



M54149

LINEAR INTEGRATED CIRCUIT

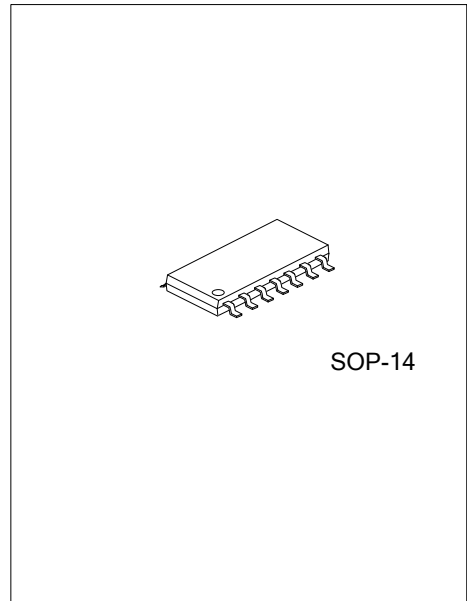
CMOS LEAKAGE PROTECTION CIRCUIT

DESCRIPTION

The UTC **M54149** is a high performance electric leakage protector special circuit delay function. Including the internal voltage stabilized source, amplifying circuit, a comparison circuit, tripping controller, delay circuit and tripping circuit. The peripheral decoupling coil, varistor, zener diode, diode, resistors, capacitors and other components.

FEATURES

- * AC power supply
- * Drive SCR, the output pulse width greater than 30ms
- * Used to detect the A and AC signal
- * Same higher accuracy for different leakage signal
- * Delay by external capacitor
- * 110V~220V(50~60Hz)
- * Width temperature range (T_A=-30~+85°C)
- * Available in SOP14 packages

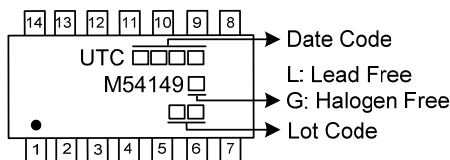


ORDERING INFORMATION

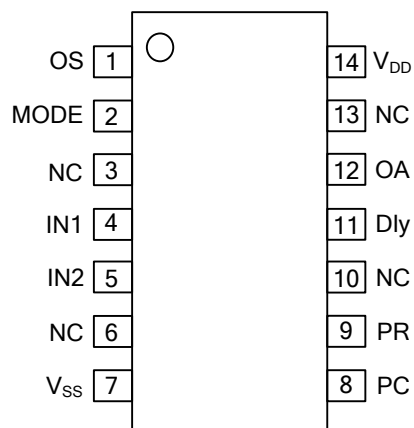
Ordering Number		Package	Packing
Lead Free	Halogen Free		
M54149L-S14-R	M54149G-S14-R	SOP-14	Tape Reel

<p>M54149G-S14-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) R: Tape Reel (2) S14: SOP-14 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



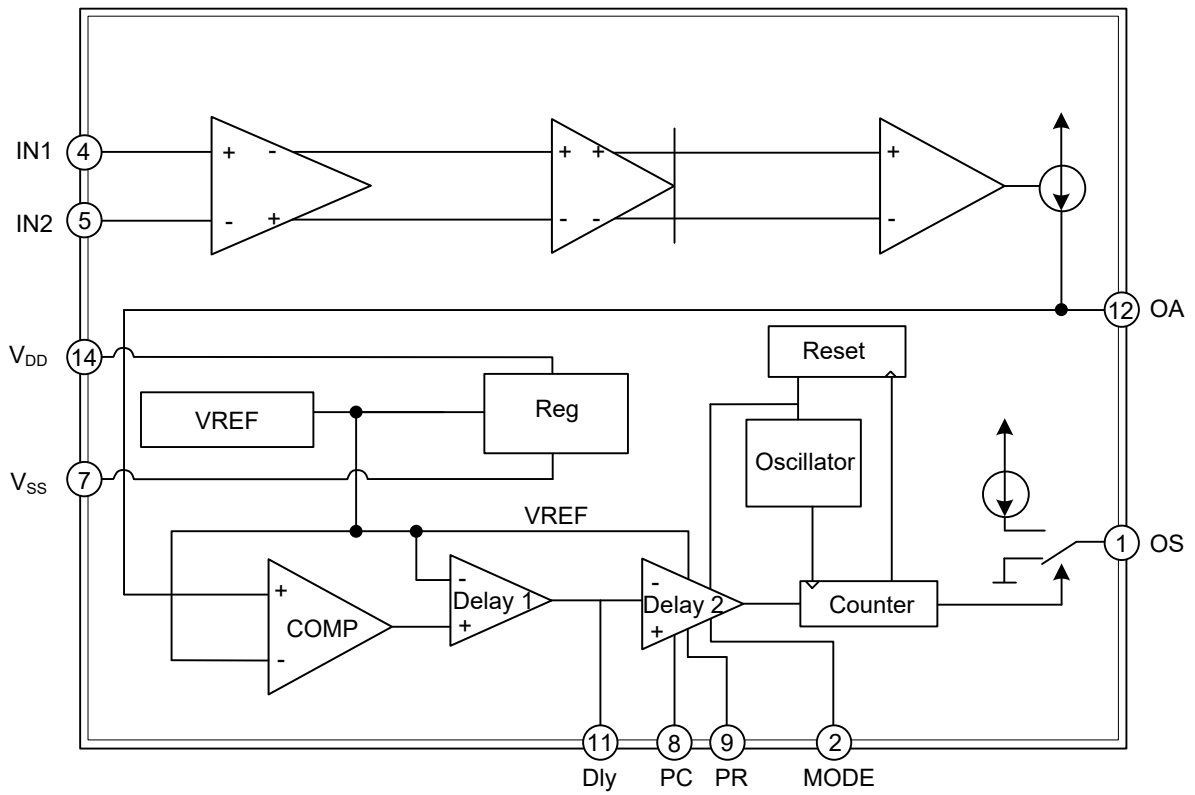
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	OS	Output. Drive SCR
2	MODE	Input. Control delay capacitor discharge velocity
3, 6, 10, 13	NC	No Connection
4	IN1	Input. Amplifier input terminal 1
5	IN2	Input. Amplifier input terminal 2
7	V _{SS}	Ground
8	PC	Output. external resistor, adjust the delay time
9	PR	Output. external resistor, adjust the delay time
11	Dly	Output. external capacitor to suppress noise
12	OA	Output. the output of the amplifier, external filter capacitor
14	V _{DD}	V _{DD}

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{DD}	8.5	V
Supply Current		8	mA
Any Pin to Ground Voltage		-1.0 ~ +7.0	V
Operating Temperature	T _{OPR}	-30 ~ +85	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

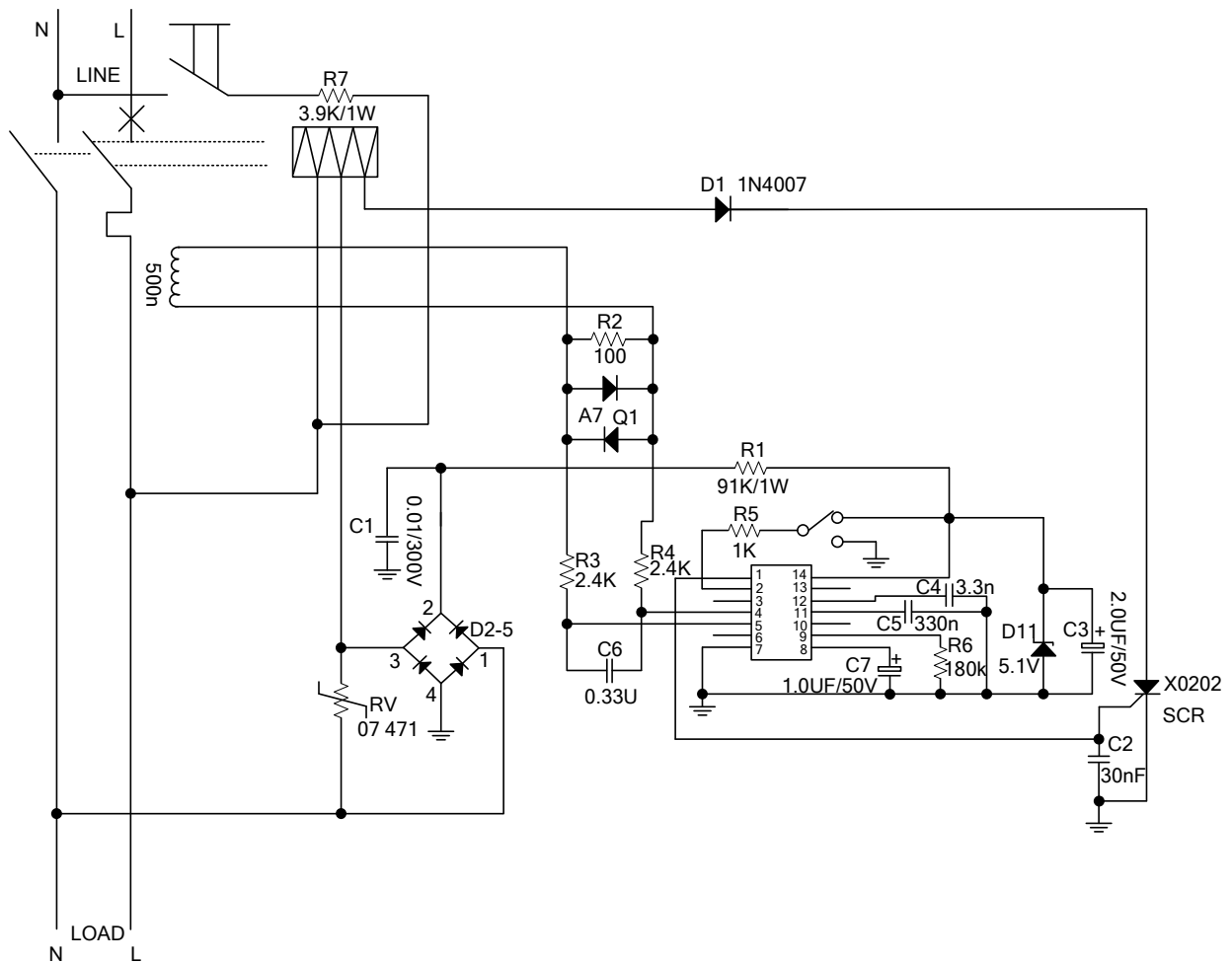
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V _{DD}	I ₁ =5mA (Test 1)	4.65	4.8	4.95	V
Dly Output High Current	I _{DYH}	I ₁ =5mA, V _{IN1} -V _{IN2} =30mV (Test 2)	45		80	μA
Dly Output Low Current	I _{DYL}	I ₁ =5mA, V _{IN1} -V _{IN2} Short Circuit (Test 3)	35		85	μA
OS Output High Current	I _{OSH}	I ₁ =5mA, V _{IN1} -V _{IN2} =30mV (Test 4)	1.2			mA
OS Output Low Level	V _{OSL}	I ₁ =5mA, V _{IN1} -V _{IN2} Short Circuit, I _{N5} =1.8mA (Test 5)			0.2	V
Positive Action Voltage	V _{PT}	I ₁ =5mA, V _{IN1} -V _{IN2} (Note 1) (Test 6)	4		6	mV
Negative Action Voltage	V _{NT}	I ₁ =5mA, V _{IN1} -V _{IN2} (Note 1) (Test 7)	4		6	mV
Lock Time	T _{ON}	I ₁ =5mA, V _{IN1} -V _{IN2} =30mV (Note 2) (Test 8)	20			ms
Delay Time	T _{W2}	I ₁ =5mA, C ₁ =0.1μF, R ₁ =100K (Test 8)		16.7		ms

Notes: 1. When V_{PT}<4mV, the OS pin output low level. When V_{PT}>6mV, the OS pin output high level.
2. T_{ON} is an OS output high level duration.

■ TYPICAL APPLICATION CIRCUIT



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