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KA2807

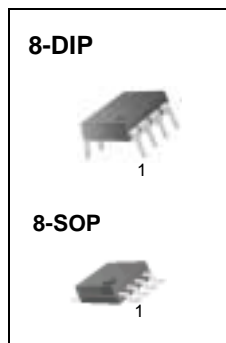
Earth Leakage Detector

Features

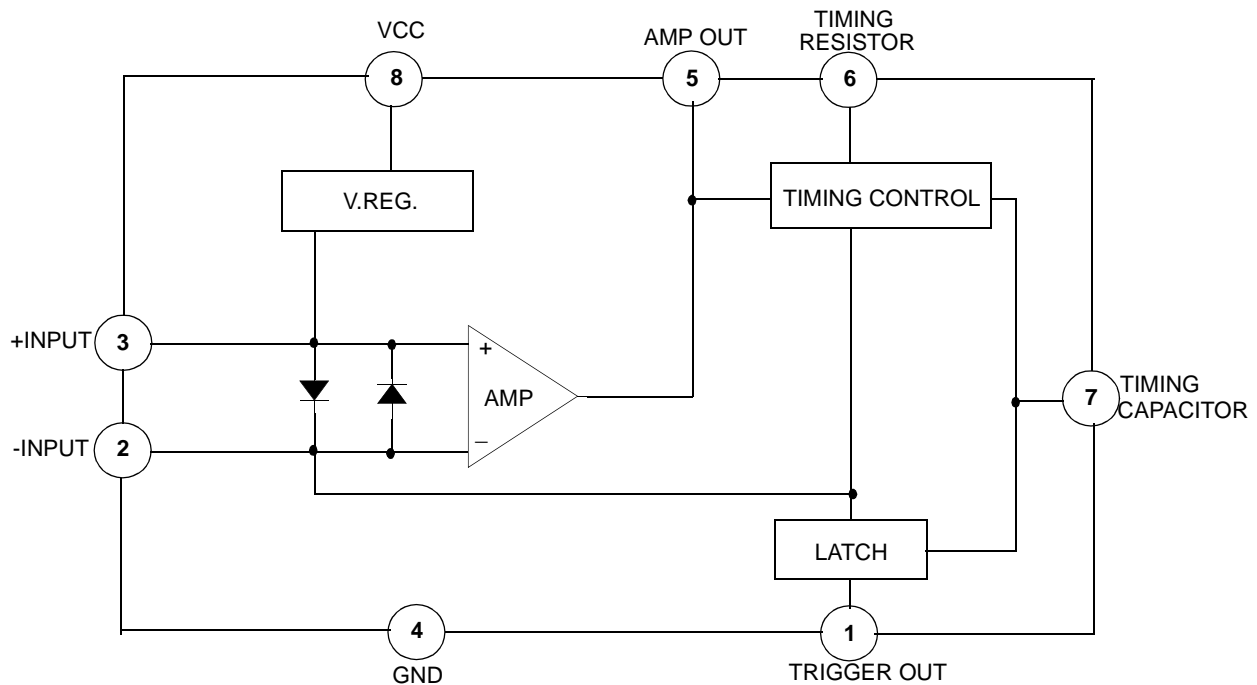
- Full Advantage of the UL943
- Built-In Voltage Regulator
- Sense Coil: 1000:1
- GND/Neutral Coil: 200:1
- Trip Time in Normal Fault and Ground Neutral Fault is 18ms Typ
- Wide Operating Temperature Range
- Excellent ESD Characteristic
- 1mA Output Current Pulse to Trigger SCR

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

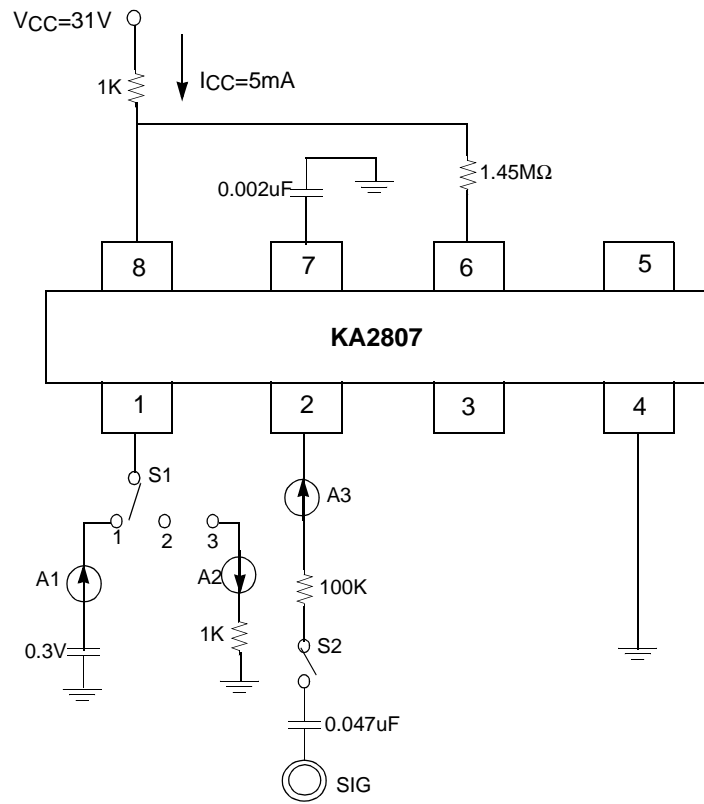
Parameter	Symbol	Value	Unit
Supply Current	ICC	19	mA
Power Dissipation 8-DIP 8-SOP	PD	1.25 0.41	W
Operating Temperature Range	TOPR	-40 ~ +70	°C
Storage Temperature Range	TSTG	-55 ~ +150	°C

Electrical Characteristics

(T_A = 25°C, I_{CC} = 5mA)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Shunt Regulator Voltage	VREG	Pin8, S1:2, S2:OFF	23	26	29	V
Amp Reference Voltage	VREF	Pin3, S1:2, S2:OFF	9.5	10.5	11.5	V
Amp High Output Voltage	VOH	Pin5, S1:3, S2:ON Sig: 800Hz, 3.0VP-P Sinewave	17	19	21	V
Amp Low Output Voltage	VOL	Pin5, S1:3, S2:ON Sig: 800Hz, 3.0VP-P Sinewave	1.5	2.5	3.5	V
Amp Sensitivity Current	ISEN	Pin2, S1:3, S2:ON Sig: 800Hz, 1.0VP-P ~ 2.5VP-P Sinewave	3.5	5	6.5	μArms
Latch On Voltage	VON(LATCH)	Pin7, S1:3, S2:ON Sig: 800Hz, 3.0VP-P Sinewave	16.5	17.5	19.5	V
SCR Trigger Current	ITR	Pin1, S1:3, S2:ON Sig:800Hz, 3.0VP-P Sinewave	0.5	1	2.0	mA
Output Low Voltage	VS 1	Pin1, S1:2, S2:OFF	-	100	240	mV
Output Impedance	ZO	Pin1, S1:2, S2:OFF	-	100	250	Ω
Output Sink Current	ISINK	Pin1, S1:2, S2:OFF	2.0	6.0	-	mA

Test Circuit

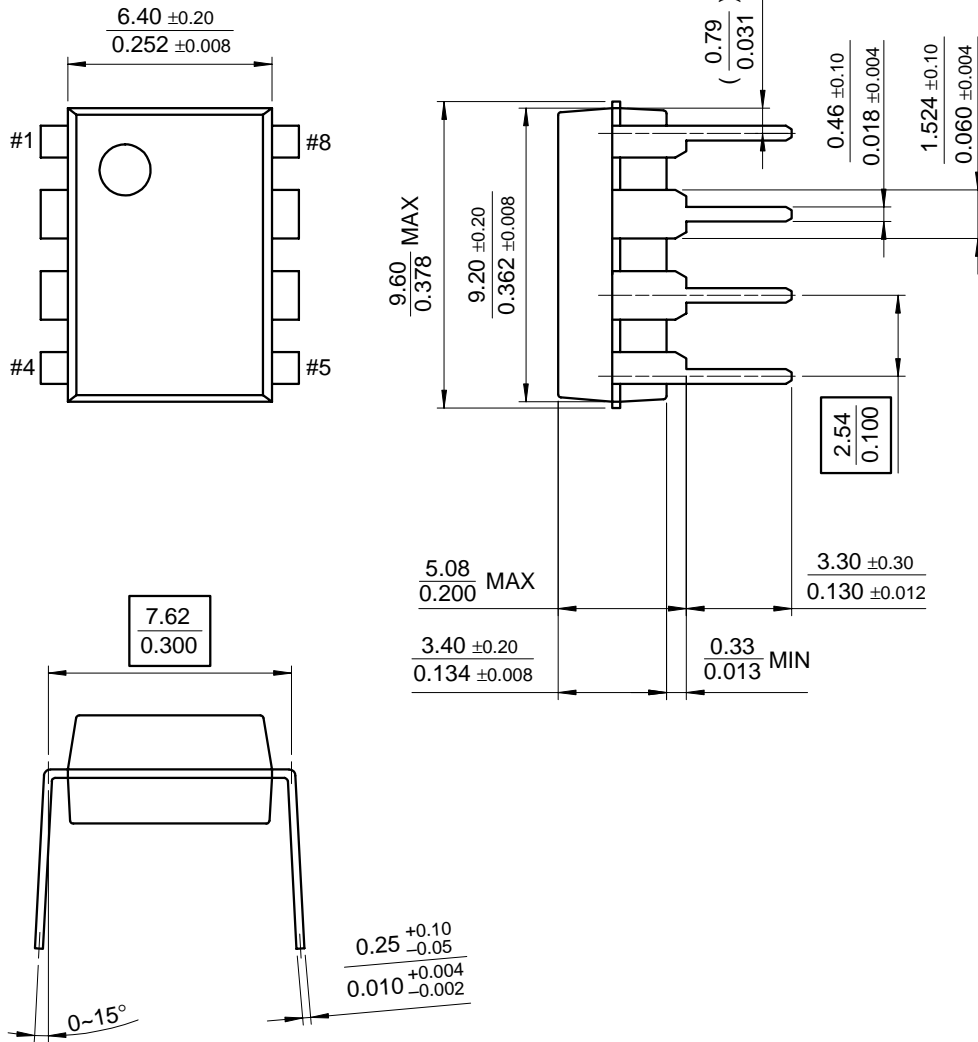


Mechanical Dimensions

Package

Dimensions in millimeters

8-DIP

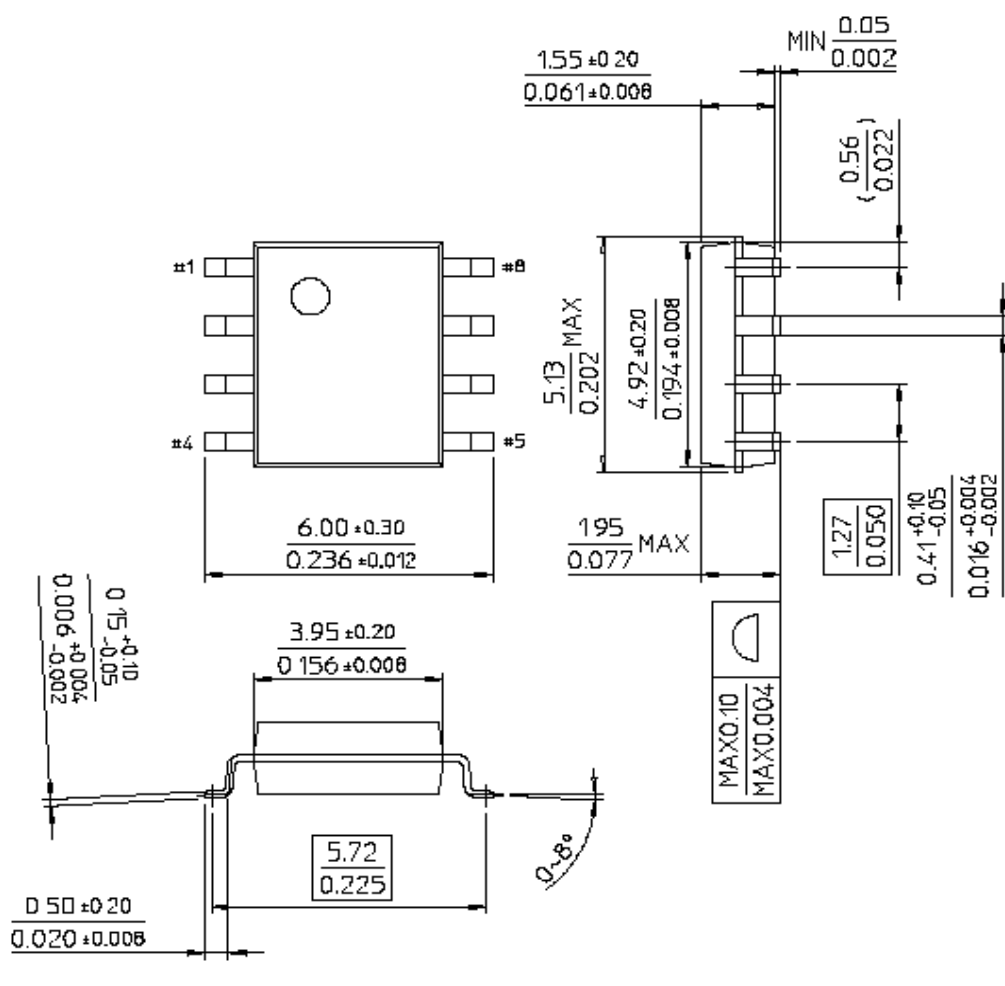


Mechanical Dimensions (Continued)

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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Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru