



Features

- Using external 32.768kHz quartz crystal
- Supports I²C-Bus's high speed mode (400 kHz)
- Includes time (Hour/Minute/Second) and calendar (Year/Month/Date/Day) counter functions (BCD code)
- Programmable square wave output signal
- Oscillator stop flag
- Low backup current: typ. 400nA at V_{DD}=3.0V and T_A=25°C
- Operating range: 1.7V to 5.5V
- Operating Temperature Range: -40~85 °C

Applications

- Digital still camera
- Digital video camera
- Printers
- Copy machines
- Mobile equipment
- Battery powered devices

Description

The IT8563 serial real-time clock is a low-power clock/calendar with a programmable square-wave output.

Address and data are transferred serially via a 2-wire bidirectional bus. The clock/calendar provides seconds, minutes, hours, day, date, month, and year information. The date at the end of the month is automatically adjusted for months with fewer than 31 days, including corrections for leap year. The clock operates in the 24-hour format indicator.

Table 1 shows the basic functions of IT8563. More details are shown in section: overview of functions.

Ordering Information

Part Number	Package	Description
IT8563WE	W	SOIC8
IT8563UE	U	MSOP8
IT8563LE	L	TSSOP8
IT8563ZZE	ZZ	TDFN 2.6x2.6_10L

Note: E= Green Package



Table 1. Basic functions of IT8563

Item	Function		IT8563	
1	Oscillator	Source: Crystal: 32.768kHz	√	
		Oscillator enable/disable	-	
		Oscillator fail detect	√	
2	Time	Time display	12-hour	-
			24-hour	√
		Century bit	-	
		Time count chain disable	-	
3	Interrupt	Alarm interrupt	√	
4	Programmable square wave output (Hz)		1, 32, 1.024k, 32.768k	
5	Communication	2-wire I ² C bus	√	
		Burst mode	√	
6	Control	Write protection	-	
		External clock test mode	√	
		Power-on reset override	√	

Function Block

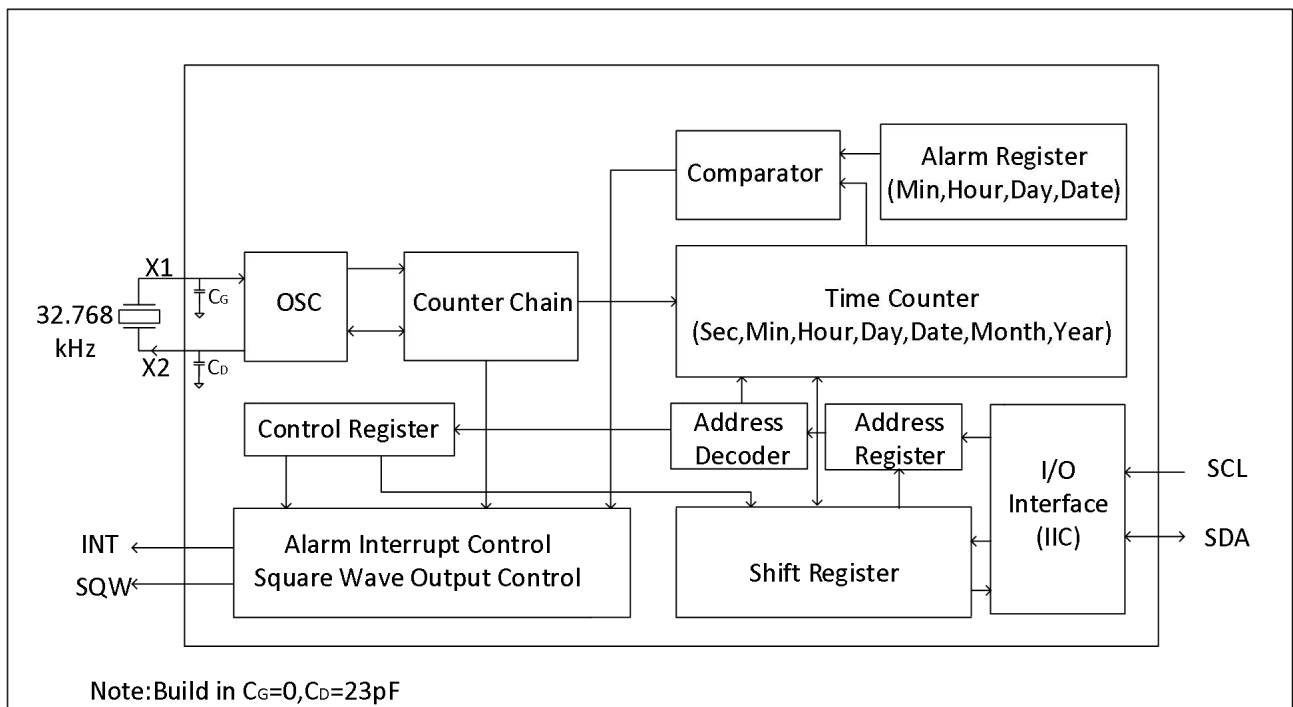


Figure 1. Function Block of IT8563

Pin Configuration

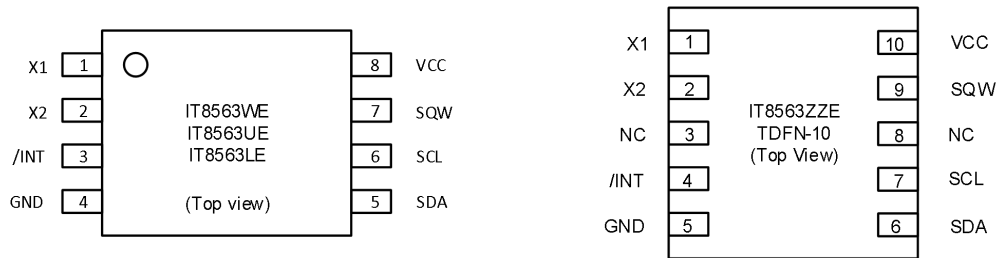


Figure 2. Pin Configuration

Pin Description

Pin No.	Pin No. (DFN10)	Pin Name	Type	Description
1	1	X1	I	Oscillator Circuit Input. Together with X2, 32.768kHz crystal is connected between them.
2	2	X2	O	Oscillator Circuit Output. Together with X1, 32.768kHz crystal is connected between them.
3	4	/INT	O	Interrupt Output. Open drain, active low.
4	5	GND	P	Ground.
5	6	SDA	I/O	Serial Data Input/Output. SDA is the input/output pin for the 2-wire serial interface. The SDA pin is open-drain output and requires an external pull-up resistor.
6	7	SCL	I	Serial Clock Input. SCL is used to synchronize data movement on the I ² C serial interface.
7	9	SQW	O	Clock Output. Open drain. Four frequencies selectable: 32.768k, 1.024k, 32, 1Hz when SQWE bit is set to 1.
8	10	VCC	P	Power.
	3,8	NC		Not Connect



Typical Application Circuit

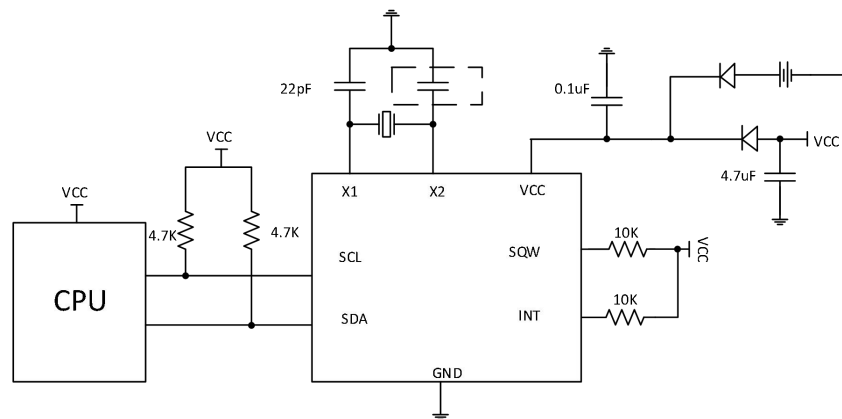


Figure 3. Typical application circuit

Note: X1 build-in capacitors is 0pF, external matching capacitor is required for design.

X2 build-in capacitors is 23pF, external matching capacitors are not required.

Function Description

1. Clock function

CPU can read or write data including the year (last two digits), month, date, day, hour, minute, and second. Any (two-digit) year that is a multiple of 4 is treated as a leap year and calculated automatically as such until the year 2100.

2. Alarm function

This device has one alarm system that outputs interrupt signals from /INT of IT8563 when the date, day of the week, hour or minute correspond to the setting. Each of them may output interrupt signal separately at a specified time.

3. Programmable square wave output

A square wave output enable bit controls square wave output at pin 7. Four frequencies are selectable: 1, 32, 1.024k, 32.768k Hz.

4. IIC Interface

Data is read and written via the I²C bus, the SCL's maximum clock frequency is 400 kHz, which supports the I²C bus's high-speed mode.

5. Oscillator fail detect

When oscillator fail, OSF bit will be set.



Registers

Registers map

Addr. (hex)	Function (time range BCD format)	Register definition							
		Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
00	Control/status 1	×	×	×	×	×	×	×	×
01	Control/status 2	×	×	×	×	AF ^{*1}	×	AIE ^{*2}	×
02	Seconds (00-59)	OSF ^{*3}	S40	S20	S10	S8	S4	S2	S1
03	Minutes (00-59)	×	M40	M20	M10	M8	M4	M2	M1
04	Hours (00-23)	×	×	H20	H10	H8	H4	H2	H1
05	Dates (01-31)	×	×	D20	D10	D8	D4	D2	D1
06	Days of the week (00-06)	×	×	×	×	×	W4	W2	W1
07	Months (01-12)	×	×	×	MO10	MO8	MO4	MO2	MO1
08	Years (00-99)	Y80	Y40	Y20	Y10	Y8	Y4	Y2	Y1
09	Alarm: Minutes (00-59)	AE ^{*4}	M40	M20	M10	M8	M4	M2	M1
0A	Alarm: Hours (01-12)	AE ^{*4}	×	H20	H10	H8	H4	H2	H1
0B	Alarm: Dates (01-31)	AE ^{*4}	×	D20	D10	D8	D4	D2	D1
0C	Alarm: Weekday (00-06)	AE ^{*4}	×	×	×	×	W4	W2	W1
0D	SQW control	SQWE	×	×	×	×	×	RS1	RS0

Notes:

*1. Alarm interrupt flag bits.

*2. Alarm interrupt enable bits.

*3. Oscillator fail indicates. Indicate clock integrity.

*4. Alarm enable bit. Alarm will be active when related time is matching if AE = 0.

*5. All bits marked with "x" are not implemented..

**Control and status register**

Addr. (hex)	Description	D7	D6	D5	D4	D3	D2	D1	D0
00	Control/status 1	×	×	×	×	×	×	×	×
	(default)	0	Undefined	0	Undefined	Undefined	Undefined	Undefined	Undefined
01	Control/status 2	×	×	×	×	AF	×	AIE	×
	(default)	Undefined	Undefined	Undefined	0	Undefined	Undefined	0	0
0D	SQW control	SQWE	×	×	×	×	×	RS1	RS0
	(default)	1	Undefined	Undefined	Undefined	Undefined	Undefined	0	0

a) Alarm Interrupt

- **AIE:** Alarm Interrupt Enable bit.

AIE	Data	Description	Default
Read / Write	0	Alarm interrupt disabled	Default
	1	Alarm interrupt enabled	

- **AF:** Alarm Flag

AF	Data	Description
Read	0	Alarm flag inactive
	1	Alarm flag active
Write	0	Alarm flag is cleared
	1	Alarm flag remains unchanged

b) SQW control

- **SQWE:** SQW output clock enable bit.

SQWE	Data	Description	Default
Read / Write	0	the SQW output is inhibited and SQW output is set to high impedance	Default
	1	the SQW output is activated	

- **RS1, RS0:** SQW output frequency select.

RS1, RS0	Data	SQW output freq. (Hz)	Default
Read / Write	00	32.768k	Default
	01	1.024k	
	10	32	
	11	1	



Time Counter

1. Time digit display (in BCD code):

Addr. (hex)	Description	D7	D6	D5	D4	D3	D2	D1	D0
02	Seconds	OSF ^{*1}	S40	S20	S10	S8	S4	S2	S1
	(default)	1	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
03	Minutes	×	M40	M20	M10	M8	M4	M2	M1
	(default)	0	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
04	Hours	×	×	H20	H10	H8	H4	H2	H1
	(default)	0	0	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined

Note1: Indicate clock integrity. When the bit is 1, the clock integrity is no longer guaranteed and the time need be adjusted.

2. Weekday Counter

The Weekday counter is a divide-by-7 counter that counts from 00 to 06 and up 06 before starting again from 00. Values that correspond to the day of week are user defined but must be sequential (i.e., if 0 equals Sunday, then 1 equals Monday, and so on). Illogical time and date entries result in undefined operation.

Addr. (hex)	Description	D7	D6	D5	D4	D3	D2	D1	D0
06	Days of the week	×	×	×	×	×	W4	W2	W1
	(default)	0	0	0	0	0	Undefined	Undefined	Undefined

3. Calendar Counter

The data format is BCD format.

- Day digits: Range from 1 to 31 (for January, March, May, July, August, October and December).
Range from 1 to 30 (for April, June, September and November).
Range from 1 to 29 (for February in leap years).
Range from 1 to 28 (for February in ordinary years).
Carried to month digits when cycled to 1.
- Month digits: Range from 1 to 12 and carried to year digits when cycled to 1.
- Year digits: Range from 00 to 99 and 00, 04, 08, ... , 92 and 96 are counted as leap years.

Addr. (hex)	Description	D7	D6	D5	D4	D3	D2	D1	D0
05	Dates	×	×	D20	D10	D8	D4	D2	D1
	(default)	0	0	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
07	Months	×	×	×	M10	M8	M4	M2	M1
	(default)	Undefined	0	0	Undefined	Undefined	Undefined	Undefined	Undefined
08	Years	Y80	Y40	Y20	Y10	Y8	Y4	Y2	Y1
	(default)	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined



Alarm Register

Addr.	Description	D7	D6	D5	D4	D3	D2	D1	D0
09	Alarm: Minutes	AE ¹	M40	M20	M10	M8	M4	M2	M1
	(default)	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
0A	Alarm: Hours	AE ²	×	H20	H10	H8	H4	H2	H1
	(default)	Undefined	0	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
0B	Alarm: Dates	AE ³	×	D20	D10	D8	D4	D2	D1
	(default)	Undefined	0	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
0C	Alarm: Weekday	AE ⁴	×	×	×	×	W4	W2	W1
	(default)	Undefined	0	0	0	0	Undefined	Undefined	Undefined

Notes:

- 1: Minute alarm enable bit.
- 2: Hour alarm enable bit.
- 3: Date alarm enable bit.
- 4: Weekday alarm enable bit.

Alarm Function

	Function	Register definition							
		Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
01	Control/status 2	×	×	×	×	AF	×	AIE	×
02	Seconds	OSF	S40	S20	S10	S8	S4	S2	S1
03	Minutes	×	M40	M20	M10	M8	M4	M2	M1
04	Hours	×	×	H20	H10	H8	H4	H2	H1
05	Dates	×	×	D20	D10	D8	D4	D2	D1
06	Days of the week	×	×	×	×	×	W4	W2	W1
09	Alarm: Minutes	AE	M40	M20	M10	M8	M4	M2	M1
0A	Alarm: Hours	AE	×	H20	H10	H8	H4	H2	H1
0B	Alarm: Dates	AE	×	D20	D10	D8	D4	D2	D1
0C	Alarm: Weekday	AE	×	×	×	×	W4	W2	W1

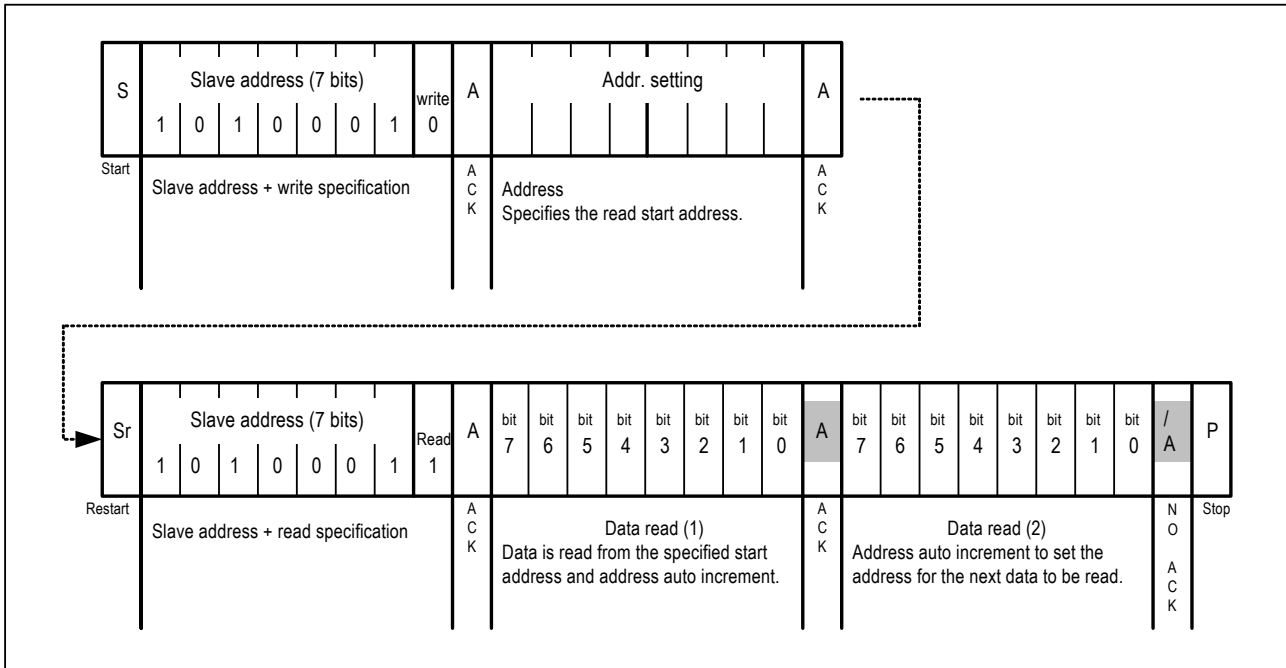
Notes:

- 1、one or more of alarm registers are loaded with a valid minute, hour, day or weekday and its corresponding bit
Alarm Enable (AE) is logic 0
- 2、compared with the current minute, hour, day and weekday. When all enabled comparisons first match, the Alarm Flag (AF) is set to 1.
- 3、AF will remain set until cleared by software. Once AF has been cleared it will only be set again when the time increments to match the alarm condition once more.
- 4、Alarm registers which have their bit AE at logic 1 will be ignored.

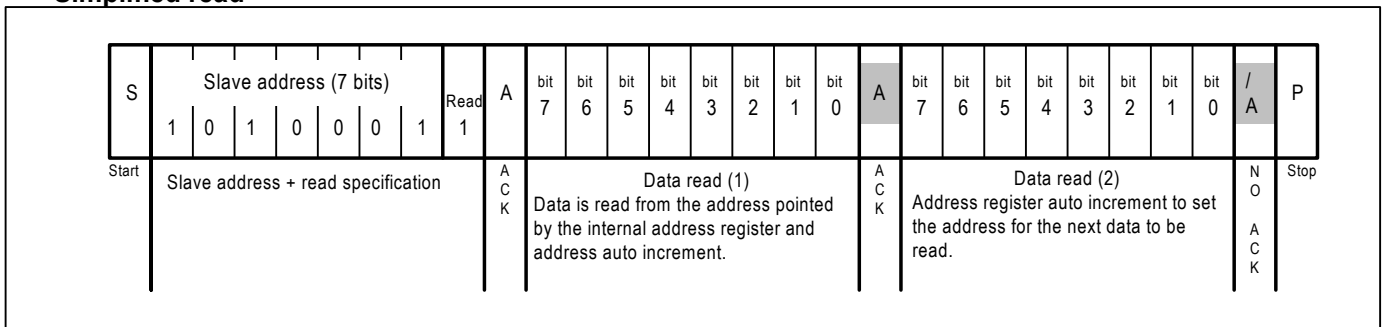


Read via I²C bus

Standard read



• Simplified read



Note:

1. The above steps are an example of transfers of one or two bytes only. There is no limit to the number of bytes transferred during actual communications.



Absolute Maximum Ratings

Storage Temperature.....	-65° C to +150° C
Ambient Temperature with Power Applied.....	-40° C to +125° C
Supply Voltage to Ground Potential (Vcc to GND)	-0.3V to +6.5V
DC Input (All Other Inputs except Vcc & GND).....	-0.3V to (Vcc+0.3V)
DC Output Voltage (SDA, /INT pins).....	-0.3V to +6.5V
Power Dissipation.....	320mW (Depend on package)

Note:

Stresses greater than those listed under MAXIMUM RATINGS may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect reliability.

Recommended Operating Conditions

Symbol	Description	MIN	TYP	MAX	Unit
V _{CC}	Power voltage	1.7	-	5.5	V
V _{IH}	Input high level	0.7 V _{CC}	-	V _{CC} +0.3	
V _{IL}	Input low level	-0.3	-	0.3 V _{CC}	
T _A	Operating temperature	-40	-	85	°C



DC Electrical Characteristics

Unless otherwise specified, GND = 0V, $V_{CC} = 1.7 \sim 5.5$ V, $T_A = -40 \text{ }^\circ\text{C}$ to $+125 \text{ }^\circ\text{C}$, $f_{OSC} = 32.768\text{kHz}$.

Symbol	Description	Pin	Conditions	MIN	TYP	MAX	Unit	
V_{CC}	Supply voltage	V_{CC}	Interface inactive. $T_A = 25^\circ\text{C}$ ¹⁾	1.5	-	5.5	V	
			Interface active. $f_{SCL} = 400\text{kHz}$ ¹⁾	1.7	-	5.5		
	Supply voltage for clock data integrity	V_{CC}	-	1.5	-	5.5		
I_{CC}	Supply current	V_{CC}	Interface active	$f_{SCL} = 400\text{kHz}$	-	-	25	μA
				$f_{SCL} = 100\text{kHz}$	-	-	15	
			Interface inactive ($f_{SCL} = 0\text{Hz}$), pin 7 disabled $T_A = -40 \sim 125^\circ\text{C}$	$V_{CC} = 5.0\text{V}$	-	450	900	nA
				$V_{CC} = 3.0\text{V}$	-	400	800	
			Interface inactive ($f_{SCL} = 0\text{Hz}$), pin 7 enabled at 32kHz $T_A = -40 \sim 125^\circ\text{C}$	$V_{CC} = 5.0\text{V}$	-	650	900	nA
				$V_{CC} = 3.0\text{V}$	-	600	850	
V_{IL1}	Low-level input voltage	SCL	-	0	-	$0.3V_{CC}$	V	
V_{IH1}	High-level input voltage	SCL	-	$0.7V_{CC}$	-	V_{CC}		
I_{OL}	Low-level output voltage	SDA	$V_{OL} = 0.4\text{V}$, $V_{CC} = 5\text{V}$	-3	-	-	mA	
		/INT, SQW	$V_{OL} = 0.4\text{V}$, $V_{CC} = 5\text{V}$	-1	-	-		
I_{IL}	Input leakage current	SCL	-	-	-	± 1	μA	
I_{OZ}	Output current when OFF	-	-	-	-	± 1	μA	

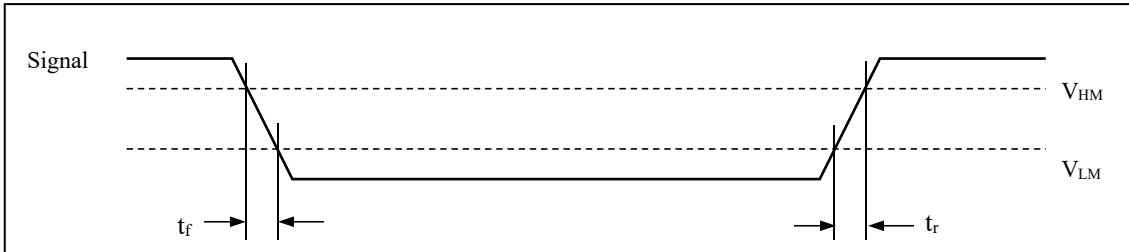
Note:

1、 For reliable oscillator start-up at power-up: $V_{CC(\text{min})\text{power-up}} = V_{CC(\text{min})} + 0.3$ V



AC Electrical Characteristics

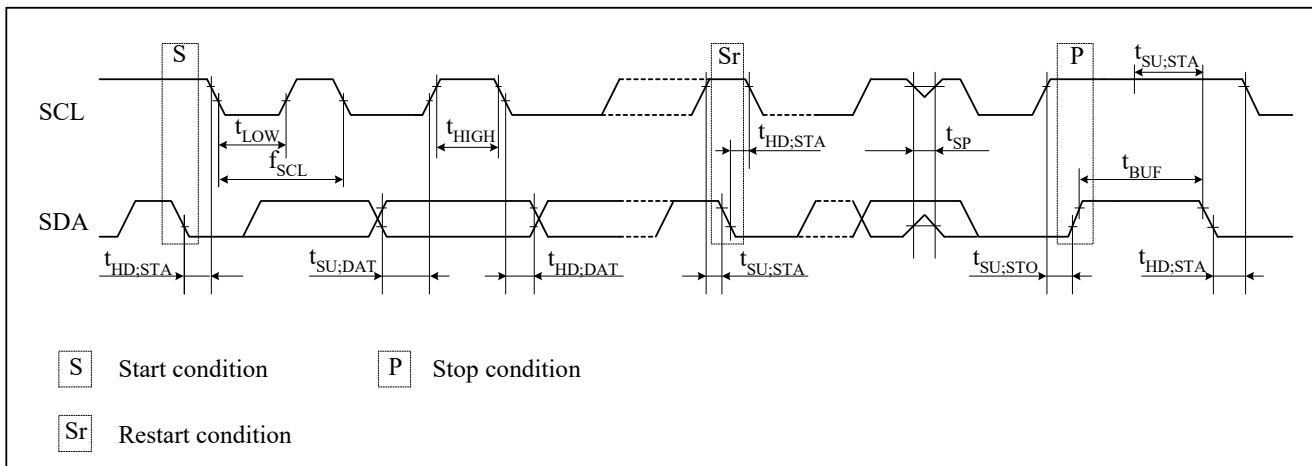
Symbol	Description	Value	Unit
V_{HM}	Rising and falling threshold voltage high	$0.8 V_{CC}$	V
V_{HL}	Rising and falling threshold voltage low	$0.2 V_{CC}$	V



Over the operating range

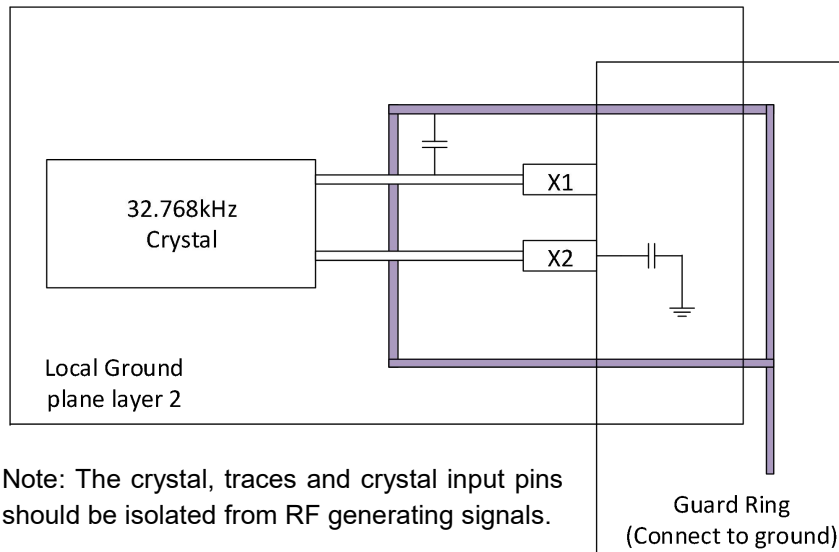
Symbol	Description	MIN	TYP	MAX	Unit
f_{SCL}	SCL clock frequency	-	-	400	kHz
$t_{SU:STA}$	START condition set-up time	0.6	-	-	μs
$t_{HD:STA}$	START condition hold time	0.6	-	-	μs
$t_{SU:DAT}$	Data set-up time (RTC read/write in Fast mode)	100	-	-	ns
$t_{HD:DAT1}$	Data hold time (RTC write)	35	-	-	ns
$t_{HD:DAT2}$	Data hold time (RTC read)	0	-	-	μs
$t_{SU:STO}$	STOP condition setup time	0.6	-	-	μs
t_{BUF}	Bus idle time between a START and STOP condition	1.3	-	-	μs
t_{LOW}	When SCL = "L"	1.3	-	-	μs
t_{HIGH}	When SCL = "H"	0.6	-	-	μs
t_r	Rise time for SCL and SDA	-	-	0.3	μs
t_f	Fall time for SCL and SDA	-	-	0.3	μs
t_{SP}^*	Allowable spike time on bus	-	-	50	ns
C_B	Capacitance load for each bus line	-	-	400	pF

* **Note:** Only reference for design.





Recommended Layout for Crystal



Built-in Capacitors Specifications and Recommended External Capacitors

Symbol	Parameter	TYP	Unit	
CG	Build-in capacitors	X1 to GND	0	pF
CD		X2 to GND	23	pF
C1	Recommended External capacitors for crystal CL=12.5pF	X1 to GND	22	pF
C2		X2 to GND	0	pF
C1	Recommended External capacitors for crystal CL=6pF	X1 to GND	7	pF
C2		X2 to GND	0	pF

Crystal Specifications

Symbol	Parameter	MIN	TYP	MAX	Unit
f ₀	Nominal Frequency	-	32.768	-	kHz
ESR	Series Resistance	-	-	70	kΩ
CL	Load Capacitance	-	6/12.5	-	pF



Package Information

WE (Lead free SOP8)

SYMBOLS	MIN.	NOM.	MAX.
A	—	—	1.75
A1	0.10	—	0.25
A2	1.25	—	—
b	0.31	—	0.51
c	0.10	—	0.25
D	4.80	4.90	5.00
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
e	1.27 BSC		
L	0.40	—	1.27
h	0.25	—	0.50
θ°	0	—	8

Recommended Land Pattern

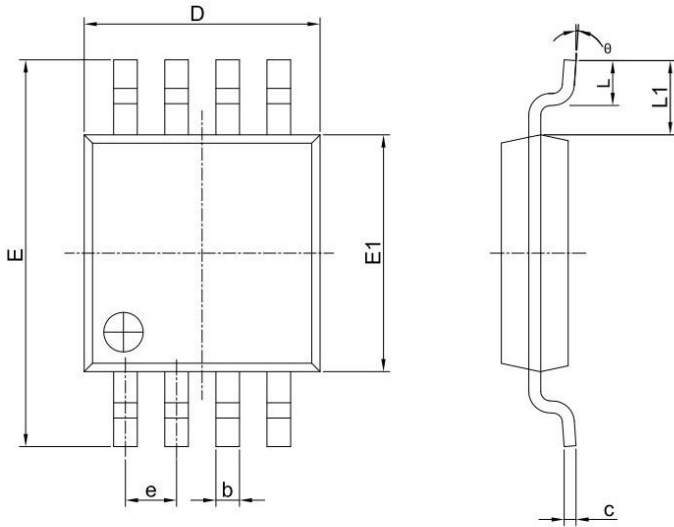
Note:

- 1.All dimensions are in mm. Angels in degrees.
- 2.Dimensions exclude burrs, mold flash or protrusions.
- 3.Refer Jedec MS-012
4. Recommended land pattern is for reference only.





UE (Lead free and Green MSOP-8)



PKG DIMENSIONS(MM)		
SYMBOL	Min.	Max.
A	--	1.10
A1	0.00	0.15
A2	0.75	0.95
b	0.22	0.38
c	0.08	0.23
D	2.80	3.20
E	4.65	5.15
E1	2.80	3.20
e	0.65 BSC	
L	0.40	0.80
L1	0.95 REF	
θ	0°	8°

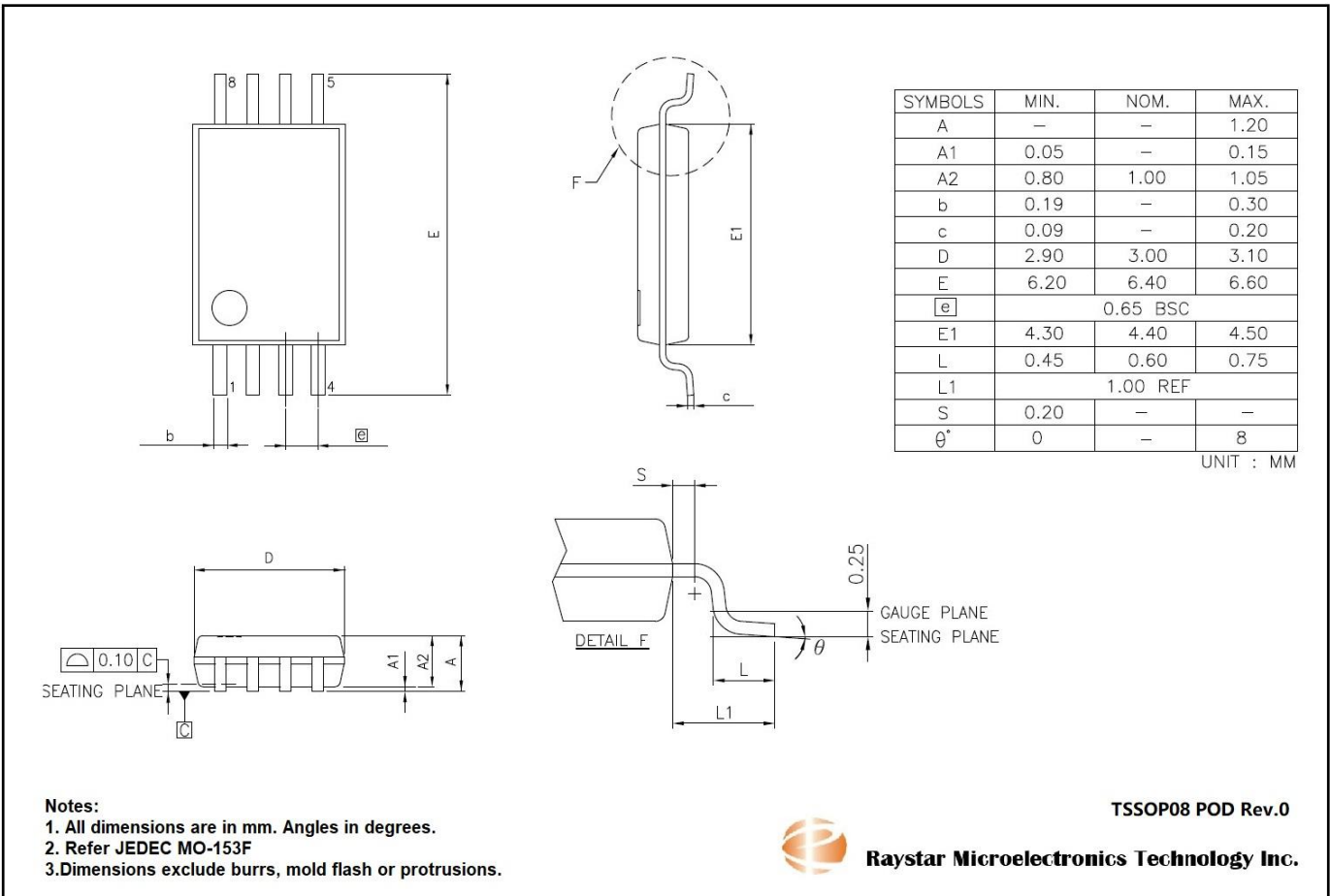
Note:

- 1.All dimensions are in mm. Angels in degrees.
- 2.Refer Jedec MO-187
- 3.Dimensions exclude burrs, mold flash or protrusions.



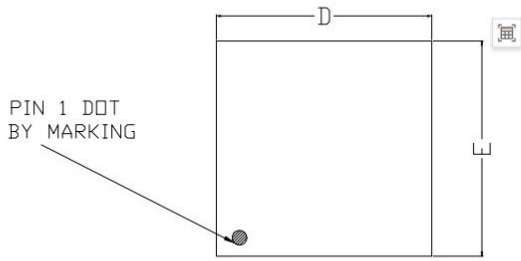


LE (Lead free and Green TSSOP-8)

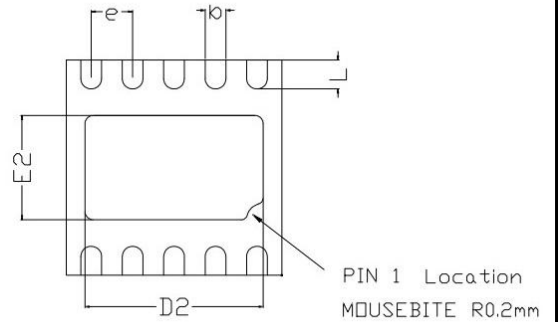




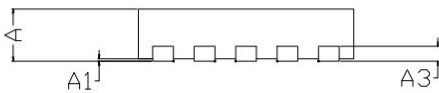
ZZE (Lead free and Green DFN-10)



TOP VIEW



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSIONS(MM)			
PKG. REF.	UT: ULTRA Thin		
	MIN.	NDM.	MAX
A	0.50	0.55	0.60
A1	0.00	-	0.05
A3	0.15 REF.		
D	2.55	2.60	2.65
E	2.55	2.60	2.65
D2	2.00	2.15	2.25
E2	1.11	1.26	1.36
b	0.20	0.25	0.30
L	0.25	0.35	0.45
e	0.5 BSC		

Note:

- 1.All dimensions are in mm. Angels in degrees.
- 2.Dimensions exclude burrs, mold flash or protrusions.
- 3.Refer Jedec MO-220





Revision History

Revision	Description	Date
V1.7	1.Update Data set-up time (RTC read/write in Fast mode) to 100ns 2.Add IT8563ZZE DFN10 package type	2023/6/20
V1.8	Update block diagram, add reference circuit	2024/7/12

深圳市致新科科技有限公司

Shenzhen Zhixinke Technology Co., Ltd.



阻容器件

插件电解电容 贴片电阻	贴片铝电解电容 热敏电阻	贴片电容 MLCC 压敏电阻	钽电容 碳膜电阻	薄膜电容 金属膜电阻
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高压MOS (N-400V N-500V N-600V N-650V N-700V N-800V N-900V / 电流: 0.5A~26A区间 电压电流选型)

2N65 650V 2A TO-252	7N60 600V 7A TO-252	8N65 650V 8A TO-251	10N50 500V 10A TO-220F	15N50 500V 15A TO-220F
4N65 650V 4A TO-220F	7N65 650V 7A TO-220F	8N65 650V 8A TO-252	12N65 650V 12A TO-220F	15N65 650V 15A TO-220F
5N60 600V 5A TO-220F	7N65 650V 7A TO-252	8N65 650V 8A TO-252	12N70 700V 12A TO-220F	15N70 700V 10A TO-220F
5N65 650V 5A TO-252	7N70 700V 7A TO-220F	9N70 700V 9A TO-252	13N50 500V 13A TO-220F	20N50 500V 20A TO-220F

低压MOS (电流: -160A~300A区间选型)

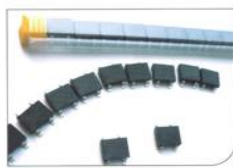
N+P 20V	P -100V	Dual N 30V	N 30V	N 75V
N+P 30V	P -12V	Dual N 100V	N 40V	N 85V
N+P 40V	P -16V	Dual N 20V	N 55V	N 100V
Dual P -30V	P -20V	Dual N 40V	N 60V	N 150V
Dual P -60V	P -40V	N 20V	N 68V	N 200V

二极管专业制造商 (定制产品, 需要一周~二周时间) 参数查看选型表

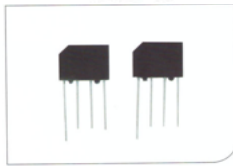
超低正向肖特基整流二极管	肖特基整流二极管	普通整流二极管	快恢复整流二极管	高效整流二极管
超快恢复整流二极管	双向触发二极管	瞬变电压抑制二极管	稳压二极管	桥式整流器
小信号肖特基二极管	小信号开关二极管	光伏二极管	汽车整流器	高压触发管

桥式整流器专业制造 (定制产品, 需要一周~二周时间)

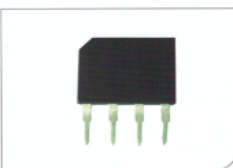
型号	芯片尺寸/类别	型号	芯片尺寸/类别
DB107S	50MIL DBS	GBU606-GBU610	88MIL GBU
DB157S	60MIL DBS	GBU806-GBU810	95MIL GBU
DB207S	60MIL DBS	GBU1006-GBU1010	100MIL GBU
DB307S	70MIL DBS	GBU1506-GBU1510	110MIL GBU
DB107	50MIL DB	GBU2506-GBU2510	130MIL GBU
DB157	60MIL DB	GBJ406-410	84MIL 4GBJ
DB207	60MIL DB	GBJ606-610	88MIL 4GBJ
DB307	70MIL DB	GBJ806-810	95MIL 4GBJ
KBP201-KBP210	50MIL KBP	GBJ1006-1010	100MIL 4GBJ
KBP301-KBP310	60MIL KBP	GBJ1506-1510	110MIL 4GBJ
KBP401-KBP410	70MIL KBP	GBJ2506-2510	130MIL 4GBJ
GBP2	50MIL GBP短脚	GBJ1506-1510	110MIL 6GBJ
GBP3	60MIL GBP短脚	GBJ1506-1510	120MIL 6GBJ
GBP3	70MIL GBP短脚	GBJ2506-2510	130MIL 6GBJ
GBP4	84MIL GBP短脚	GBJ3506-3510	140MIL 6GBJ
GBP6	88MIL GBP短脚	GBJ3506-3510	160MIL 6GBJ
GBP2	50MIL GBP长脚	KBJ406-410	84MIL KBJ (4GBJ)
GBP3	60MIL GBP长脚	KBJ606-610	88MIL KBJ (4GBJ)
GBP3	70MIL GBP长脚	KBJ806-810	95MIL KBJ (4GBJ)
GBP4	84MIL GBP长脚	KBJ1006-1010	100MIL KBJ (4GBJ)
GBP6	88MIL GBP长脚	KBJ1506-1510	110MIL KBJ (4GBJ)
D3K 2A	60MIL D3K	KBJ2506-2510	130MIL KBJ (4GBJ)
D3K 3A	70MIL D3K	MB6S-10S	46MIL MBS
D3K 4A	84MIL D3K	MB6S-10S	50MIL MBS
KBL406-410	70MIL KBL	MB6F-10F	46MIL MBF
KBL406-410	84MIL KBL	MB6F-10F	50MIL MBF
KBL606-610	88MIL KBL	ABS6-ABS10	46MIL ABS
GBU406-GBU410	70MIL GBU	ABS6-ABS10	50MIL ABS
GBU406-GBU410	84MIL GBU	ABS6-ABS10	60MIL ABS



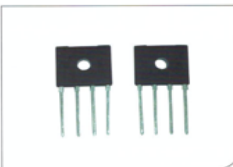
DB-S



KBP



GBP



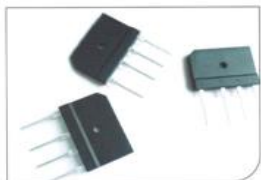
D3K



KBL



GBU



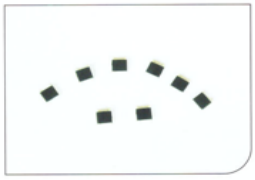
GBJ



KBJ



MDB-S



ABS

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光耦 红外对射

EL0631	EL814	LTV-217	KAQY212	MOC3022
EL1018	EL817	LTV-247	KMOC3021	MOC3023
EL1019	ELM440A	LTV-3063	KMOC3022	MOC3042
EL2501	ELM453	LTV-3223	KMOC3023	MOC3052
EL3041	ELM611	LTV-356	KMOC3041	MOC3063
EL3063	ELQ3H4	LTV-357	KMOC3042	MOC3043
EL354	ELQ3H7	LTV-814	KMOC3043	HS0038BD
EL357	ELR3223	LTV-816	KMOC3063	IR204C-A-L
EL3H4	ELS3120	LTV-817	KMOC3083	IR333C-A
EL3H7	ELS3150	CT3043	FOD814	ITR1100
EL406A	ELS680	CT3063	6N137	ITR8102
EL6N137	CT3023	CTT3223	MOC3021	ITR8402

长晶 JSCJ (原名长电)

1N4148WS	SOD323	BC547	T092	BZT52C3V6	SOD123	CJ431	SOT-23	MMBT3904	SOT23
2N5551	TO-92	BC548	T092	BZT52C3V9	SOD123	CJ7812	TO220-3L	MMBT540	SOT23
2SA1013	SOT89-3L	BCX56-16	SOT89-3L	BZT52C5V1	SOD123	CJ7815	TO252-2L	MMBTA44	SOT-23
2SB1386	SOT89	BD237	TO126	BZT52C6V2	SOD123	CJ78L05	SOT89	MMBTA94	SOT23
2SC1623	SOT23	BSS123	SOT23	BZT52C6V8S	SOD323	CJ78L08	SOT89	MMSZ4689	SOD123
2SC1815	TO92	BU406	TO220-3L	BZT52C8V2	SOD123	CJ78L12	SOT89	RS3M	SMBG
2SC2712	SOT-23	BZT52C10	SOD123	BZX84C15	SOT23	CJ78M05	TO252	S8050	SOT23
2SD1724	TO-126	BZT52C12	SOD123	C1815	TO92F	CJ78M06	TO252	S8550	SOT23
2SD965A	SOT89	BZT52C15	SOD123	CJ2301	SOT23	CJ78M12	TO252	S9012	SOT23
B0530WS	SOD323	BZT52C18	SOD123	CJ2302	SOT23-3	CJ79L05	TO92	S9013	SOT23
B5819W	SOD123	BZT52C22S	SOD323	CJ2304	SOT-23	D882	TO126	S9014	SOT23
BAT54	SOT23-3	BZT52C24V	SOD123	CJ2306	SOT23	ES2J	SMAG	S9015	SOT23
BAV99	SOT23	BZT52C30	SOD123	CJ2310	SOT23	LM317	SOT223	SD103AW	SOD123
BC546B	TO92	BZT52C3V3	SOD123	CJ3415	SOT23-3	MCR100-8	TO92	TIP122	TO126

圣邦微 (SGMICRO)

SGM2019	SGM3110-5.0YN6/TR	SGM4056-6.8YPS8G/TR	SGM6232YPS8G/TR	SGM809
SGM2021	SGM3132YDE8G/TR	SGM4056-6.8YTDE8G/TR	SGM6603	SGM810
SGM2032	SGM3157YC6/TR	SGM4062YDE8G/TR	SGM6609YTD12G/TR	SGM8272YS8G/TR
SGM2033	SGM3206YN5G/TR	SGM4064YDE8G/TR	SGM706	SGM8522XS/TR
SGM2036	SGM321YN5/TR	SGM44599YTQ16/TR	SGM721XN5/TR	SGM8582XS8G/TR
SGM2200	SGM324YS14/TR	SGM4582YTS16G/TR	SGM7222YMS10/TR	SGM8632XMS/TR
SGM2203	SGM330A-YQS/TR	SGM4807YTDE8G/TR	SGM7222YWQ10/TR	SGM8632XS/TR
SGM2268YWQ10/TR	SGM331A-YQS16G/TR	SGM4871YPS8/TR	SGM7227YMS10G/TR	SGM8634XS14/TR
SGM2549YN6G/TR	SGM358YMS/TR	SGM4890YMS/TR	SGM7227YUWQ10G/TR	SGM89000YTS14G/TR
SGM2551AYN5G/TR	SGM358YS/TR	SGM4891YDE8G/TR	SGM7228YWQ10G/TR	SGM8903YTS14G/TR
SGM2554AYN5G/TR	SGM3700YTQ16G/TR	SGM4917AYTQ16G/TR	SGM722XMS/TR	SGM8904YMS10G/TR
SGM2571ADYG/TR	SGM3732YTN6G/TR	SGM4918AYD10G/TR	SGM722XS/TR	SGM9111YC5/TR
SGM2576YN5G/TR	SGM3733BYTD16G/TR	SGM4996YMS8G/TR	SGM8051XN5/TR	SGM9114YN6G/TR
SGM2578YG/TR	SGM3752YTN6G/TR	SGM6012	SGM8054XS/TR	SGM9116XS/TR

DIODES (美台) PAM 百利通 (pericom)

AL1666S-13	AL8863SP-13	APT17NTR-G1	PAM2861ABR	PAM8403DR-H
AL1692-30BS7-13	AP1084D25G-13	AS78L05RTR-E1	PAM2861CBR	PAM8404KGR
AL1692S-13	AP1084D33G-13	AZ1117	PAM2863ECR	PAM8406DR
AL1697-40DS7-13	AP1501-50K5G-13	AZ34063UMTR-G1	PAM8003DR	PAM8610TR
AL17050WT-7	AP1501-K5G-13	AZ431AN-ATRE1	PAM8004DR	PAM8620TR
AL3353S-13	AP1603WG-7	PAM2301CAABADJ	PAM8006ATR	PAM8902HKER
AL5812MP-13	AP2127K-ADJTRG1	PAM2305AABADJ	PAM8007NHR	PAM8904JER
AL8805W5-7	AP2204K-3.3TRG1	PAM2305CGFADJ	PAM8106TVR	PAM8908JER
AL8807W5-7	AP2204K-5.0TRG1	PAM2312AABADJ	PAM8124RHR	PAM8908JER
AL8808WT-7	AP2204K-ADJTRG1	PAM2401SCADJ	PAM8301AAF	PAM8945PJR
AL8843SP-13	AP2210N-3.3TRG1	PAM2421AECADJR	PAM8302AADCR	SMAJ5.0A-13-F
AL8860MP-13	AP3012KTR-G1	PAM2423AECADJR	PAM8302AASCR	ZXMP10A13FTA
AL8860WT-7	AP4310AMTR-G1	PAM2803AAF095	PAM8303DBSC	PT7C4302WEX
AL8861WT-7	AP4313KTR-G1	PAM2804AAB010	PAM8304ASR	PT7C4337UEX
AL8861Y-13	AP7333-33SAG-7	PAM2808BLBR	PAM8320RDR	PT7C4337WEX

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微盟 (Microne)

ME1117 MET1117	ME3116AM6G	ME431BXG	ME6210	ME8115BD7G
ME1502CM5G	ME321AM5G	ME6118A33B3G	ME6211	ME8115D7G
ME2107A50M5G	ME358ASG	ME6119C33M5G	ME6212	ME8125AS6G
ME2108	ME4054BM5G	ME6203A50M3G	ME6213C33M5G	ME8165GD8G
ME2188	ME4055AM6G	ME6206	ME6214C18M5G	ME8202SG
ME2214AM6G	ME4056SPG	ME6206A33M3G	ME6215C25M5G	ME8321AS7G
ME2807A30M3G	ME4074AM5G	ME6208	ME6216A30XG	ME8327BS7G-N
ME3102BM5G	ME4211AM6G	ME6209	ME6228	MEL7135PG-N
ME3110AM6G	ME4313CM6G	ME6209A50M3G	ME6230	MEL7136AP5G

恩智浦 (NXP) 安世半导体 (NXPERIA)

2N7002	74HC238PW	74HC574D	BCX51-16	HEF4094BT
74HC00D	74HC245D	74HC595D	BT137-800E	HEF4511BT
74HC04D	74HC245DB	74HC595N	BT139-800E	PCF8563T
74HC08D	74HC245N	74HC74D	BT151-500R	PCF8563T/5
74HC125D	74HC245PW	74HC86D	HEF4001BP	PCF8563TS/5
74HC138D	74HC257D	74HCT164D	HEF40106BP	PMBT3904
74HC138PW	74HC373N	74HCU04D	HEF4011BP	PMBT3906
74HC14D	74HC393D	BA591	HEF4011BT	PRTR5V0U2X
74HC154D	74HC4051D	BAT54	HEF4012BP	TJA1021T
74HC157D	74HC4051PW	BAV199	HEF4013BP	TJA1027T
74HC164D	74HC4066D	BAV99	HEF4013BT	TJA1040T
74HC164PW	74HC4316D	BC817-40	HEF4051BT	TJA1042T
74HC165D	74HC4538D	BC846B	HEF4069UBT	TJA1044T
74HC238D	74HC573D	BC858B	HEF4093BP	TJA1050T

德州仪器 (TIS)

CD14538BE	LM2576S	NE5532	SN74HC273	TLV75718PDBVR
CD4001BE	LM258DGKR	OP07CDR	SN74HC595	TLV75728PDBVR
CD40106BE	LM2596SX	OP07CP	SN74LVC1G08DCKR	TPA3116D2
CD4011BE	LM2901	PCA9306DCUR	SN74LVC1G175DCKR	TPS23881RTQR
CD4012BE	LM2902	SN65C1168ERGYR	SN74LVC1G3157DBVR	TPS2412PWR
CD4013BE	LM2903	SN65HVD230DR	SN74LVC1G32DRLR	TPS54331DDAR
CD4017BM96	LM2904	SN65HVD231DR	SN74LVC2G07DBVR	TPS54620RGYR
CD4026BE	LM317	SN65LBC184	SN74LVC2T45DCUR	TPS62291DRVR
CD4050	LM321	SN74AHC1G08DBVR	TL081CP	TPS62410DRCCR
CD4051	LM324	SN74AHC1G86DCK	TL082BCDR	TPS63000DRCCR
CD4052	LM339	SN74AHC1GU04DRLR	TL084CN	TPS63020DSJR
CD4053	LM358	SN74AVC16T245DGGR	TL431	TPS76330DBVR
CD4069UBE	LM393	SN74HC04	TL494CDR	TSS721ADR
CD4081BE	LMV321IDBVR	SN74HC138	TLC272CDR	TXS0102DCUR
CD74HC221M96	LMV324ID	SN74HC14	TLC274CD	UCC28070PWR
DRV8837DSGR	MAX202	SN74HC148	TLV272CDR	UCC28180
L298N	MAX232	SN74HC165	TLV62569DBVR	ULN2003
LM224DR	MAX3232	SN74HC244	TLV70033DDCR	ULN2004

意法半导体 (STM)

BTA08-600CRG	L78L05ACUTR	M24C64-RMN6TP	STM32F207ZET6	STM8S103F3P6
BTA08-800CRG	L78M05CDT	ST1S10PHR	STM32F401CEU6	STM8S103K3T6C
BTB04-600SL	L78M08ABDT	STM32F030C6T6	STM32F405RGT6	STM8S105C6T6
HCF4052M013TR	LM258AD	STM32F030C8T6	STM32F407VET6	STM8S105K4T6C
L298N	LM2903	STM32F030F4P6	STM32F407VGT6	STM8S105S4T6C
L6562DTR	LM2904	STM32F030K6T6	STM32F407ZET6	STM8S105S6T6
L6599ATDTR	LM293	STM32F051C8T6	STM32F407ZGT6	STM8S207RBT6
L7805CDT	LM317T	STM32F071VBT6	STM32F429IET6	TDA2030AV
L7805CV	LM324	STM32F103C8T6	STM32G070RBT6	TDA7265
L7806CV	LM335	STM32F103R8T6	STM32L475VET6	TDA7851L
L7809CV	LM339	STM32F103RCT6	STM8L051F3P6	TIP122
L7812CV	LM358	STM32F103VCT6	STM8L052C6T6	VIPER12ADIP-E
L7815CD2T-TR	LM393	STM32F105RBT6	STM8S003F3P6	VIPER17LN
L78L05ABUTR	M24C02-WMN6TP	STM32F107VCT6	STM8S005K6T6C	VIPER22ASTR

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安森美 (ONS) 仙童 (FAIRCHILD)

6N137	LM339DR2G	MC33063ADR2G	MC78M08CDTRKG	MMBT3906LT1G
LM2902DR2G	LM393DR2G	MC34063ADR2G	MC7915CD2TR4G	MMBT8550LT1G
LM2903DR2G	LM358DR2G	MC7805	MC7915CTG	SG3525ANG
LM2904DR2G	MBR20100CTG	MC7812CDTRKG	MC79M05BDTRKG	UC2843BNG
LM317LBDR2G	MBRS340T3G	MC7815CTG	MC79M15CDTRKG	UC2844BD1R2G
LM324DR2G	MBRS540T3G	MC78L05ACDR2G	MMBT3904LT1G	UC3845BNG

MAXLINEAR 艾科嘉 (EXAR) 西伯斯 (SIPEX)

SP202EEN-L/TR	SP3222EEA-L/TR	SP3243EUEA-L/TR	SP485EEN-L/TR	SPX5205M5-L-3.3/TR
SP232EEN-L/TR	SP3232EBEA-L/TR	SP336EEY-L/TR	SPX29302T5-L/TR	SPX5205M5-L-5.0/TR
SP3220EEY-L/TR	SP3232EEY-L/TR	SP3485EN-L/TR	SPX3819M5-L-3-3/TR	SPX1117

新日本无线 (JRC)

NJM2035M	NJM2370U33	NJM2831F33	NJM3414AM	NJM78M05DL1A
NJM2274R	NJM2567V	NJM3404AV	NJM4558M	NJM79M05DL1A

美信 (MAXIM) 达拉斯 (DALLAS)

DS1302	DS1337	MAX232AEPE	MAX232CSE	MAX3232IPWR
DS1307	MAX17126ETM	MAX232AEPE	MAX232ESE	MAX485ESA
DS1338Z	MAX1771CSA	MAX232AESE	MAX232N	MAX6701BAUT30
DS2431P	MAX202CPW	MAX232CPE	MAX3088ESA	MAX9722AETE

微芯 (MICROCHIP) 爱特梅尔 (ATMEL)

AT24C02C-SSHM-T	AT24C64D-SSHM-T	PIC16F1936-I/SO	PIC16F505-I/SL	PIC16F723A-I/SS
AT24C04C-SSHM-T	PIC12F1822-I/SN	PIC16F1938-I/SO	PIC16F54-I/SO	PIC16F723-I/SO
AT24C16C-SSHM-T	PIC12F508-I/P	PIC16F1938-I/SS	PIC16F676-I/SL	PIC16F883-I/SS
AT24C256C-SSHL-T	PIC16F1826-I/SO	PIC16F1947-I/PT	PIC16F722A-I/SS	PIC16F914-I/PT

STC

STC15W4K32S4	STC12C5A32S2	STC15W204S	STC8A8K48D4	STC8H1K08
STC8H3K64S4	STC12C5A32S2	STC15W404AS	STC8A8K64D4	STC8H3K32S2
STC11L32XE	STC12C5A56S2	STC15W4K32S4	STC8A8K64S4A12	STC8H3K48S
STC11L60XE	STC15F2K08S2	STC15W4K48S4	STC8F1K08S2	STC8H3K48S4
STC12C5604AD	STC15L204EA	STC89C55RD	STC8F2K16S2	STC8H8K48U
STC12C5A08AD	STC15W104	STC8A8K32S4A12	STC8G1K08A	STC8H8K64U

华邦 (WINBOND)

W25Q128FVSIQ	W25Q128JVSIQ	W25Q128JWP1Q	W25Q16JVSSIQ	W25Q32JWSNIQ
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美国芯源 (MPS)

MP1471AGJ-Z	MP1653GTF-Z	MP2303ADN-LF-Z	MP2636GR-Z	MP8756GD-Z
MP1482DS-LF-Z	MP1657GTF-Z	MP2359DJ-LF-Z	MP3202DJ-LF-Z	MP9447GL-Z
MP1484EN-LF-Z	MP1658GTF-Z	MP2374DS-LF-Z	MP3426DL-LF-Z	MP9495DJ-LF-Z
MP1494DJ-LF-Z	MP2015AGG-33-Z	MP24943DN-LF-Z	MP5013AGJ-Z	MP9518GJS
MP1601GTF-Z	MP2122GJ-Z	MP26029GTF	MP6650GJS	NB679GD-Z
MP1605GTF-Z	MP2144GJ-Z	MP2603EJ-LF-Z	MP8126DF-LF-Z	NB680GD-Z

昂宝电子 (On-Bright)

OB3635	OB2222MCP	OB2263MP	OB2281MP	OB2535CPA
OB2212AP	OB2263AP	OB2273AMP	OB2356LCPA	OB3636MP

电池芯片 马达驱动器

4054 SOT23-5	CW1053	HP4011	LN8238A	TC118
4056 ESOP8	DW02R	HY2213	FM8002A	TC618CS
CW1051	DW06D	IP5305	TC117HS	TMI8118S

其它IC

RTL8201CP-VD-LF	IT7C4337WEX	IT8563UEX	HYM8563	TH10CA061
RTL8201F-VB-CG	IT8563WEX	BM8563	AiP8563	TH11CA031

我司本着“质量第一”的理念，通过正规渠道采购物料，专业采购师对采购物料要求严格，保证质量，在业界获得好评，货源优秀，港深两地常备原装现货。买原装正品IC，找致新科。