

RT8H064C

0.5-wave 1-shot count system

DESCRIPTION

The RT8H064C consists of a leakage detection circuit, which employs a 0.5-wave, one-shot count method. By connecting the capacitance to the external terminal, the operating time can be set. By adopting the latch output format, once a leakage current is detected, the abnormal output is maintained.

FEATURES

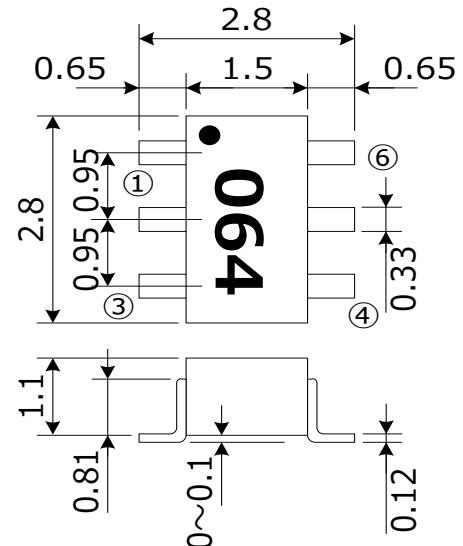
- Leakage detection method : 0.5 wave and one shot count.
- output method : Latch output
- Low current consumption : 400uA standard
- High sensitivity input : $V_T=8.5mV$ standard (DC)
- Small Surface Mount Package (SC-74 : 2.8mm×2.8mm)

APPLICATION

- Leakage protection plug
- Ground Fault Taps
- Earth leakage circuit breaker

OUTLINE DRAWING

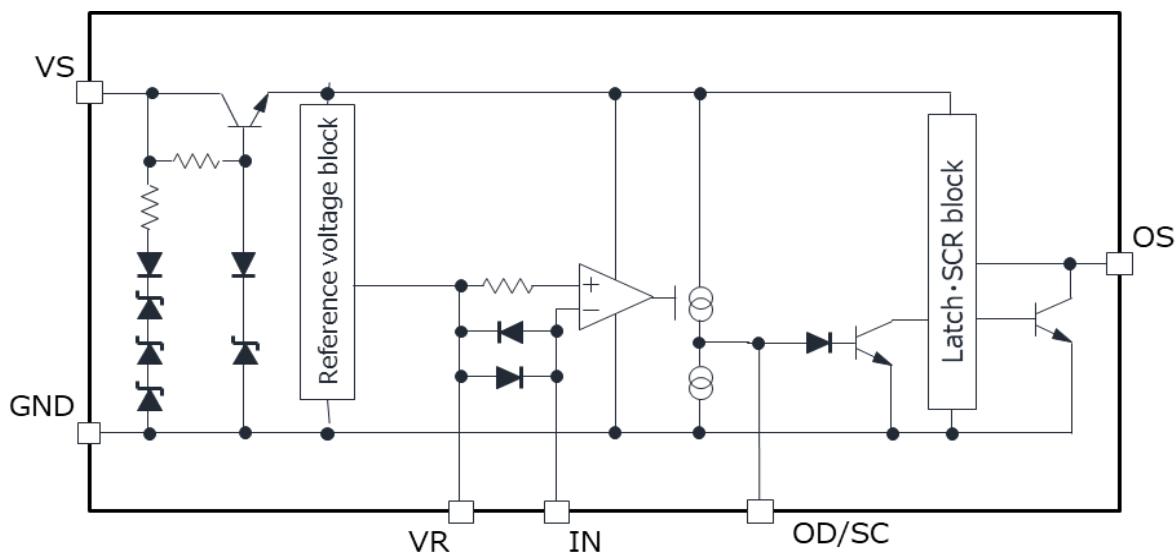
unit : mm



Pin layout

- | | |
|---------|-------|
| ① VR | ⑥ VS |
| ② IN | ⑤ GND |
| ③ OD/SC | ④ OS |

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS (Ta = 25°C, unless otherwise noted.)

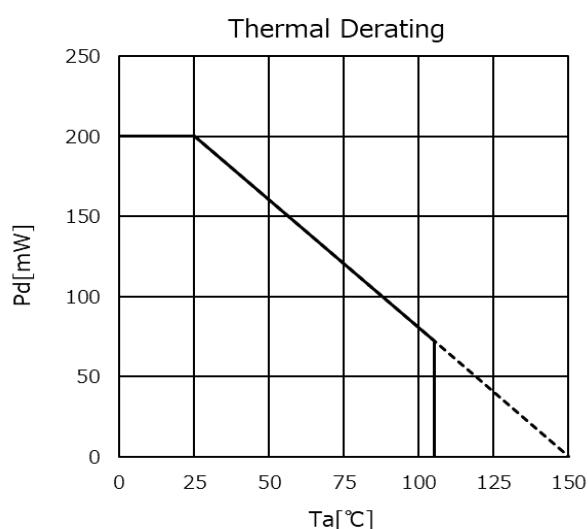
Symbol	Parameter	Test condition	Ratings	Unit
IS	Power supply current		8	mA
IVR	VR terminal current	VR-GND Pulse=500ms	25	mA
IIN	IN terminal current	IN-GND Pulse=500ms	25	mA
IVR-IN	VR-IN current	VR-IN	150	mA
IOD/SC	OD/SC terminal current		5	mA
Pd	Internal power dissipation		200	mW
Kθ	Thermal derating	Ta ≥ 25°C	1.6	mW/°C
Tj	Junction temperature		150	°C
Tstg	Storage temperature	(keep dry)	-55~150	°C
Topr	Operating temperature	(keep dry)	-40~105	°C

ELECTRICAL CHARACTERISTIC (Ta=25°C.)

Symbol	Parameter	Test condition	Limits			Unit
			Min	Typ	Max	
IS1	Power supply current	VS=12V, VR-VIN=30mV, VOD/SC=0V	-	400	530	uA
VT	Trip DC voltage	VS=16V, VR-VIN voltage	6	8.5	11.1	mV
ITD1	Timed current1	VS=16V, VR-VIN=30mV, VOD/SC=1.2V	-12	-21	-30	uA
ITD2	Timed current2	VS=16V, VOD/SC=0.8V, VR-VIN=0mV	12	21	30	uA
IOS	Output Current	VOD/SC=1.4V, IS=530uA	-100	-	-	uA
VOSM	Maximum Output Voltage	VS=16V, VR-VIN=30mV, OS-GND:100kΩ	5.7	6.3	6.9	V
VSCon	OD/SC ON voltage	VS=16V	0.7	1.1	1.4	V
IOSL	Output "L" current	VS=12V, VOSL=0.2V	200	-	-	uA
VIC	Input clamping voltage	VS=12V, IIC=10mA	10.0	13.0	16.0	V
VIDC	Differential input clamp voltage	IIDC=100mA	0.4	1.2	2.0	V
VSM	Maximum Current Voltage	ISM=7mA	24	28	32	V
IOS2	Power supply current2	VR-VIN=0mV, VOS=0.6V	-	-	900	uA
VSoFF	Latch release power supply voltage		0.5	-	-	V
Ton	Operating time	VS=16V, VR-VIN=30mV, C=0.047uF	2	-	4	ms

※Output Voltage is determined by the multiplication value of IOS and resistance(OS-GND),
but when the resistance value is 70 kΩ or more, it is clamped by the value of the Maximum Output Voltage.

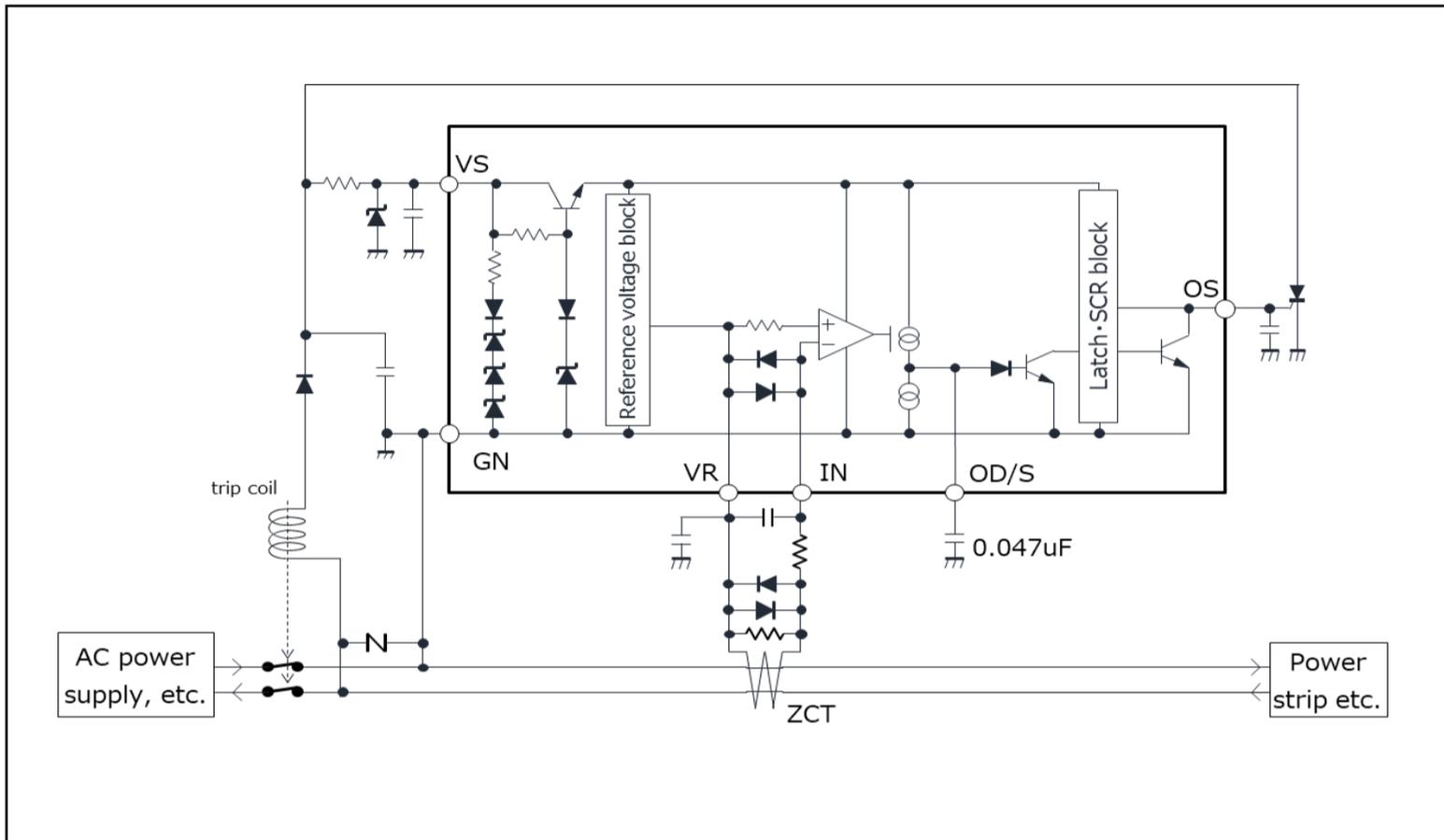
Typical Characteristic



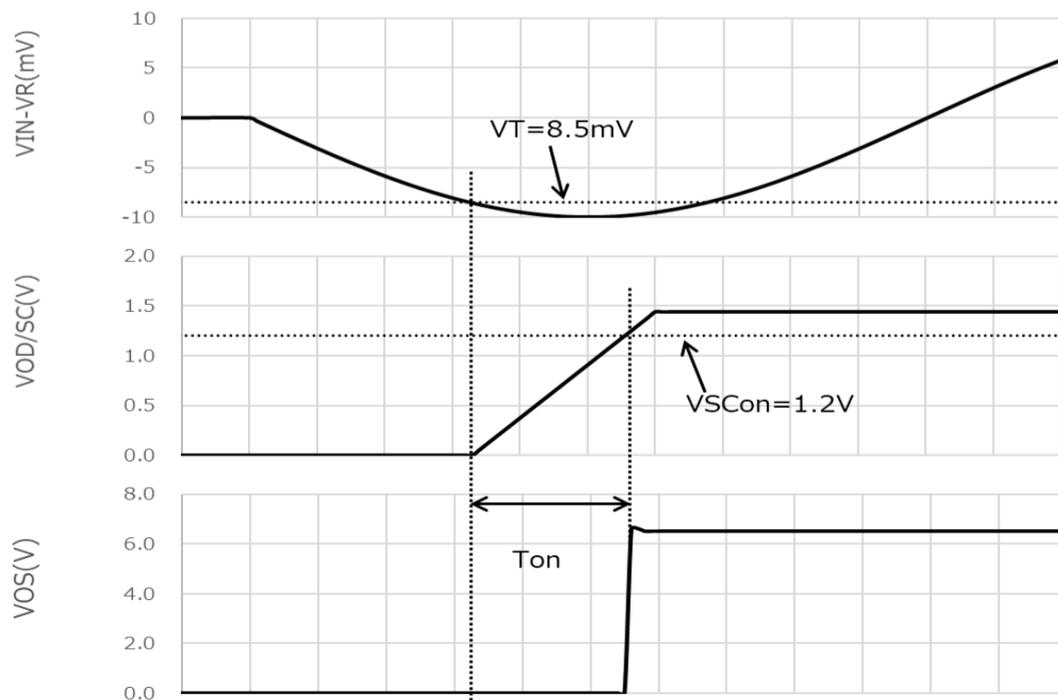
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APPLICATION CIRCUIT EXAMPLES



Timing Chart



Keep safety first in your circuit designs!

·ISAHAYA Electronics Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage.

Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (1) placement of substitutive, auxiliary, (2) use of non-flammable material or (3) prevention against any malfunction or mishap.

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