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KA2807

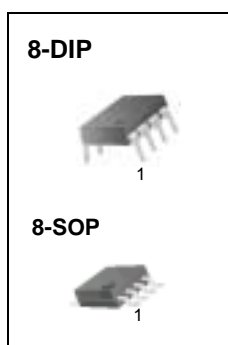
Earth Leakage Detector

Features

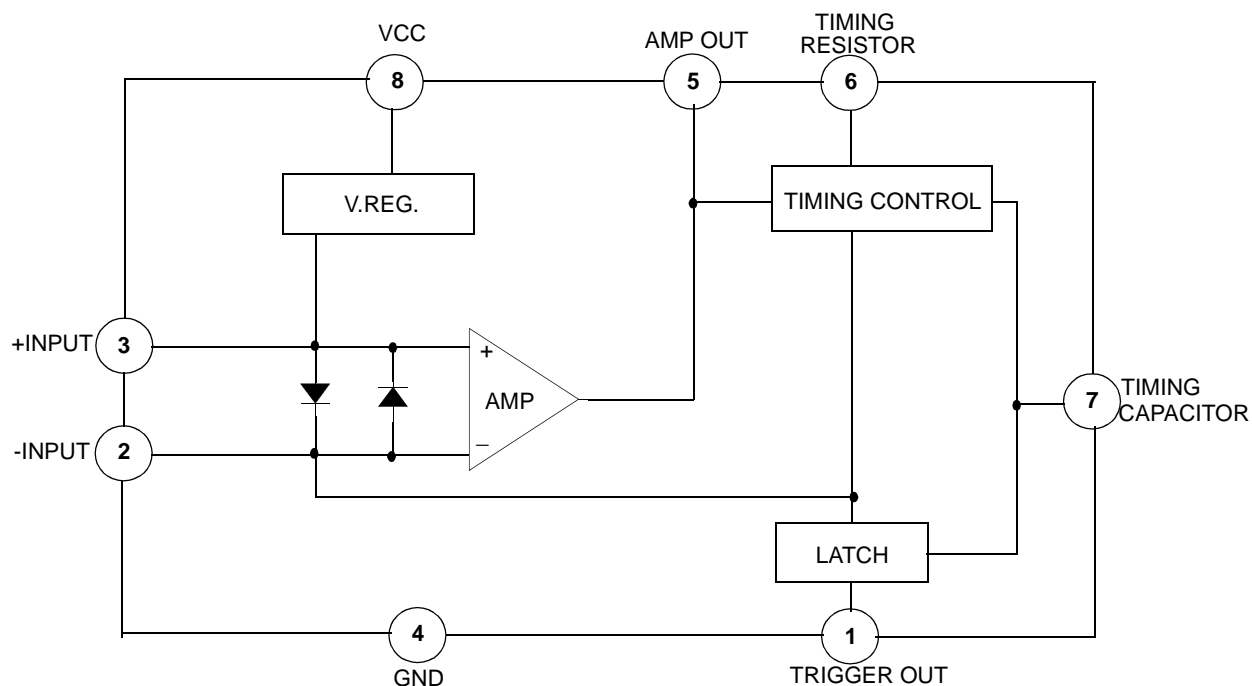
- Full Advantage of the UL943
- Built-In Voltage Regulator
- Sense Coil: 1000:1
- GND/Neutral Coil: 200:1
- Trip Time in Normal Fault and Ground Neutral Fault is 18ms Typ
- Wide Operating Temperature Range
- Excellent ESD Characteristic
- 1mA Output Current Pulse to Trigger SCR

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

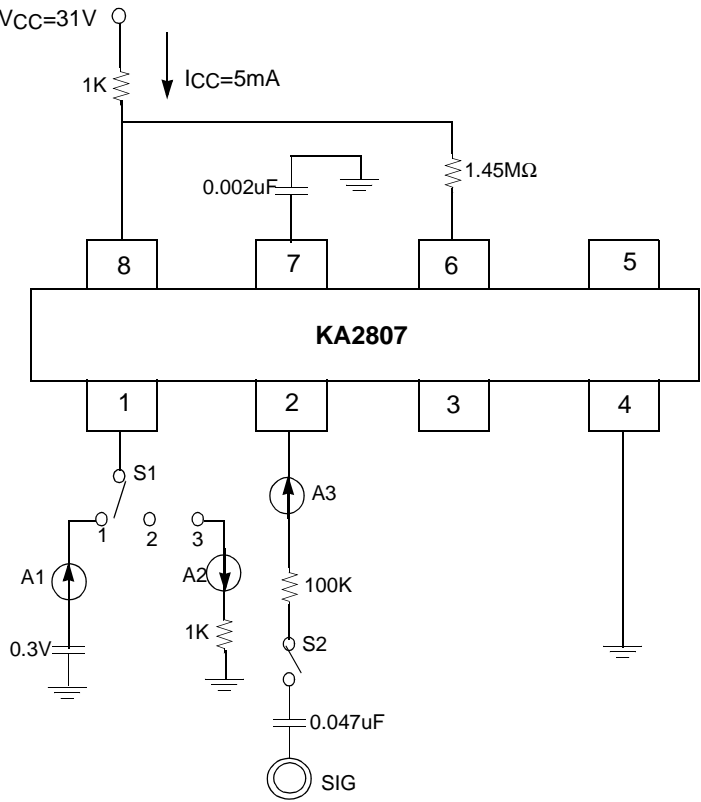
Parameter	Symbol	Value	Unit
Supply Current	I _{CC}	19	mA
Power Dissipation 8-DIP 8-SOP	P _D	1.25 0.41	W
Operating Temperature Range	T _{OPR}	-40 ~ +70	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics

(T_A = 25°C, I_{CC} = 5mA)

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

Test Circuit

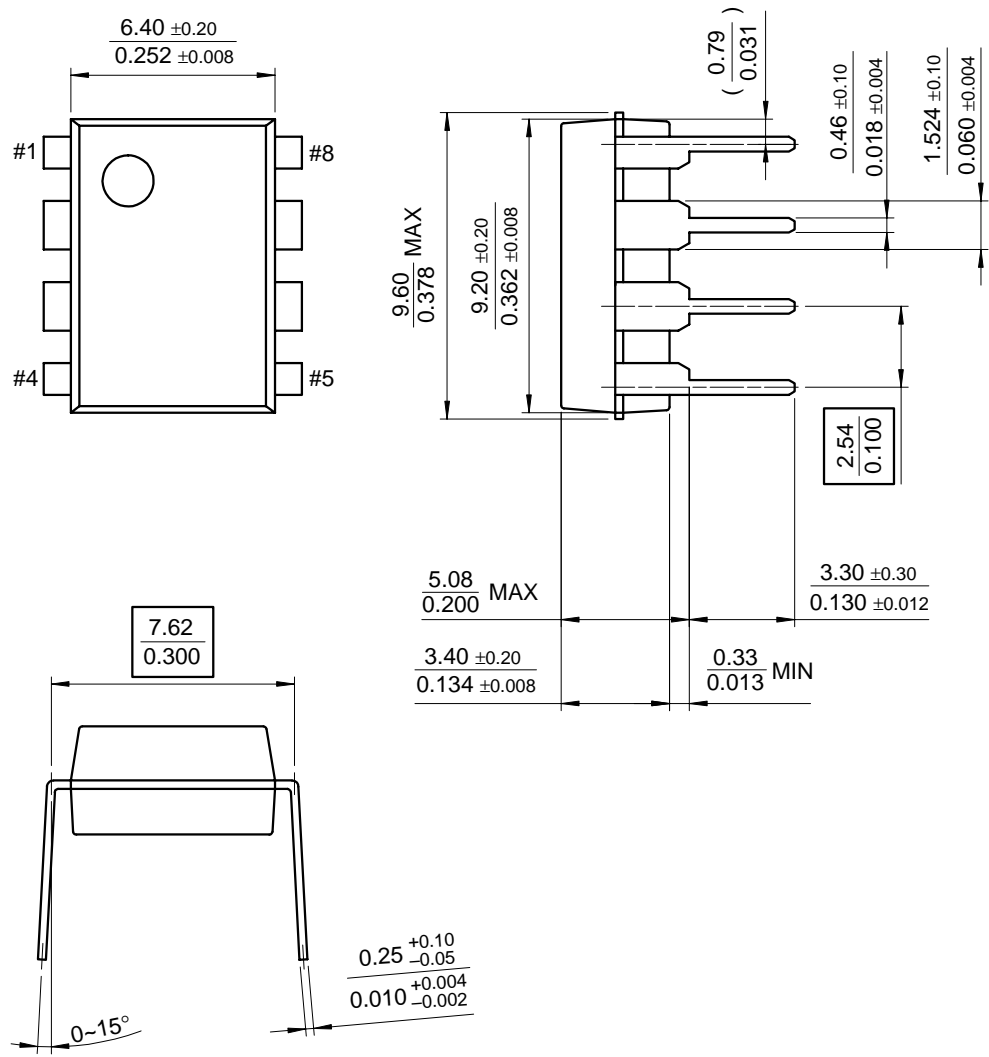


Mechanical Dimensions

Package

Dimensions in millimeters

8-DIP

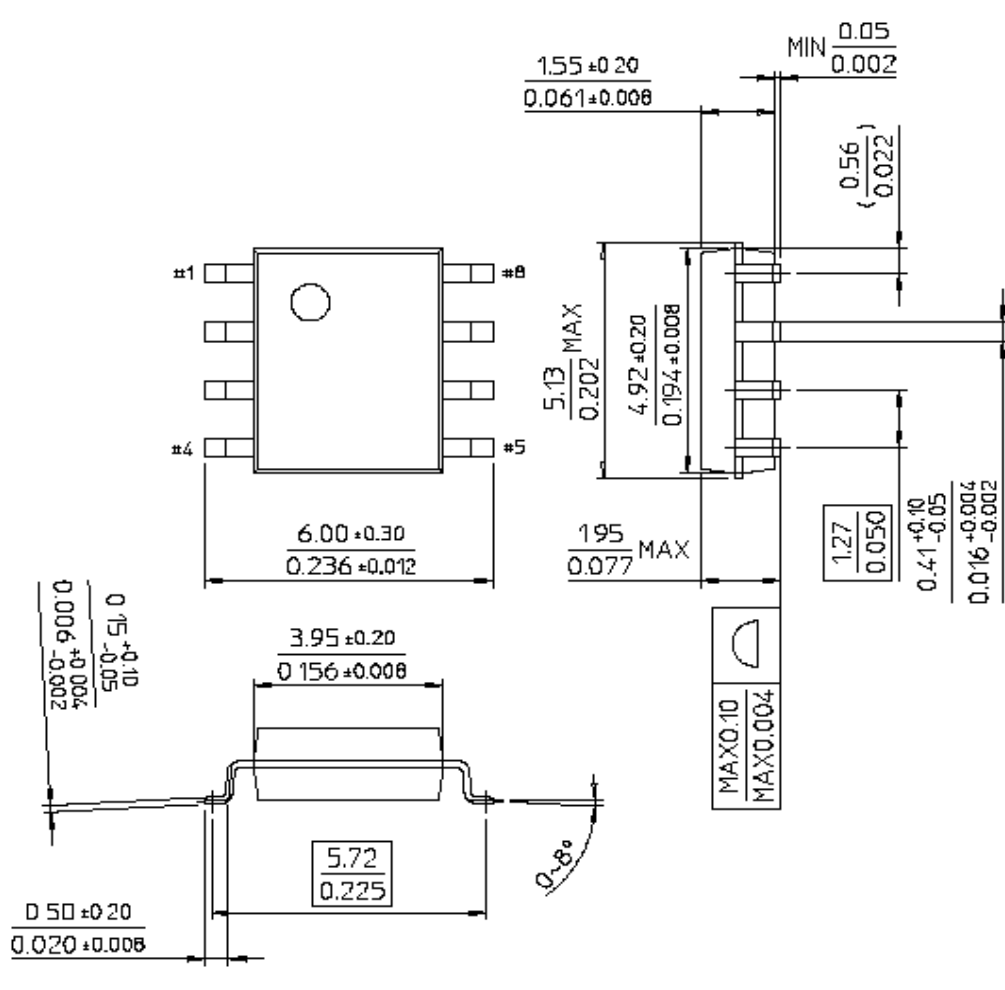


Mechanical Dimensions (Continued)

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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