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# KA2807

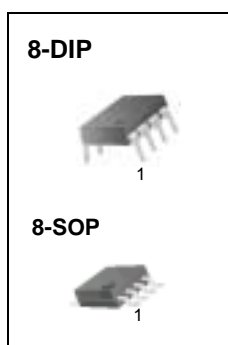
## Earth Leakage Detector

### Features

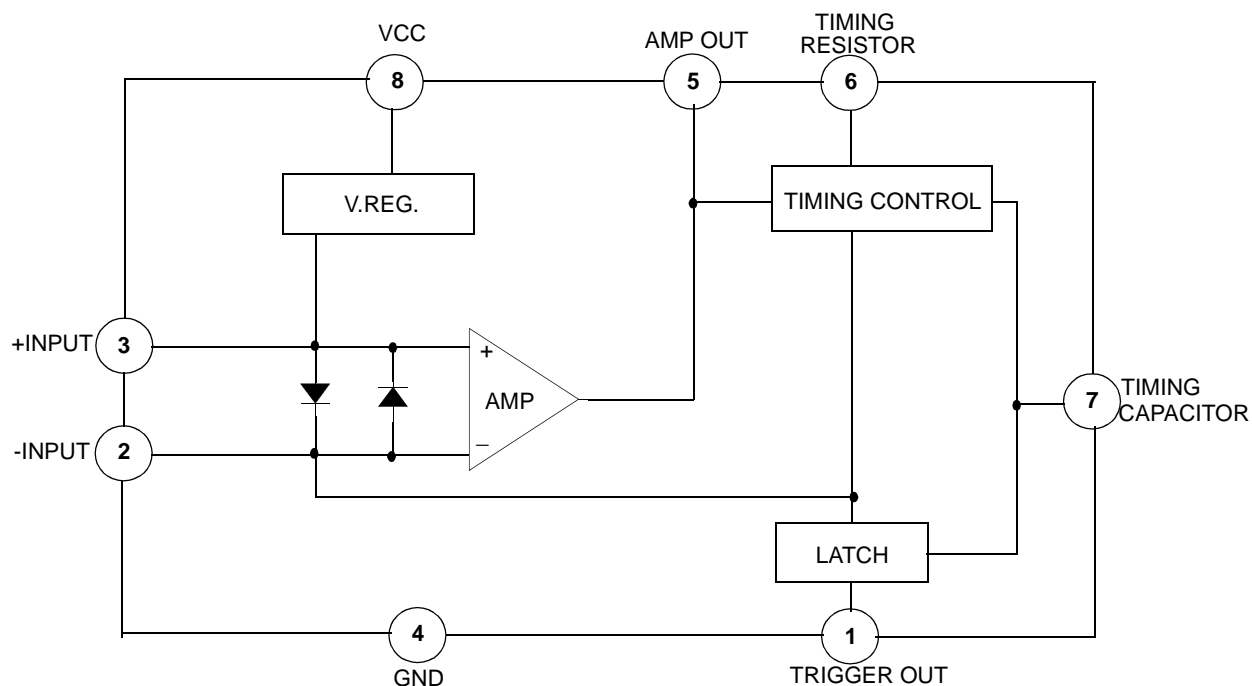
- Full Advantage of the UL943
- Built-In Voltage Regulator
- Sense Coil: 1000:1
- GND/Neutral Coil: 200:1
- Trip Time in Normal Fault and Ground Neutral Fault is 18ms Typ
- Wide Operating Temperature Range
- Excellent ESD Characteristic
- 1mA Output Current Pulse to Trigger SCR

### Description

The KA2807 is a IC for ground fault circuit interrupters which are intended to provide an electrical shock hazard protection from line to ground fault currents on grounded circuits of 120V supplies.



### Internal Block Diagram



## Absolute Maximum Ratings

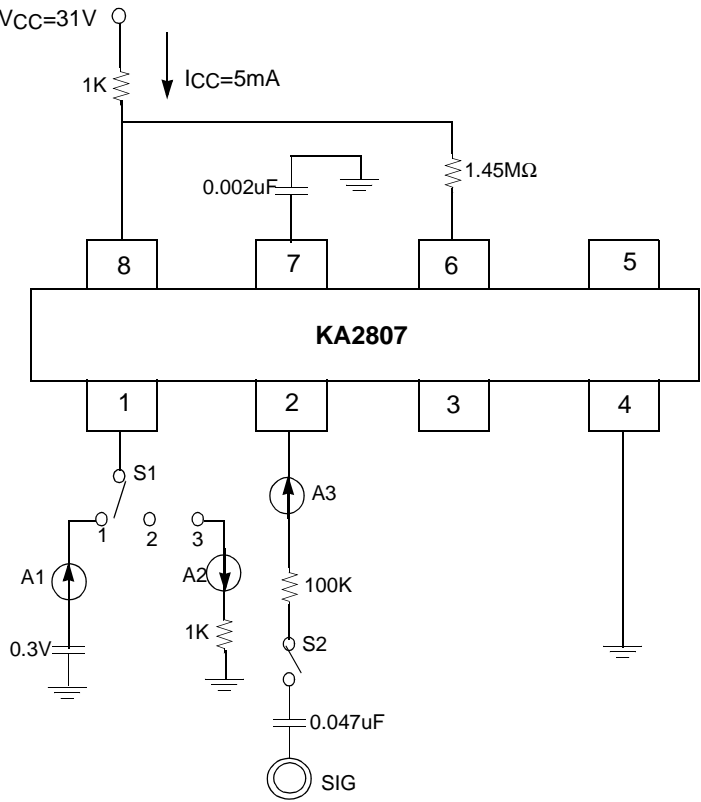
Parameter	Symbol	Value	Unit
Supply Current	I <sub>CC</sub>	19	mA
Power Dissipation 8-DIP 8-SOP	P <sub>D</sub>	1.25 0.41	W
Operating Temperature Range	T <sub>OPR</sub>	-40 ~ +70	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150	°C

## Electrical Characteristics

(T<sub>A</sub> = 25°C, I<sub>CC</sub> = 5mA)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Shunt Regulator Voltage	V <sub>REG</sub>	Pin8, S1:2, S2:OFF	23	26	29	V
Amp Reference Voltage	V <sub>REF</sub>	Pin3, S1:2, S2:OFF	9.5	10.5	11.5	V
Amp High Output Voltage	V <sub>OH</sub>	Pin5, S1:3, S2:ON Sig: 800Hz, 3.0VP-P Sinewave	17	19	21	V
Amp Low Output Voltage	V <sub>OL</sub>	Pin5, S1:3, S2:ON Sig: 800Hz, 3.0VP-P Sinewave	1.5	2.5	3.5	V
Amp Sensitivity Current	I <sub>SEN</sub>	Pin2, S1:3, S2:ON Sig: 800Hz, 1.0VP-P ~ 2.5VP-P Sinewave	3.5	5	6.5	μArms
Latch On Voltage	V <sub>ON(LATCH)</sub>	Pin7, S1:3, S2:ON Sig: 800Hz, 3.0VP-P Sinewave	16.5	17.5	19.5	V
SCR Trigger Current	I <sub>TR</sub>	Pin1, S1:3, S2:ON Sig:800Hz, 3.0VP-P Sinewave	0.5	1	2.0	mA
Output Low Voltage	V <sub>S 1</sub>	Pin1, S1:2, S2:OFF	-	100	240	mV
Output Impedance	Z <sub>O</sub>	Pin1, S1:2, S2:OFF	-	100	250	Ω
Output Sink Current	I <sub>SINK</sub>	Pin1, S1:2, S2:OFF	2.0	6.0	-	mA

Test Circuit

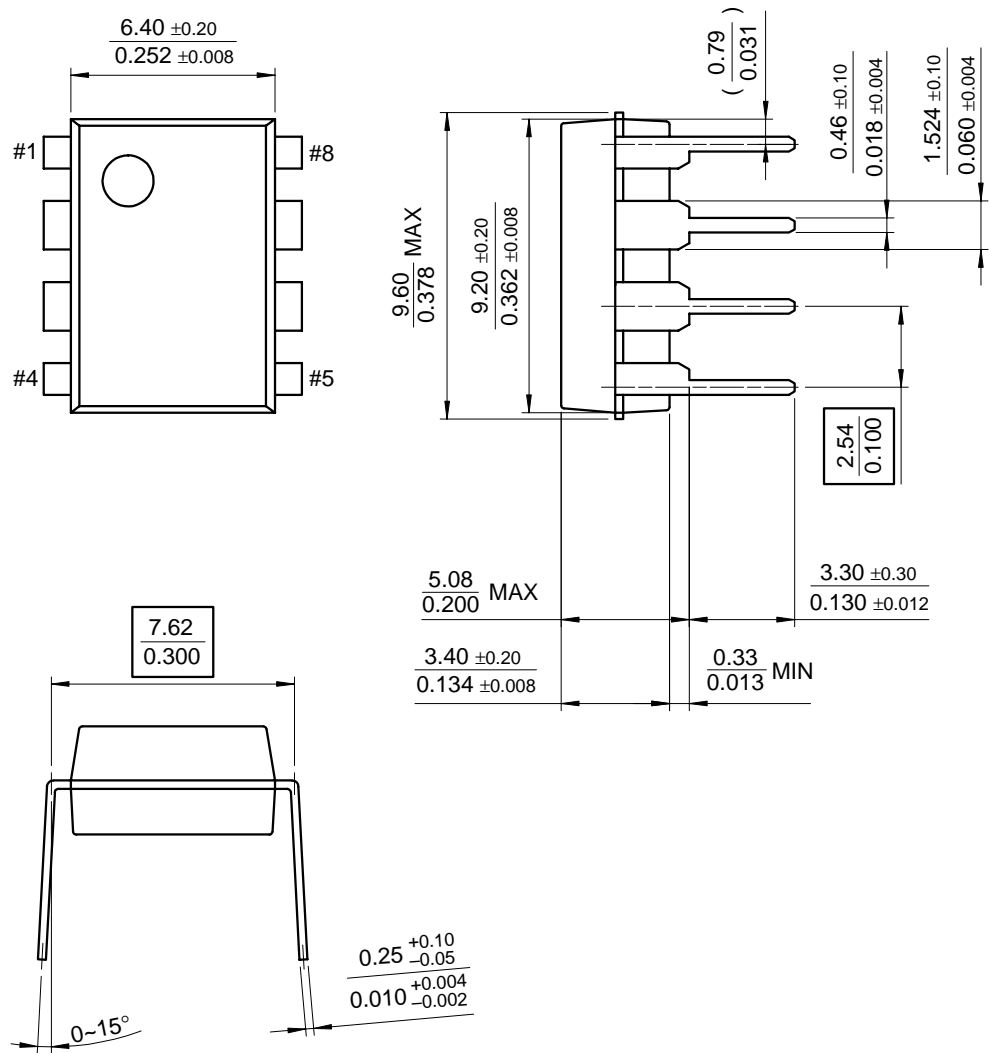


Mechanical Dimensions

Package

Dimensions in millimeters

8-DIP

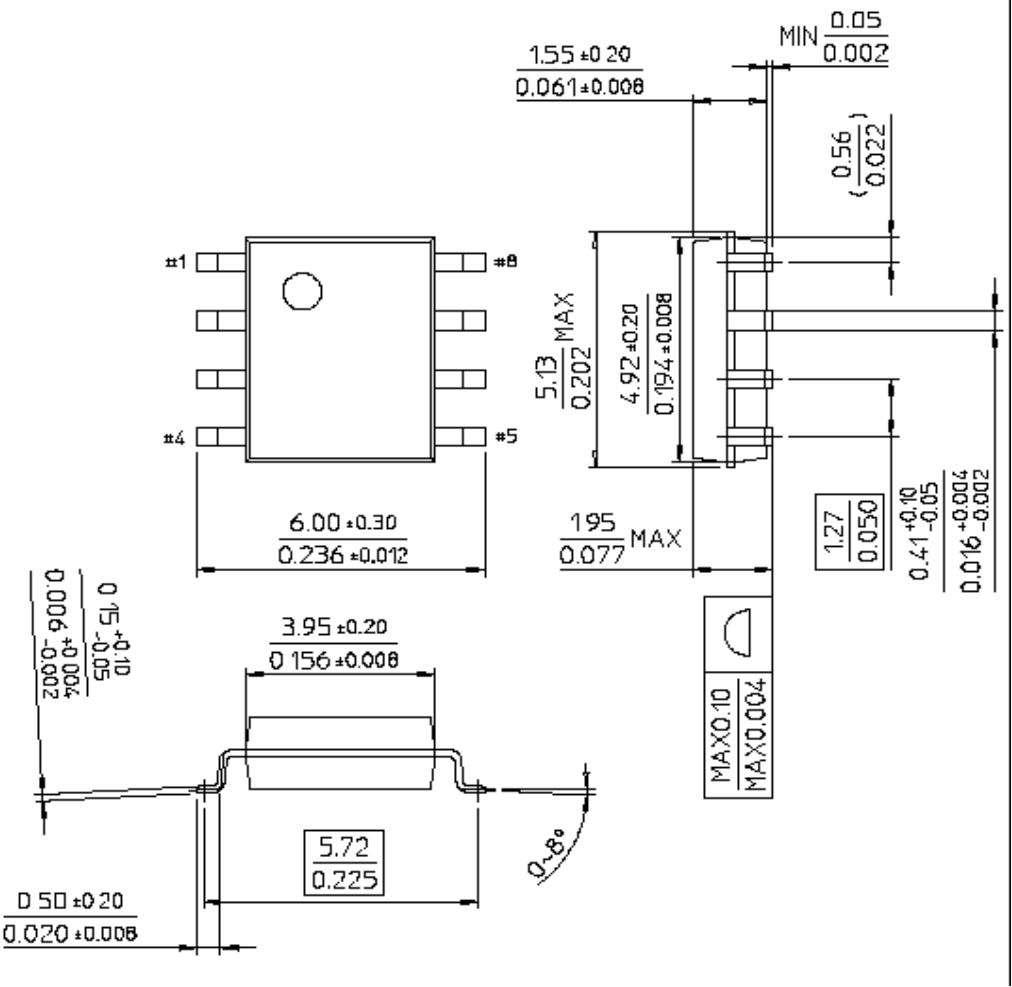


# Mechanical Dimensions (Continued)

Package

Dimensions in millimeters

## 8-SOP



## Ordering Information

Product Number	Package	Operating Temperature
KA2807	8-DIP	-40 ~ +70°C
KA2807D	8-SOP	

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