

Real-time Clock Module (3-wire Interface)

Features

- Uses external 32.768kHz quartz crystal
- Real-time clock (RTC) counts seconds, minutes hours, date of the month, month, day of the week, and year with leap-year compensation valid up to 2099
- 31-byte, RAM for data storage
- Time keeping voltage: 1.5V to 5.5V
- Uses less than 300nA at 2.0V
- Simple 3-wire interface
- Serial I/O for minimum pin count
- Burst mode for reading/writing successive addresses in clock/RAM
- TTL-compatible (VCC = 5V)
- Optional industrial temperature range: -40°C to +85°C
- Battery backup
- Trickle charger on chip for rechargeable energy source backup
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. “Green” Device (Note 3)
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](http://www.diodes.com/contact-us) or your local Diodes representative.
- <https://www.diodes.com/quality/product-definitions/>
- Packaging (Pb-free & Green):
 - 8-Pin, SOIC (W)
 - 8-Pin, TDFN (ZE)

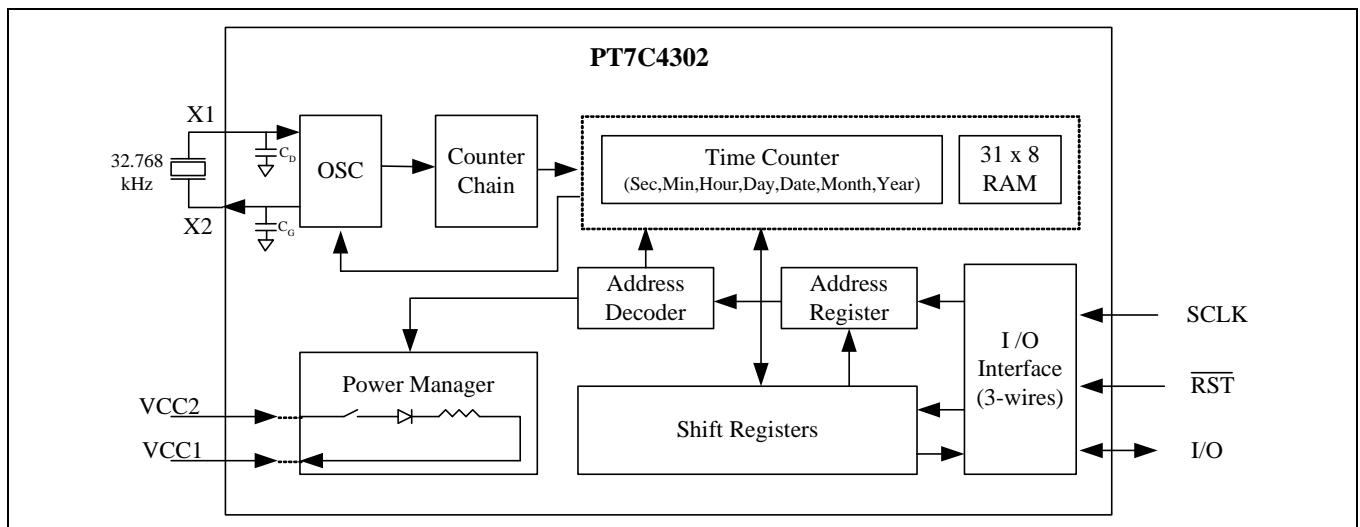
Description

The PT7C4302 serial real-time clock is a low-power clock/calendar with a programmable square-wave output and 31 bytes of RAM.

Address and data are transferred serially via a 3-wire 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 supports either the 24-hour or 12-hour format with AM/PM indicator.

Table 1 shows the basic functions of PT7C4302. More details are shown in section: overview of functions.

Function Block

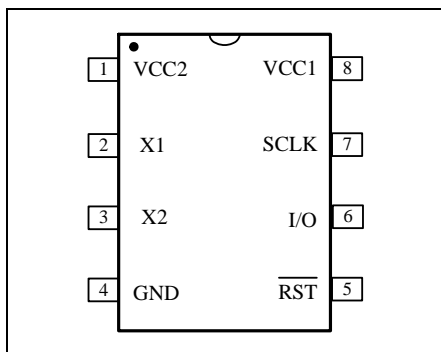


Note: C_D=C_G=11pF

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Pin Configuration



Pin Description

Pin#	Pin	Type	Description
1	VCC 2	P	Primary power. When V_{CC2} is greater than $V_{CC1} + 0.2V$, V_{CC2} will power the IC. While $V_{CC2} < V_{CC1}$, V_{CC1} will power the IC. ^{*1}
2	X1	I	Oscillator Circuit Input. Together with X2, 32.768kHz crystal is connected between them.
3	X2	O	Oscillator Circuit Output. Together with X1, 32.768kHz crystal is connected between them.
4	GND	P	Ground.
5	$\overline{\text{RST}}$	I	Reset. The reset signal must be asserted high during a read or a write. This pin has a 40k Ω internal pull-down resistor.
6	I/O	I/O	Serial Data Input/Output. I/O is the input/output pin for the 3-wire serial interface. The pin has a 40k Ω internal pull-down resistor.
7	SCL K	I	Serial Clock Input. SCLK is used to synchronize data movement on the 3-wire serial interface. The pin has a 40k Ω internal pull-down resistor.
8	VCC 1	P	Backup power. When V_{CC2} is greater than $V_{CC1} + 0.2V$, V_{CC2} will power the IC. While $V_{CC2} < V_{CC1}$, V_{CC1} will power the IC. ^{*1}

Note ^{*1}: If V_{CC1} connects to battery, the battery voltage V_{CC1} has to be lower than $V_{CC2} - 0.2V$ when IC is read and written.

Maximum Ratings

Storage Temperature.....	-65°C to +150°C
Supply Voltage to Ground Potential (V _{CC} to GND).....	-0.3V to +6.5V
DC Input (All Other Inputs except V _{CC} & GND).....	-0.3V to +6.5V
DC Output Voltage (SDA, /INTA, /INTB pins).....	-0.3V to +6.5V
Power Dissipation	320mW (Depend on package)
Junction Temperature.....	125°C max.

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	Type	Max	Unit
V _{CC1}	Backup power voltage	1.5	-	5.5	V
V _{CC2}	Timing data and RAM data maintaining voltage	1.2	-	5.5	
	Timing data writing voltage	1.5	-	5.5	
	Timing data reading voltage	1.5	-	5.5	
	RAM data writing voltage	3.0	-	5.5	
	RAM data reading voltage	1.5	-	5.5	
V _{IH}	Input high level	2	-	V _{CC} +0.3	
V _{IL}	Input low level	-0.3	-	0.3	
T _A	Operating temperature	-40	-	85	°C

DC Electrical Characteristics

Unless otherwise specified, GND = 0V, T_A = 25 °C, Oscillation frequency = 32.768 kHz.

Symbol	Item	Pin	Conditions	Min	Typ	Max	Unit	
V _{CC1}	Backup power voltage	VCC1	-	1.5	-	5.5	V	
V _{CC2}	Timing and RAM data maintaining	VCC2	-	1.2	-	5.5	V	
	Timing data writing voltage		-	1.5	-	5.5		
	Timing data reading voltage		-	1.5	-	5.5		
	RAM data writing voltage		-	3.0	-	5.5		
	RAM data reading voltage		-	1.5	-	5.5		
I _{CC1}	Current consumption	VCC1	OSC on, Note 2, 5	V _{CC1} : 2V	-	-	0.4	mA
				V _{CC1} : 5V	-	-	1.2	
			OSC on, Note 1, 5	V _{CC1} : 2V	-	0.5	-	μA
				V _{CC1} : 5V	-	1	-	
			OSC off, Note 4, 5, 7	V _{CC1} : 2V	-	100	-	nA
				V _{CC1} : 5V	-	100	-	
I _{CC2}	Current consumption	VCC2	OSC on, Note 2, 6	V _{CC1} : 2V	-	-	0.425	mA
				V _{CC1} : 5V	-	-	1.28	
			OSC on, Note 1, 6	V _{CC1} : 2V	-	-	25.3	μA
				V _{CC1} : 5V	-	-	81	
			OSC off, Note 4, 6	V _{CC1} : 2V	-	-	25	μA
				V _{CC1} : 5V	-	-	80	
V _{IL1}	Low-level input voltage	SCL, /RST	V _{CC1} : 5V	-	1.1	0.8	V	
			V _{CC1} : 2V	-	0.6	0.4		
V _{IH1}	High-level input voltage	SCL, /RST	V _{CC1} : 5V	2.0	1.3	-	V	
			V _{CC1} : 2V	1.4	0.9	-		

PT7C4302

Symbol	Item	Pin	Conditions	Min	Typ	Max	Unit
V _{IL2}	Low-level input voltage	X1	V _{CC1} : 5V	-	1.9	0.8	V
			V _{CC1} : 2V	-	0.9	0.6	
V _{IH2}	High-level input voltage	X1	V _{CC1} : 5V	2.0	1.9	-	V
			V _{CC1} : 2V	1.4	0.9	-	
V _{OL}	Low-level output voltage	I/O	I _{OH} = 1.5mA, V _{CC} = 2V	-	0.08	0.4	V
			I _{OH} = 4.0mA, V _{CC} = 5V	-	0.11	0.4	
V _{OH}	High-level output voltage	I/O	I _{OH} = -0.4mA, V _{CC} = 2V	1.6	1.9	-	V
			I _{OH} = -1.0mA, V _{CC} = 5V	2.4	4.9	-	
I _{IL}	Input leakage current	/RST,SCLK	Note 3	-	-	500	μA
I _{OZ}	Output current when OFF	I/O	Note 3	-	-	500	μA
V _{TD}	Trickle Charge Diode Voltage Drop	-	-	-	0.7	-	V
R1	Trickle charge resistors	-	-	-	2	-	kΩ
R2		-	-	-	4	-	
R3		-	-	-	-	8	

Note:

- I/O open, /RST set to a logic 0, and /EOSC bit = 0 (oscillator enabled).
- I/O pin open, /RST high, SCLK=2MHz at V_{CC} = 5V; SCLK = 500kHz, V_{CC} = 2.0V, and /EOSC bit = 0 (oscillator enabled).
- /RST, SCLK, and I/O all have 40kΩ pull-down resistors to ground.
- /RST, I/O, and SCLK open. The /EOSC bit = 1 (oscillator disabled).
- V_{CC2} = 0V.
- V_{CC1} = 0V.
- Typical values are at 25°C.

AC Electrical Characteristics

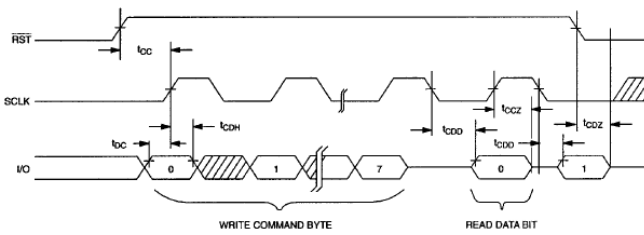


Figure 1: Timing diagram, Read data transfer

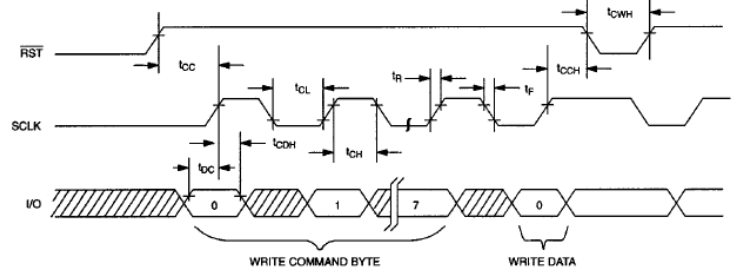


Figure 2: Timing diagram, Write data transfer

T_A = -40 °C to +85 °C. Unless otherwise specified.

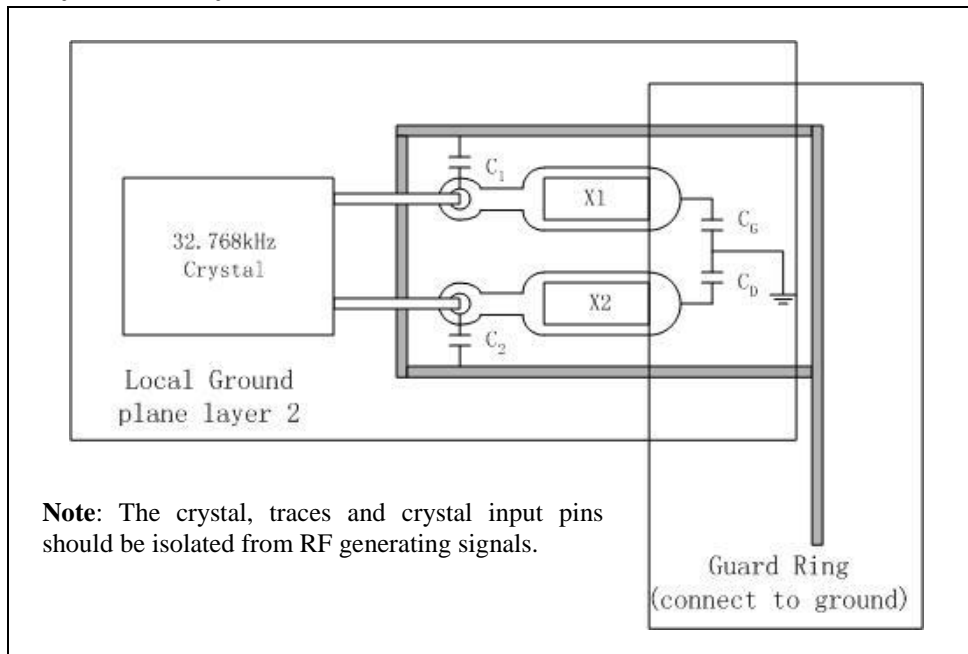
Parameter	Sym	Min	Typ	Max	Unit	Notes	
Data to CLK Setup	t _{DC}	V _{CC} =2.0V	200	-	-	ns	1
		V _{CC} =5.0V	50	-	-		
CLK to Data Hold	t _{CDH}	V _{CC} =2.0V	280	-	-	ns	1
		V _{CC} =5.0V	70	-	-		
CLK to Data Delay	t _{CDD}	V _{CC} =2.0V	-	-	800	ns	1,2,3
		V _{CC} =5.0V	-	-	200		
CLK Low Time	t _{CL}	V _{CC} =2.0V	1000	-	-	ns	1
		V _{CC} =5.0V	250	-	-		
CLK High Time	t _{CH}	V _{CC} =2.0V	1000	-	-	ns	1
		V _{CC} =5.0V	250	-	-		
CLK Frequency	t _{CLK}	V _{CC} =2.0V	-	-	0.5	MHz	1
		V _{CC} =5.0V	0	-	2.0		

Parameter	Sym	Min	Typ	Max	Unit	Notes	
CLK Rise and Fall	t_R, t_F	$V_{CC}=2.0V$	-	-	2000	ns	1
		$V_{CC}=5.0V$	-	-	500		
\overline{RST} to CLK Setup	t_{CC}	$V_{CC}=2.0V$	4	-	-	μs	1
		$V_{CC}=5.0V$	1	-	-		
CLK to \overline{RST} Hold	t_{CCH}	$V_{CC}=2.0V$	240	-	-	ns	1
		$V_{CC}=5.0V$	60	-	-		
\overline{RST} Inactive Time	t_{CWH}	$V_{CC}=2.0V$	4	-	-	μs	1
		$V_{CC}=5.0V$	1	-	-		
\overline{RST} to I/O High-Z	t_{CDZ}	$V_{CC}=2.0V$	-	-	280	ns	1
		$V_{CC}=5.0V$	-	-	70		
SCLK to I/O High-Z	t_{CCZ}	$V_{CC}=2.0V$	-	-	280	ns	1
		$V_{CC}=5.0V$	-	-	70		

Note:

1. Measured at $V_{IH} = 2.0V$ or $V_{IL} = 0.8V$ and 10ns maximum rise and fall time.
2. Measured at $V_{OH} = 2.4V$ or $V_{OL} = 0.4V$.
3. Load capacitance = 50pF.

Recommended Layout for Crystal



Built-in Capacitors Specifications and Recommended External Capacitors

Parameter		Symbol	Typ	Unit
Build-in capacitors	X1 to GND	C _G	11	pF
	X2 to GND	C _D	11	pF
Recommended External capacitors for crystal C _L =12.5pF	X1 to GND	C ₁	12	pF
	X2 to GND	C ₂	12	pF
Recommended External capacitors for crystal C _L =6pF	X1 to GND	C ₁	0	pF
	X2 to GND	C ₂	0	pF

Note: The frequency of crystal can be optimized by external capacitor C₁ and C₂, for frequency=32.768 KHz, C₁ and C₂ should meet the equation as below:

$$C_{par} + [(C_1 + C_G) * (C_2 + C_D)] / [(C_1 + C_G) + (C_2 + C_D)] = C_L$$

C_{par} is all parasitical capacitor between X1 and X2.

C_L is crystal's load capacitance.

Crystal Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Nominal Frequency	f ₀	-	32.768	-	kHz
Series Resistance	ESR	-	-	70	kΩ
Load Capacitance	C _L	-	6/12.5	-	pF

Function Description

Overview of Functions

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 2099.

2. Interface with CPU

Simple 3-wire interface.

3. Oscillator enable/disable

Oscillator can be enabled or disabled by /EOSC bit. But time count chain does not shut down when the bit is logic 1.

4. Charger function

The function is controlled by trickle charge register. Customer can select the charge current by selecting the number of diode and resistor value through the register.

For example:

Assume that a system power supply of 5V is applied to VCC2 and a super cap is connected to VCC1. Also assume that the trickle charger has been enabled with one diode and resistor R1 between VCC2 and VCC1. The maximum current I_{MAX} would, therefore, be calculated as follows:

$$I_{MAX} = (5.0V - \text{diode drop}) / R1 \approx (5.0V - 0.7V) / 2k\Omega \approx 2.2mA$$

As the super cap charges, the voltage drop between VCC1 and VCC2 will decrease and, therefore, the charge current will decrease.

Registers

1. Allocation of registers

Addr. (hex) ^{*1}	Function	Register Definition							
		Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
00	Seconds (00-59)	/EOSC ^{*2} 2	S40	S20	S10	S8	S4	S2	S1
01	Minutes (00-59)	0	M40	M20	M10	M8	M4	M2	M1
02	Hours (00-23 / 01-12)	12, /24	0	H20 or P /A	H10	H8	H4	H2	H1
03	Dates (01-31)	0	0	D20	D10	D8	D4	D2	D1
04	Months (01-12)	0	0	0	MO10	MO8	MO4	MO2	MO1
05	Days of the week (01-07)	0	0	0	0	0	W4	W2	W1
06	Years (00-99)	Y80	Y40	Y20	Y10	Y8	Y4	Y2	Y1
07	Control	WP ^{*3}	0	0	0	0	0	0	0
08	Trickle charger	TCS ^{*4}	TCS	TCS	TCS	DS ^{*5}	DS	RS ^{*6}	RS
1F	Clock burst ^{*7}	-	-	-	-	-	-	-	-
20~3E	RAM ^{*9}	-	-	-	-	-	-	-	-
3F	RAM burst ^{*8}	-	-	-	-	-	-	-	-

Caution points:

- *1. PT7C4302 uses 5 bits for address. It's address byte consists of 1 + RAM/Clock select bit +5-bit addr. + Read/Write select bit.
- *2. Oscillator Enable bit. When this bit is set to 1, oscillator is stopped but time count chain is still active.
- *3. WP: Write Protect bit. WP bit should be cleared before attempting to write to the device.
- *4. TCS: Trickle Charger Select.
- *5. DS: Diode Select.
- *6. RS: Resistor Select.
- *7. Clock burst register address is used as clock/calendar burst mode operation address for consecutively read/write 0~7H registers. Clock/calendar burst mode operation can continuously read 0H to maximum 7H registers in order; write 0~7H registers in order. Less or larger than 8 bytes in clock burst write mode are ignored.
- *8. RAM burst register address is used as RAM burst mode operation address for consecutively read/write 20~3EH RAM. Less than 31 bytes in RAM burst read/write mode are valid.
- *9. PT7C4302 has 31×8 static RAM for customer use. It is volatile RAM.
- *10. All bits marked with "0" are read-only bits. Their value when read is always "0". All bits marked with "-" are customer using space.

2. Control and status register

Addr. (hex)	Description	D7	D6	D5	D4	D3	D2	D1	D0
07	Control (default)	WP	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0

WP: Write Protect bit.

WP	Data	Description
Read / Write	0	Write operation is enabled. Default
	1	Prevent a write operation to any other register.

3. Time Counter

Time digit display (in BCD code):

- Second digits: Range from 00 to 59 and carried to minute digits when incremented from 59 to 00.
- Minute digits: Range from 00 to 59 and carried to hour digits when incremented from 59 to 00.
- Hour digits: See description on the /12, 24 bit. Carried to day and day-of-the-week digits when incremented from 11 p.m. to 12 a.m. or 23 to 00.

Addr. (hex)	Description	D7	D6	D5	D4	D3	D2	D1	D0
00	Seconds (default)	/EOSC* 0	S40 Undefined	S20 Undefined	S10 Undefined	S8 Undefined	S4 Undefined	S2 Undefined	S1 Undefined
01	Minutes (default)	0 0	M40 Undefined	M20 Undefined	M10 Undefined	M8 Undefined	M4 Undefined	M2 Undefined	M1 Undefined
02	Hours (default)	12, /24 Undefined	0 0	H20 or P,/A Undefined	H10 Undefined	H8 Undefined	H4 Undefined	H2 Undefined	H1 Undefined

* **Note:** /EOSC bit must be written into 0 to start the time count.

a) 12 / 24 bit

This bit is used to select between 12-hour clock operation and 24-hour clock operation.

12, /24	Description	Hours Register			
0	24-hour time display	24-hour clock	12-hour clock	24-hour clock	12-hour clock
		00	92 (AM 12)	12	B2 (PM 12)
		01	81 (AM 01)	13	A1 (PM 01)
		02	82 (AM 02)	14	A2 (PM 02)
		03	83 (AM 03)	15	A3 (PM 03)
		04	84 (AM 04)	16	A4 (PM 04)
1	12-hour time display	05	85 (AM 05)	17	A5 (PM 05)
		06	86 (AM 06)	18	A6 (PM 06)
		07	87 (AM 07)	19	A7 (PM 07)
		08	88 (AM 08)	20	A8 (PM 08)
		09	89 (AM 09)	21	A9 (PM 09)
		10	90 (AM 10)	22	B0 (PM 10)
		11	91 (AM 11)	23	B1 (PM 11)

Be sure to select between 12-hour and 24-hour clock operation before writing the time data.

4. Days of the week Counter

The day counter is a divide-by-7 counter that counts from 01 to 07 and up 07 before starting again from 01. Values that correspond to the day of week are user defined but must be sequential (i.e., if 1 equals Sunday, then 2 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
05	Days of the week (default)	0 0	0 0	0 0	0 0	0 0	W4 Undefined	W2 Undefined	W1 Undefined

5. Calendar Counter

The data format is BCD format.

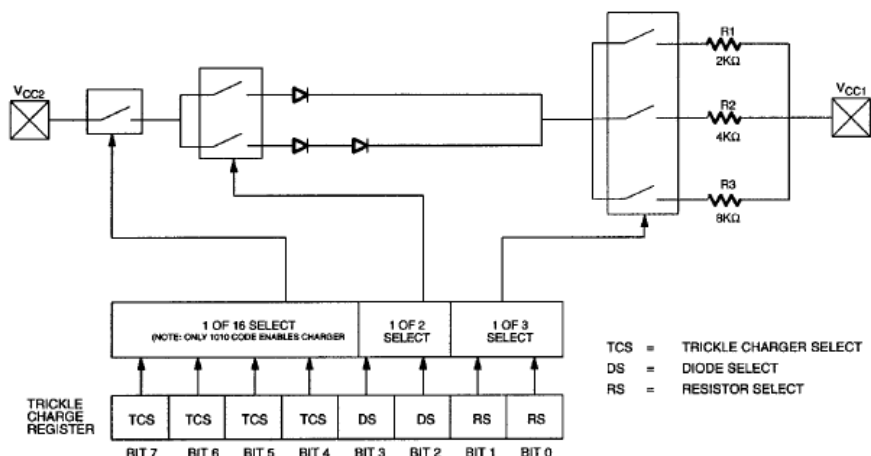
- Day digits: Range from 1 to 31 (for January, March, May, July, August, October and December).
Range from 1 to 30 (for April, June, September and November).
Range from 1 to 29 (for February in leap years).
Range from 1 to 28 (for February in ordinary years).
Carried to month digits when cycled to 1.
- 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
03	Dates (default)	0 0	0 0	D20 Undefined	D10 Undefined	D8 Undefined	D4 Undefined	D2 Undefined	D1 Undefined
04	Months (default)	0 0	0 0	0 0	M10 Undefined	M8 Undefined	M4 Undefined	M2 Undefined	M1 Undefined
06	Years (default)	Y80 Undefined	Y40 Undefined	Y20 Undefined	Y10 Undefined	Y8 Undefined	Y4 Undefined	Y2 Undefined	Y1 Undefined

Note: Any registered imaginary time should be replaced by correct time, otherwise it will cause the clock counter malfunction.

6. Trickle Charger

Addr.	Description	D7	D6	D5	D4	D3	D2	D1	D0
8	Trickle charger (default)	TCS 0	TCS 1	TCS 0	TCS 1	DS 1	DS 1	RS 0	RS 0



a) Trickle Charger Select

Control the selection of the trickle charger.

TCS	Data	Description
Read/ Write	Other patent	Disable the trickle charger
	1010	Enable the trickle charger

* Default 0101

b) Diode Select

Select whether one diode or two diodes are connected between VCC2 and VCC1.

DS	Data	Description
Read/ Write	00 or 11	The trickle charger is disabled independently of TCS. * Default
	01	One diode is selected.
	10	Two diodes are selected.

c) Resistor Select

Select whether one diode or two diodes are connected between VCC2 and VCC1.

RS	Data	Description
Read/ Write	00	No resistor. * Default
	01	R1 with typ. 2kΩ
	10	R2 with typ. 4kΩ
	11	R3 with typ. 8kΩ

Communication

1. 3-wire Interface

a) Command Byte

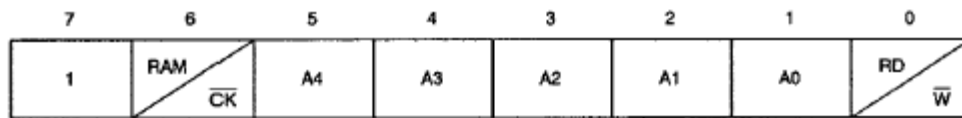


Figure 3: Command byte

The command byte is shown in Figure 1. Each data transfer is initiated by a command byte. The MSB (Bit 7) must be a logic 1. If it is 0, writes to the PT7C4302 will be disabled. Bit 6 specifies clock/calendar data if logic 0 or RAM data if logic 1. Bits 1 through 5 specify the designated registers to be input or output, and the LSB (bit 0) specifies a write operation (input) if logic 0 or read operation (output) if logic 1. The command byte is always input starting with the LSB (bit 0).

b) $\overline{\text{RST}}$ and SCL Signal

All data transfers are initiated by driving the $\overline{\text{RST}}$ input high and terminated by driving the $\overline{\text{RST}}$ input low. A clock cycle is a sequence of a falling edge followed by a rising edge. For data inputs, data must be valid during the rising edge of the clock and data bits are output on the falling edge of clock. If the $\overline{\text{RST}}$ input is low all data transfer terminates and the SDA pin goes to a high impedance state. Data transfer is illustrated in Figure 2 and Figure 3. At power-up, $\overline{\text{RST}}$ must be a logic 0 until VCC > 2.0V. Also SCLK must be at a logic 0 when $\overline{\text{RST}}$ is driven to a logic 1 state.

c) Single Byte Read

SINGLE BYTE READ

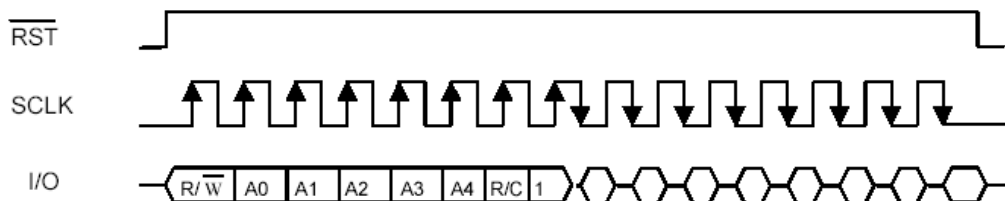


Figure 4: Single byte read

Following the eight SCLK cycles that input a read command byte, a data byte is output on the falling edge of the next eight SCLK cycles. Note that the first data bit to be transmitted occurs on the first falling edge after the last bit of the command byte is written. Additional SCLK cycles will transmit the same data bytes by PT7C4302 so long as RST remains high. This operation permits continuous burst mode read capability. Also, the SDA pin is tri-stated upon each rising edge of SCLK. Data is output starting with bit 0.

d) Single Byte Write

SINGLE BYTE WRITE

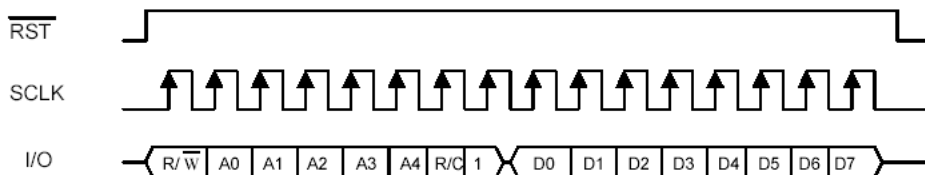


Figure 5: Signal byte write

Following the eight SCLK cycles that input a write command byte, a data byte is input on the rising edge of the next eight SCLK cycles. Additional SCLK cycles are ignored. Data is input starting with bit 0.

e) Burst Mode

Burst mode is specified for either the clock/calendar or the RAM registers by addressing location 31 decimal (Address bits: A4 A3 A2 A1 A0 = 1 1 1 1 1 showed in Figure 1). As before, bit 6 specifies clock or RAM and bit 0 specifies read or write. There is no data storage capacity at locations 9 through 31 in the Clock/Calendar Registers or location 31 in the RAM registers. Reads or writes in burst mode start with bit 0 of address 0.

When writing to the clock registers in the burst mode, the first eight registers must be written in order for the data to be transferred. If the number of transferred bytes is less than eight, the data will be ignored. However, when writing to RAM in burst mode, it is not necessary to write all 31 bytes for the data to transfer. Each byte that is written will be transferred to RAM regardless of whether all 31 bytes are written or not. Additional SCLK cycles are ignored.

- Clock/Calendar Burst Mode**

The clock/calendar command byte specifies burst mode operation. In this mode the first eight clock/calendar registers can be consecutively read or written starting with bit 0 of address 0.

If the write protect bit is set high when a write clock/calendar burst mode is specified, no data transfer will occur to any of the eight clock/calendar registers (this includes the control register). The trickle charger is not accessible in burst mode.

At the beginning of a clock burst read, the current time is transferred to a second set of registers. The time information is read from these secondary registers, while the clock may continue to run. This eliminates the need to re-read the registers in case of an update of the main registers during a read.

- RAM Burst Mode**

The RAM command byte specifies burst mode operation. In this mode, the 31 RAM registers can be consecutively read or written starting with bit 0 of address 0.

Note: PT7C4302 use 94H, 96H as test mode address. Customer should not use the address.

Part Marking

W Package



T: Die Rev

Y: Date Code (Year)

W: Date Code (Workweek)

1st X: Assembly Site Code

2nd X: Fab Site Code

Bar above "T" means Fab3 of MGN

Bar above 2nd "X" means Cu wire

ZE Package

Top mark not available at this time. To obtain advance information regarding the top mark, please contact your local sales representative.

PT7C4302

Packaging Mechanical
8-SOIC (W)

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

		DATE: 06/02/20
DESCRIPTION: 8-Pin, 150mil-Wide, SOIC		
PACKAGE CODE: W (W8)		
DOCUMENT CONTROL #: PD-1001		REVISION: H

NOTE :
 1. ALL DIMENSIONS ARE IN mm. ANGLES IN DEGREES
 2. DIMENSIONS EXCLUDE BURRS, MOLD FLASH OR PROTRUSIONS
 3. REFER JEDEC MS-012
 4. RECOMMENDED LAND PATTERN IS FOR REFERENCE ONLY.

20-1273

PT7C4302

8-TDFN (ZE)

PKG. DIMENSIONS(MM)		
SYMBOL	Min	Max
A	0.70	0.80
A1	0.00	0.05
A3	0.20 REF	
D	1.92	2.08
E	2.92	3.07
D1	1.40	1.60
E1	1.40	1.60
k	0.20 MIN	
b	0.20	0.30
e	0.50 TYP	
L	0.22	0.38

		DATE: 06/14/13
DESCRIPTION: 8-Pin, TDFN, 2X3		
PACKAGE CODE: ZE (ZE8)		
DOCUMENT CONTROL#: PD-2116		REVISION: --

Notes:
1. Ref. JEDEC MO-229

13-0155

For latest package info.

please check: <http://www.diodes.com/design/support/packaging/pericom-packaging/packaging-mechanicals-and-thermal-characteristics/>

Ordering Information

Part Number	Package Code	Package Description
PT7C4302WEX	W	8-Pin, 150mil-Wide (SOIC)
PT7C4302ZEEX	ZE	8-Pin, 2x3 (TDFN)

Notes:

- No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
- See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
- Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- E = Pb-free and Green
- X suffix = Tape/Reel

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 - 2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.
- B. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or to affect its safety or effectiveness.

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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)

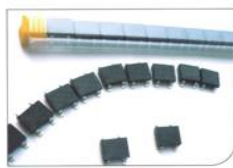
N+P 20V	P -100V	Dual N 30V	N 30V	N 75V
N+P 30V	P -12V	Dual N 100V	N 40V	N 85V
N+P 40V	P -16V	Dual N 20V	N 55V	N 100V
Dual P -30V	P -20V	Dual N 40V	N 60V	N 150V
Dual P -60V	P -40V	N 20V	N 68V	N 200V

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

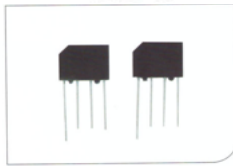
超低正向肖特基整流二极管	肖特基整流二极管	普通整流二极管	快恢复整流二极管	高效整流二极管
超快恢复整流二极管	双向触发二极管	瞬变电压抑制二极管	稳压二极管	桥式整流器
小信号肖特基二极管	小信号开关二极管	光伏二极管	汽车整流器	高压触发管

桥式整流器专业制造 (定制产品, 需要一周~二周时间)

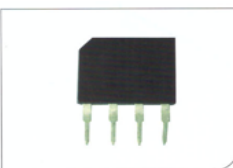
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DB107S	50MIL DBS	GBU606-GBU610	88MIL GBU
DB157S	60MIL DBS	GBU806-GBU810	95MIL GBU
DB207S	60MIL DBS	GBU1006-GBU1010	100MIL GBU
DB307S	70MIL DBS	GBU1506-GBU1510	110MIL GBU
DB107	50MIL DB	GBU2506-GBU2510	130MIL GBU
DB157	60MIL DB	GBJ406-410	84MIL 4GBJ
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
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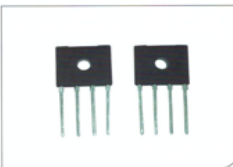
DB-S



KBP



GBP



D3K



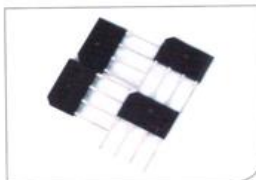
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GBU



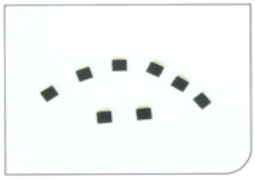
GBJ



KBJ



MDB-S



ABS

深圳市致新科科技有限公司

Shenzhen Zhixinke Technology Co., Ltd.



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	HSO038BD
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

深圳市致新科科技有限公司

Shenzhen Zhixinke Technology Co., Ltd.



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

深圳市致新科科技有限公司

Shenzhen Zhixinke Technology Co., Ltd.



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。