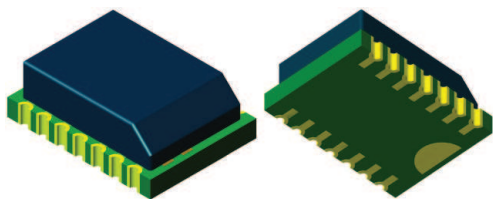




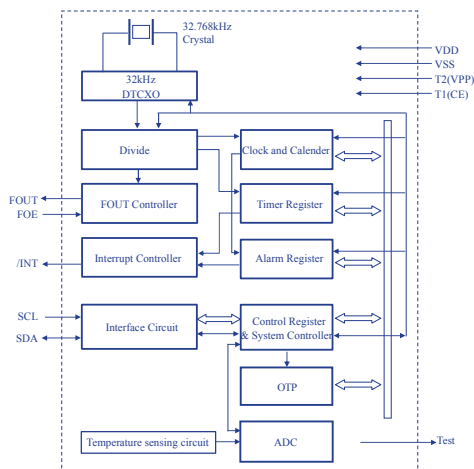
### ■ Holder Type: TR



**NEW**  
TR-8105 Series RTC  
Integrated with TCXO



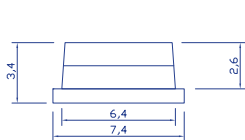
### ■ Block Diagram



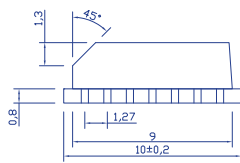
### Features:

- Built in frequency adjusted 32.768 kHz crystal unit and DTCXO
- Interface type: I<sup>2</sup>C-Bus Interface (400 kHz)
- Interface voltage range: 1.8 V to 5.5 V
- Temp.compensated voltage range: 2.5 V to 5.5 V
- Wide Timekeeper voltage range: 1.6 V to 5.5 V
- Oscillator frequency output function: C-MOS output (30pF Max) With Control Pin
- Real Time Clock function includes full calendar, alarm, timer and leap year adjustment
- Lower power consumption
- Frequency stability:
  - A Type:  $\pm 3.4\text{ppm}$  @  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
  - B Type:  $\pm 5.0\text{ppm}$  @  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

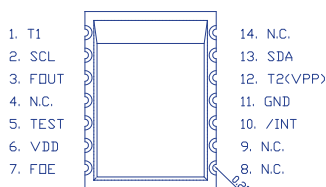
### ■ Dimensions (mm)



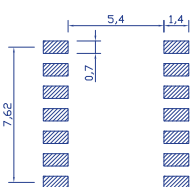
Front View



Side View

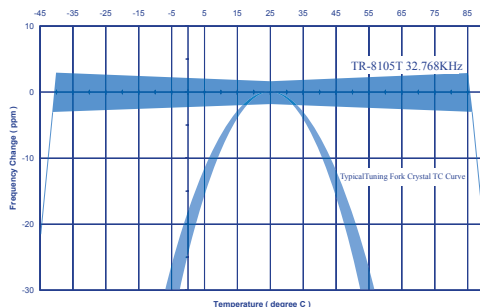


Top View



Recommended Land Pattern

### ■ Temperature Characteristics



\*Intellectual property rights reserved by Hong Kong X'tals Ltd.

\*The I<sup>2</sup>C-Bus is a trademark of NXP Semiconductors.



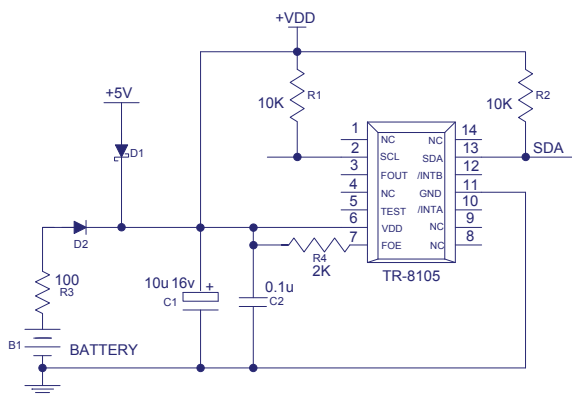
### ■ Pin Function Definitions

Signal Name	Pin No.	I/O	Function
T1(CE)	1	input	Use by manufacture for testing (do not connect externally)
SCL	2	input	Serial clock input pin
FOUT	3	output	Reference clock signal output (CMOS)
TEST	5	input	Use by manufacture for testing (do not connect externally)
VDD	6	-	Positive power supply
FOE	7	input	FOUT output control
/INT	10	output	Interrupt output (N-ch open drain)
GND	11	-	Ground
T2(Vpp)	12	-	Use by manufacture for testing (do not connect externally)
SDA	13	I/O	Data input and output pin

### ■ Specifications

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	
Supply voltage	VDD	Interface voltage	1.8	3.0	5.5	V	
Temp. compensated voltage	VTEM	Temp. compensated voltage	2.5	3.0	5.5	V	
Clock voltage	VCLK	-	1.6	3.0	5.5	V	
Operating temperature	TOPR	-	-40	+25	+85	°C	
Stability	$\Delta f/f$	-40 °C to +85 °C	±3.4		(A Type)	ppm	
		-40 °C to +85 °C	±5.0		(B Type)	ppm	
Current Consumption (1)	IBK1	FSCL=0Hz FOE=VSS.	VDD=5V	-	1.2	3.4	uA
Current Consumption (2)	IBK2	/INT=VDD	VDD=3V	-	0.8	2.8	uA

### ■ Recommended Circuit



Note:

1. Manufacturer reserves the right to change the product appearance, specification and content of this product for improvement without notification.
2. Custom specification is welcome. Please contact our sales representative for further details.
3. If the real time clock is intended for applications which have direct impact on human life and properties, and require a high degree of reliability and safety concerns, customers must provide full information such as but not limit to the application, electrical and reliability specification at the inquiry beginning stage.
4. Any part of this catalogue may not be reproduced or duplicated in any form or any means without the written permission of HKC.