to synchronous serial data output port (SCL and SDA) which is I²C[®] compatible. Its application includes TV, TV TUNNER, VCR, Multimedia, CD, VCD, DVD player and etc.

FEATURE :

Operating voltage range : 4.5V ~ 5.5V 。

Operating temperature range : 0 ~ 70 。

Storage temperature range : -65 ~ 150 。

Input voltage : -0.3V ~ +6.0V

Out voltage : -0.3V ~ +6.0V

Power consumption: less than 5 m A at 18.4 HZ

I/O : I_{OH}= 7 m A , I_{OL}=10 m A

I²C frequency : SCL <100K

IR valid distance: : 12 Meter (use JAECS standard remote control)。

IR valid distance at angle 25° : 8 Meter (use JAECS standard remote control)。

IC PACKAGE :

IRDC369P : 18PIN DIP 300 mil 。

IRDC369M : 18 PIN SOP(SOIC) 300 mil 。

.Pin description:

SYMBOL	PIN NO.	TYPE	FUNCTION
VDD	14	-	POWER
VSS	5	-	GROUND
OSCI	16	I	* XTAL type : Crystal input terminal or external clock input pin.
OSCO	15	I/O	* XTAL type: Output terminal for crystal oscillator or external clock input pin.
SDA	6	I/O	I ² C Data
SCL	2,3	I	I ² C Clock
PB0,PB1	17,18	O	GPIO, be control by master
PA1,PA2,PA3	7,8,9	I	GPIO, be reade by master
PA4,PA5,PA6	10,11,12	O	GPIO, be control by master
PA7	13	O	When the IRDC369 decoded code 12H, the pin will change it from Hi to Low around 55ms.
PB2	1	I	IR signal IN
RESET	4	I	Input pin with Schmitt trigger. If this pin remains at logic low, the controller will keep in reset condition.

POWER ON / RESET GPIO STATUS

SYMBOL	PIN NO.	TYPE	POWER ON RESET GPIO INITIAL STATUS
SDA	6	I/O	-
SCL	2,3	I	-
PB0,PB1	17,18	O	LOW
PA4,PA5,	10,11	O	LOW
PA6,PA7	12,13	O	HI

TYPE 1 is input, 0 is output , I/O is bi-direction .

Function description :

. READ REMOTE CONTROLLER DATA :

1. When IRDC369 decode a valid IR signal. It will save up the data to I²C buffer memory.. IRDC369 will reply data via I²C bus to master device. And clear the I²c buffer memory to 0xFF.
2. When IRDC369 decode a valid IR signal over 1 sec. The I²C buffer memory will be clear to 0xFF automatic.
3. When remote controller key pressed, there will generation repeat code at every 108 m s .

I²C command sequence as below :

MASTER_START → 65 → SLAVE_ACK → SLAVE_REPLY_REMOTE DATA → MASTER_ACK
→ MASTER_STOP

. READ IRDC369 PORT A

DATA VALUE	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
PORTA STATUS	0	PA7	PA6	PA5	PA4	PA3	PA2	PA1

MASTER_START → 67 → SLAVE_ACK → SLAVE REPLY PORTA DATA → MASTER_ACK → MASTER_STOP

. READ IRDC369 SECRET CODE 0X62

DATA VALUE	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
SECRET CODE	0	1	1	0	0	0	1	0

MASTER_START → 69 → SLAVE_ACK → SLAVE REPLY 0X62 → MASTER_ACK → MASTER_STOP

. WRITE TO IRDC369 PORT A

WRITE VALUE	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
PORTA STATUS	X	1	1/0	1/0	1/0	X	X	X

MASTER_START → 66 → SLAVE_ACK → MASTER WRITE TO PORTA DATA → SLAVE_ACK
→ MASTER_STOP

. WRITE TO IRDC369 PORT B

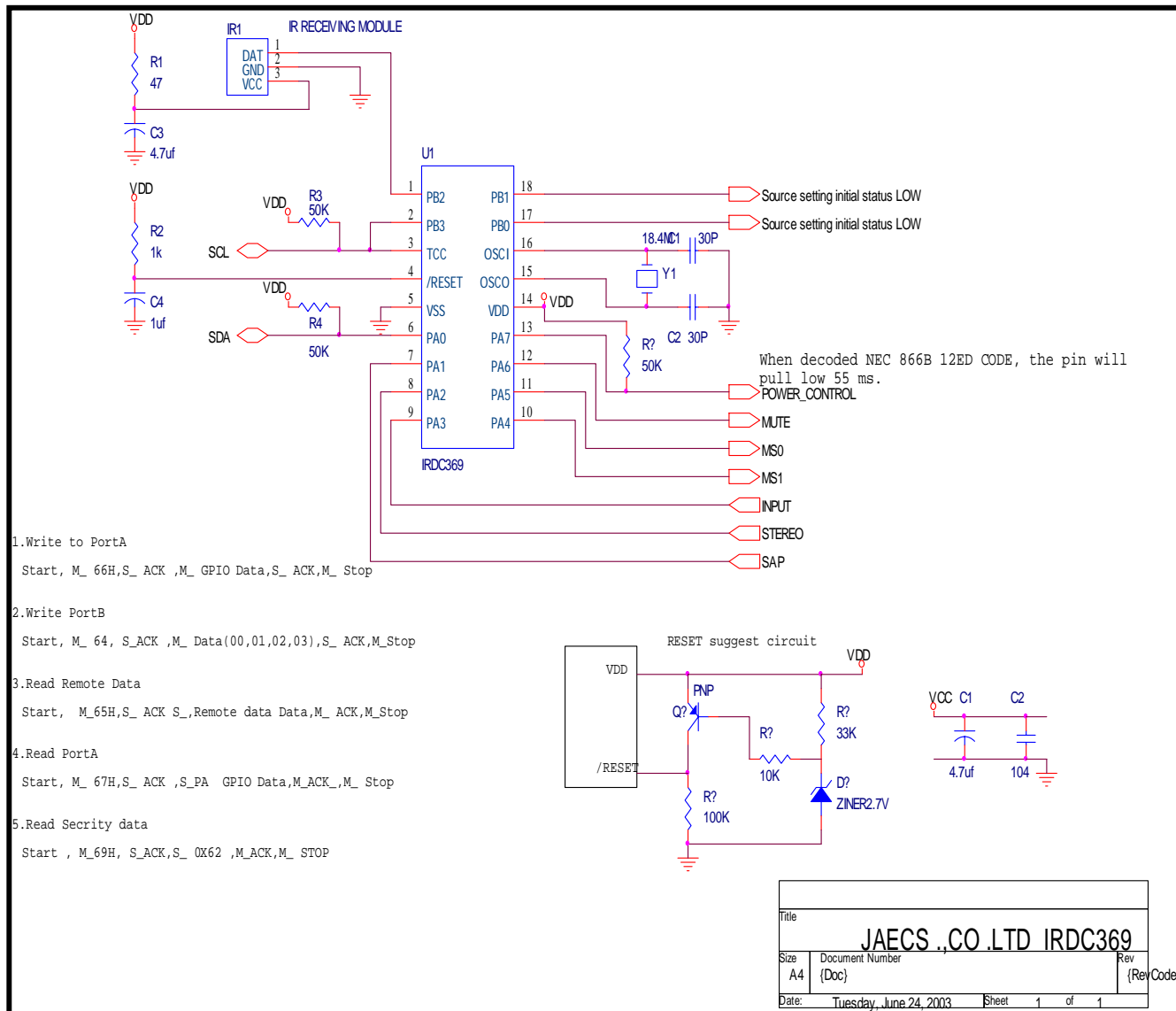
WRITE VALUE	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
PORTB STATUS	X	X	X	X	X	X	1/0	1/0

MASTER_START → 64 → SLAVE_ACK → MASTER WRITE TO PORTB DATA → SLAVE_ACK
→ MASTER_STOP

Remote control Decoder IC

IRDC369M/IRDC369P

CIRCUIT :

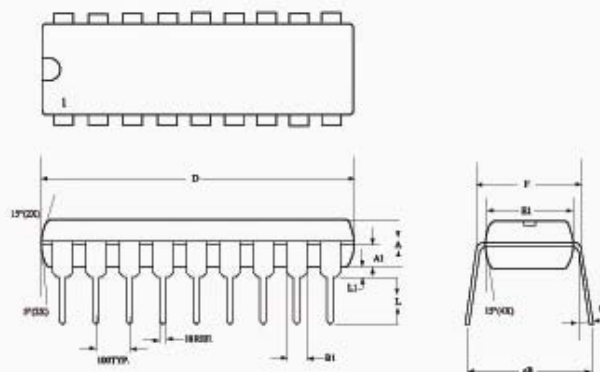


DIP PACKAGE DRAWING:

JAECS CO., LTD

PACKAGE INFORMATION

18-PIN : 18-Lead Plastic Dual In-Line (PDIP)-300mil



Sym.	Dimension in mils			Dimension in mm		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	125	130	135	3.175	3.302	3.429
AI	58	60	62	1.474	1.524	1.575
B1	56	60	64	1.422	1.524	1.626
D	880	900	920	22.352	22.860	23.368
E1	245	255	262	6.223	6.477	6.655
F	290	300	310	7.366	7.620	7.874
L	110	125	140	2.794	3.175	3.556
LI	10	20	---	0.254	0.508	---
eB	305	355	405	7.474	9.017	10.287
theta	0°	7.5°	15°	0°	7.5°	15°

* This specification is subject to be changed without notice.

SMD PACKAGE DRAWING:

JAECS CO., LTD PACKAGE INFORMATION

18-PIN : 18-Lead Plastic Small Outline (SOP)-300mil

Sym.	Dimension in mils			Dimension in mm		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	81	91	100	2.057	2.311	2.540
A1	4	8	12	0.102	0.203	0.305
B	12	16	20	0.305	0.406	0.508
D	447	455	463	11.354	11.557	11.760
E	291	295	299	7.391	7.493	7.595
cB	394	407	419	10.008	10.338	10.643
L	16	33	50	0.406	0.838	1.270
θ°	0°	4°	8°	0°	4°	8°

* This specification is subject to be changed without notice.