

KA2807

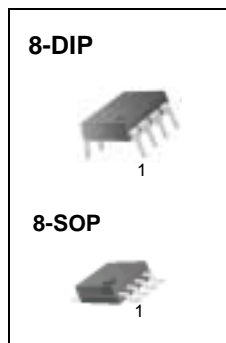
Earth Leakage Detector

Features

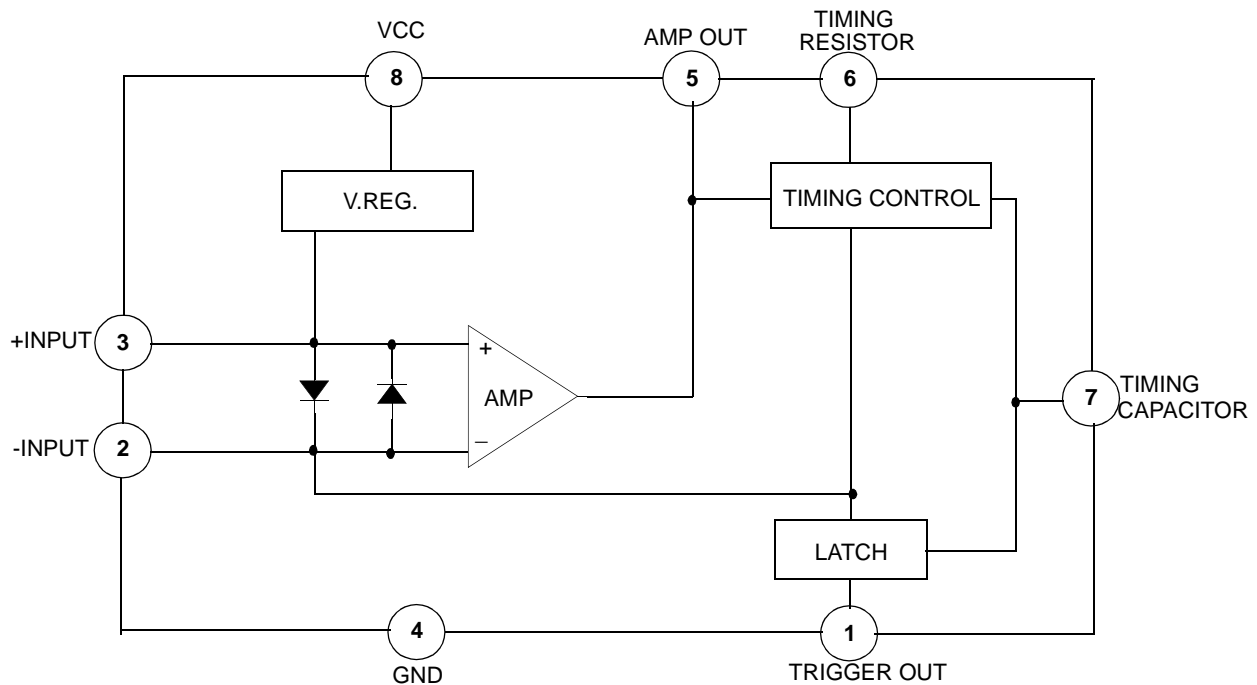
- Full Advantage of the UL943
- Built-In Voltage Regulator
- Sense Coil: 1000:1
- GND/Neutral Coil: 200:1
- Trip Time in Normal Fault and Ground Neutral Fault is 18ms Typ
- Wide Operating Temperature Range
- Excellent ESD Characteristic
- 1mA Output Current Pulse to Trigger SCR

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

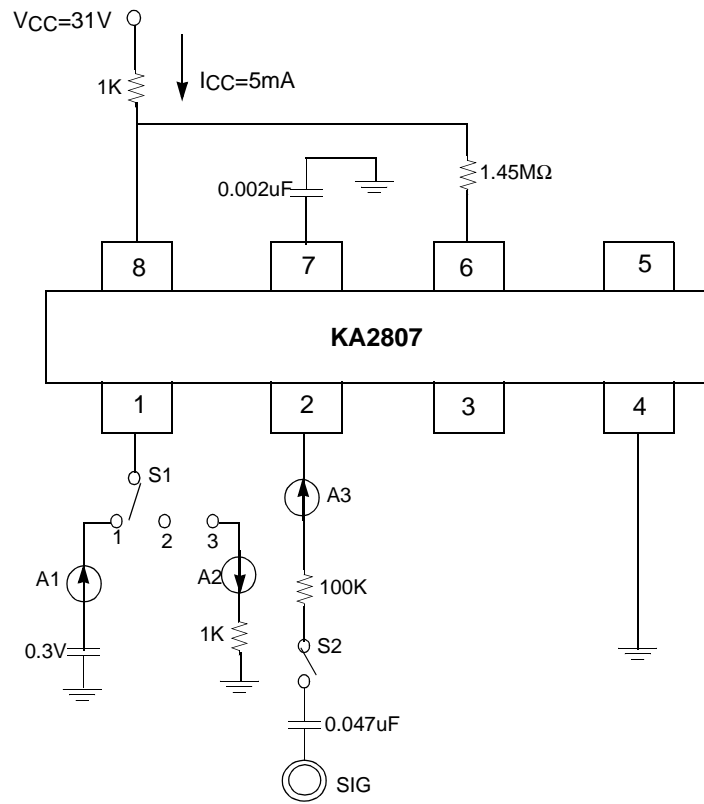
Parameter	Symbol	Value	Unit
Supply Current	ICC	19	mA
Power Dissipation 8-DIP 8-SOP	PD	1.25 0.41	W
Operating Temperature Range	TOPR	-40 ~ +70	°C
Storage Temperature Range	TSTG	-55 ~ +150	°C

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	Z _O	Pin1, S1:2, S2:OFF	-	100	250	Ω
Output Sink Current	ISINK	Pin1, S1:2, S2:OFF	2.0	6.0	-	mA

Test Circuit

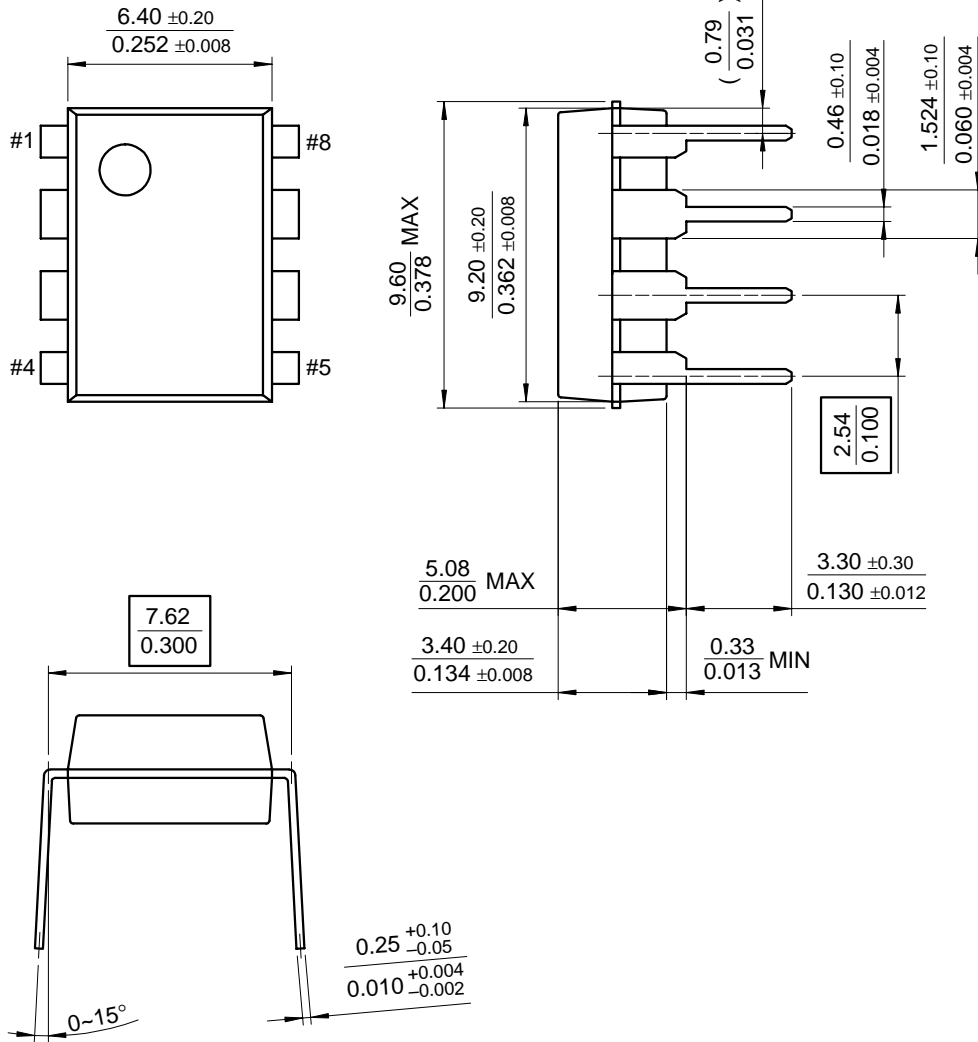


Mechanical Dimensions

Package

Dimensions in millimeters

8-DIP

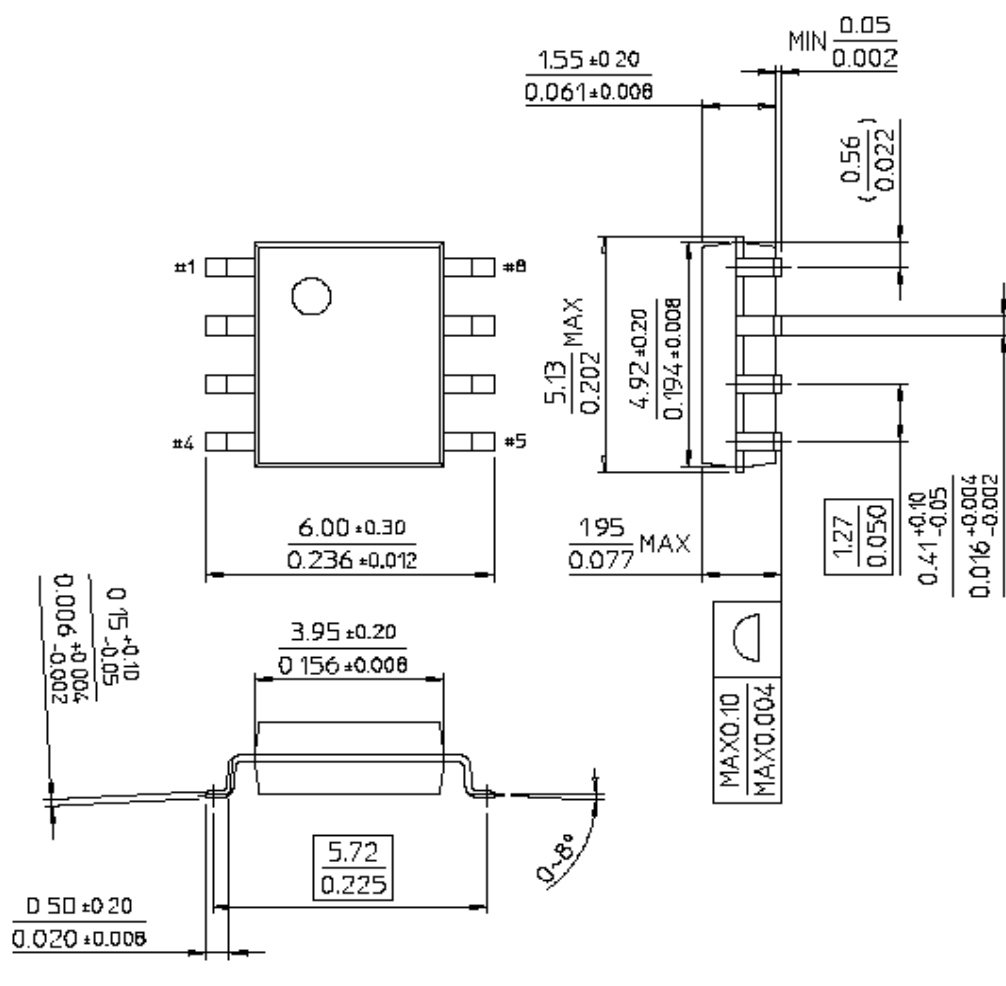


Mechanical Dimensions (Continued)

Package

Dimensions in millimeters

8-SOP



Ordering Information

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

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

Home >> Find products >>

KA2807

Earth Leakage Detector

Contents

- [General description](#)
- [Features](#)
- [Product status/pricing/packaging](#)
- [Order Samples](#)
- [Qualification Support](#)

General description

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

[back to top](#)


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

[back to top](#)

Product status/pricing/packaging

BUY

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
KA2807	Full Production	 Full Production	\$0.30	DIP	8	RAIL	N/A

BUY

Datasheet

[Download this datasheet](#)



[e-mail this datasheet](#)



This page

[Print version](#)

Related Links

[Request samples](#)

[How to order products](#)



[Product Change Notices \(PCNs\)](#)

[Support](#)

[Sales support](#)

[Quality and reliability](#)

[Design center](#)

KA2807D	Full Production		\$0.30	SOIC	8	RAIL	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &2 (2-Digit Date Code) &T (Die Trace Code) Line 2: KA2807
KA2807DTF	Full Production		\$0.30	SOIC	8	TAPE REEL	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &2 (2-Digit Date Code) &T (Die Trace Code) Line 2: KA2807

* Fairchild 1,000 piece Budgetary Pricing

** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

Package marking information for product KA2807 is available. [Click here for more information](#).

[back to top](#)

Qualification Support

Click on a product for detailed qualification data

Product
KA2807
KA2807D
KA2807DTF

[back to top](#)

© 2007 Fairchild Semiconductor

